# MagMeDIP qPCR Kit

**C02010020**  
**C02010021**  
Flyleaf

---

**Date of compilation: 2020-04-07**

## Bill of materials

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Number of pieces</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magbeads</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>3 – 10</td>
</tr>
<tr>
<td>ChIP-seq grade water</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>11 – 18</td>
</tr>
<tr>
<td>5x MagBuffer A</td>
<td></td>
<td>1</td>
<td>Eye Dam. 1 / H318 Aquatic Chronic 2 / H411</td>
<td>!</td>
<td>19 – 28</td>
</tr>
<tr>
<td>MagBuffer B</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>29 – 36</td>
</tr>
<tr>
<td>MagBuffer C</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>37 – 44</td>
</tr>
<tr>
<td>5-mC monoclonal antibody 33D3</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>45 – 52</td>
</tr>
<tr>
<td>Methylated spike-in control</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>53 – 60</td>
</tr>
<tr>
<td>Unmethylated spike-in control</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>61 – 68</td>
</tr>
<tr>
<td>MagWash buffer-1</td>
<td></td>
<td>1</td>
<td>Eye Irrit. 2 / H319 Aquatic Chronic 3 / H412</td>
<td>!</td>
<td>69 – 77</td>
</tr>
<tr>
<td>MagWash buffer-2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>78 – 85</td>
</tr>
<tr>
<td>DNA Isolation Buffer (DIB)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>86 – 93</td>
</tr>
<tr>
<td>proteinase K</td>
<td></td>
<td>2</td>
<td>Resp. Sens. 1 / H334</td>
<td>!</td>
<td>94 – 102</td>
</tr>
<tr>
<td>Primer pair for meDNA spike-in ctrl</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>103 – 110</td>
</tr>
<tr>
<td>Primer pair for unDNA spike-in ctrl</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>111 – 118</td>
</tr>
<tr>
<td>TSH2B primer pair</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>119 – 126</td>
</tr>
<tr>
<td>ChIP-seq grade GAPDH TSS primer pair</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>127 – 134</td>
</tr>
<tr>
<td>GenDNA Digestion buffer</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>135 – 142</td>
</tr>
<tr>
<td>GenDNA precipitant</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>143 – 150</td>
</tr>
</tbody>
</table>

---

United Kingdom  
DIAGENODE 000297 KIT-07
**MagMeDIP qPCR Kit**

**C02010020**  
**C02010021**  
**Flyleaf**

Date of compilation: 2020-04-07

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Number of pieces</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>GenDNA TE</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>151 – 158</td>
</tr>
<tr>
<td>GenDNA RNase (DNase-free)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>159 – 167</td>
</tr>
</tbody>
</table>
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
   - trade name: Magbeads
   - registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
   - relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
   - Diagenode SA
     LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
     4102 Seraing
     Belgium
   - telephone: +32 4 364 20 50
   - e-mail: info@diagenode.com

1.4 emergency telephone number
   - emergency information service: +32 4 364 20 50
     this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
   - classification according to Regulation (EC) No 1272/2008 (CLP)
     this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
   - labelling according to Regulation (EC) No 1272/2008 (CLP)
     not required

2.3 other hazards
   - results of PBT and vPvB assessment
     this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
   - not relevant (mixture)

3.2 mixtures
   - description of the mixture
     This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up

advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
Skin protection
- Hand protection
  wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures
  take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection
in case of inadequate ventilation wear respiratory protection.

Environmental exposure controls
use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid (suspension)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Brown</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
</tbody>
</table>

**Other safety parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not relevant, (fluid)</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>This information is not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Information on this property is not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>This information is not available</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

**10.1 reactivity**
concerning incompatibility: see below “Conditions to avoid” and “Incompatible materials”.

**10.2 chemical stability**
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.3 possibility of hazardous reactions**
no known hazardous reactions.

**10.4 conditions to avoid**
there are no specific conditions known which have to be avoided.

**10.5 incompatible materials**
there is no additional information.

**10.6 hazardous decomposition products**
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

**11.1 information on toxicological effects**
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Magbeads

version number: GHS 1.0

date of compilation: 2020-04-07

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure

physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
identification of the substance ChIP-seq grade water
registration number (REACH) this information is not available
CAS number 7732-18-5

1.2 relevant identified uses of the substance or mixture and uses advised against
relevant identified uses for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium
telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number
emergency information service +32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
classification according to Regulation (EC) No 1272/2008 (CLP)
this substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
labelling according to Regulation (EC) No 1272/2008 (CLP)
not required

2.3 other hazards
results of PBT and vPvB assessment
according to the results of its assessment, this substance is not a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 substances

<table>
<thead>
<tr>
<th>name of substance</th>
<th>ChIP-seq grade water</th>
</tr>
</thead>
<tbody>
<tr>
<td>identifiers</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>molecular formula</td>
<td>H2O</td>
</tr>
<tr>
<td>molar mass</td>
<td>18.02 g/mol</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 description of first aid measures

general notes
- do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
- if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
- wash with plenty of soap and water.

following eye contact
- remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
- rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

- symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

- none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
- water spray, alcohol resistant foam, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
- water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters

- in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material [e.g. cloth, fleece]. collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
  use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.
SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/ impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- other protection measures
take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.
respiratory protection
in case of inadequate ventilation wear respiratory protection.
environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties
appearance

<table>
<thead>
<tr>
<th>physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>0 °C</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>100 °C</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
</tbody>
</table>
explosive limits | not determined
---|---
vapour pressure | not determined
density | not determined
vapour density | this information is not available
relative density | information on this property is not available

solubility(ies)
- water solubility | miscible in any proportion

partition coefficient
- n-octanol/water (log KOW) | this information is not available

auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidising properties | none

SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
there is no additional information.

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.
SECTION 11: Toxicological information

11.1 information on toxicological effects
classification according to GHS (1272/2008/EC, CLP)
this substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.
SECTION 13: Disposal considerations

13.1 waste treatment methods
waste treatment-relevant information
recycling/reclamation of other inorganic materials.

sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
no Chemical Safety Assessment has been carried out for this substance.
SECTION 16: Other information

indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>section</th>
<th>former entry (text/value)</th>
<th>actual entry (text/value)</th>
<th>safety-relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>suitable extinguishing media: not applicable</td>
<td>suitable extinguishing media: water spray, alcohol resistant foam, BC-powder, carbon dioxide (CO2)</td>
<td>yes</td>
</tr>
<tr>
<td>5.1</td>
<td>unsuitable extinguishing media: not applicable</td>
<td>unsuitable extinguishing media: water jet</td>
<td>yes</td>
</tr>
</tbody>
</table>

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
   trade name 5x MagBuffer A
   registration number (REACH) not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
   relevant identified uses for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
   Diagenode SA
   LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
   4102 Seraing
   Belgium
   telephone: +32 4 364 20 50
   e-mail: info@diagenode.com

1.4 emergency telephone number
   emergency information service +32 4 364 20 50
   this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM
   poison centre
   United Kingdom National Poisons Information Service 111

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
   classification according to Regulation (EC) No 1272/2008 (CLP)

<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>1</td>
<td>Eye Dam. 1</td>
<td>H318</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>2</td>
<td>Aquatic Chronic 2</td>
<td>H411</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

the most important adverse physicochemical, human health and environmental effects spillage and fire water can cause pollution of watercourses.

2.2 label elements
   labelling according to Regulation (EC) No 1272/2008 (CLP)
   - signal word danger
   - pictograms GHS05, GHS09
- hazard statements
  H318  causes serious eye damage.
  H411  toxic to aquatic life with long lasting effects.

- precautionary statements
  P273  avoid release to the environment.
  P280  wear protective gloves/protective clothing/eye protection/face protection.
  P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310  immediately call a POISON CENTER/doctor.
  P391  collect spillage.
  P501  dispose of contents/container to industrial combustion plant.

- hazardous ingredients for labelling
  Triton X-100

2.3  other hazards
results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1  substances
not relevant (mixture)

3.2  mixtures
description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>CAS No 9002-93-1</td>
<td>≤ 10</td>
<td>Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>EC No 618-344-0</th>
</tr>
</thead>
</table>

for full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1  description of first aid measures

        general notes
        do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

        following inhalation
        if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

        following skin contact
        wash with plenty of soap and water.

        following eye contact
        remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

        following ingestion
        rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2  most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.
4.3 indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 extinguishing media
suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)
unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture
hazardous combustion products
nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
for non-emergency personnel
remove persons to safety.
for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
keep away from drains, surface and ground water. retain contaminated washing water and dispose of it. if substance has entered a water course or sewer, inform the responsible authority.

6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material [e.g. cloth, fleece]. collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.
SECTION 7: Handling and storage

7.1 precautions for safe handling

- measures to prevent fire as well as aerosol and dust generation
  use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
  wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

control of effects
  protect against external exposure, such as frost

- packaging compatibilities
  only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls
  general ventilation.

individual protection measures (personal protective equipment)
  eye/face protection
    wear eye/face protection.

skin protection
  - hand protection
    wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

  - other protection measures
    take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
  use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.
## SECTION 9: Physical and chemical properties

### 9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>appearance</strong></td>
<td></td>
</tr>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
<tr>
<td><strong>other safety parameters</strong></td>
<td></td>
</tr>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>oxidising properties</td>
<td>none</td>
</tr>
</tbody>
</table>

### 9.2 other information

there is no additional information
SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
see below "Conditions to avoid".

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
oxidisers

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
causes serious eye damage.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germin cell mutagenicity
shall not be classified as germ cell mutagenic.

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].
aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
	toxic to aquatic life with long lasting effects.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

treatment methods

doz not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
	it is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. completely emptied packages
can be recycled. handle contaminated packages in the same way as the substance itself.

remarks

please consider the relevant national or regional provisions. waste shall be separated into the categories that can be
handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number 3082

14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LI-
QUID, N.O.S.
technical name (hazardous ingredients) Triton X-100

14.3 transport hazard class(es)
class 9 (environmentally hazardous)

14.4 packing group III (substance presenting low danger)

14.5 environmental hazards
	environmentally hazardous substance (aquatic environment)
	Triton X-100

14.6 special precautions for user
	provisions for dangerous goods (ADR) should be complied within the premises.
14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

| UN number | 3082 |
| proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| class | 9 |
| classification code | M6 |
| packing group | III |
| danger label(s) | 9, fish and tree |
| environmental hazards | yes [hazardous to the aquatic environment] |
| special provisions [SP] | 274, 335, 375, 601 |
| excepted quantities [EQ] | E1 |
| limited quantities [LQ] | 5 L |
| transport category [TC] | 3 |
| tunnel restriction code [TRC] | - |
| hazard identification No | 90 |
| Emergency Action Code | 3Z |

International Maritime Dangerous Goods Code (IMDG)

| UN number | 3082 |
| proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| class | 9 |
| marine pollutant | yes [hazardous to the aquatic environment] |
| packing group | III |
| danger label(s) | 9, fish and tree |
| special provisions [SP] | 274, 335, 969 |
| excepted quantities [EQ] | E1 |
| limited quantities [LQ] | 5 L |
| EmS | F-A, S-F |
| stowage category | A |
International Civil Aviation Organization (ICAO-IATA/DGR)

UN number: 3082
proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
class: 9
environmental hazards: yes (hazardous to the aquatic environment)
packing group: III
danger label(s): 9, fish and tree

special provisions (SP): A97, A158, A197
excepted quantities (EQ): E1
limited quantities (LQ): 30 kg

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture
15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU [European Union]</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>abbr.</td>
<td>descriptions of used abbreviations</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation [EC] No 1272/2008</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**


**classification procedure**

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**list of relevant phrases (code and full text as stated in chapter 2 and 3)**

<table>
<thead>
<tr>
<th>code</th>
<th>text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

**disclaimer**

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
 trade name MagBuffer B
 registration number (REACH) not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
 relevant identified uses for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
 Diagenode SA
 LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
 4102 Seraing Belgium
 telephone: +32 4 364 20 50
 e-mail: info@diagenode.com

1.4 emergency telephone number
 emergency information service +32 4 364 20 50
 this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

| poison centre |
|--------------|-----------------|------------------|
| country      | name                     | telephone |
| United Kingdom | National Poisons Information Service | 111  |

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
 classification according to Regulation (EC) No 1272/2008 (CLP)
 this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
 labelling according to Regulation (EC) No 1272/2008 (CLP)
 not required

2.3 other hazards
 results of PBT and vPvB assessment
 this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
 not relevant (mixture)

3.2 mixtures
 description of the mixture
SECTION 4: First aid measures

4.1 description of first aid measures

general notes
- do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation
- if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
- wash with plenty of soap and water.

following eye contact
- remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
- rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
- water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
- water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
- remove persons to safety.

for emergency responders
- wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
   covering of drains
   advice on how to clean up a spill
   wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
   appropriate containment techniques
   use of adsorbent materials.
   other information relating to spills and releases
   place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
   recommendations
   - measures to prevent fire as well as aerosol and dust generation
   use local and general ventilation. use only in well-ventilated areas.
   advice on general occupational hygiene
   wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of effects
   protect against external exposure, such as frost

7.3 specific end use(s)
   see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
   this information is not available.

8.2 exposure controls
   appropriate engineering controls
   general ventilation.
   individual protection measures (personal protective equipment)
   eye/face protection
   wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/ impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility [ies]</td>
<td>not determined</td>
</tr>
</tbody>
</table>

partition coefficient
- n-octanol/water (log KOW) this information is not available
auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidising properties | none

9.2 other information | there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
there is no additional information.

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitisier.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
carcinogenicity shall not be classified as carcinogenic.
reproductive toxicity shall not be classified as a reproductive toxicant.
specific target organ toxicity - single exposure shall not be classified as a specific target organ toxicant (single exposure).
specific target organ toxicity - repeated exposure shall not be classified as a specific target organ toxicant (repeated exposure).
aspiration hazard shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability data are not available.

12.3 bioaccumulative potential data are not available.

12.4 mobility in soil data are not available.

12.5 results of PBT and vPvB assessment data are not available.

12.6 other adverse effects data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal-relevant information do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
   not subject to transport regulations

14.2 UN proper shipping name
   not relevant

14.3 transport hazard class(es)
   none

14.4 packing group
   not assigned to a packing group

14.5 environmental hazards
   non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
   there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
   the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
   not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
   not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
   not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
   chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
MagBuffer B

key literature references and sources for data

classification procedure
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
   trade name: MagBuffer C
   registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
   relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
   Diagenode SA
   LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
   4102 Seraing
   Belgium
   telephone: +32 4 364 20 50
   e-mail: info@diagenode.com

1.4 emergency telephone number
   emergency information service: +32 4 364 20 50
   this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>country</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
   classification according to Regulation (EC) No 1272/2008 (CLP)
   this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
   labelling according to Regulation (EC) No 1272/2008 (CLP)
   not required

2.3 other hazards
   results of PBT and vPvB assessment
   this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
   not relevant (mixture)

3.2 mixtures
   description of the mixture
   This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

- do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation

- if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

- wash with plenty of soap and water.

following eye contact

- remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

- rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

- suitable extinguishing media
  - water spray, BC-powder, carbon dioxide (CO2)

- unsuitable extinguishing media
  - water jet

5.2 special hazards arising from the substance or mixture

- hazardous combustion products
  - carbon monoxide (CO), carbon dioxide (CO2)

5.3 advice for firefighters

- in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

- remove persons to safety.

for emergency responders

- wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

- keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur [diatomite], sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
  use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
  wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
  protect against external exposure, such as frost

7.3 specific end use(s)
  see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
  general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
  wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- other protection measures
take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.
respiratory protection
in case of inadequate ventilation wear respiratory protection.
environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>light yellow</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>other safety parameters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water [log KOW]</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

10.1 **reactivity**

concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **chemical stability**

the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **possibility of hazardous reactions**

no known hazardous reactions.

10.4 **conditions to avoid**

there are no specific conditions known which have to be avoided.

10.5 **incompatible materials**

oxidisers

10.6 **hazardous decomposition products**

reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

11.1 **information on toxicological effects**

test data are not available for the complete mixture.

**classification procedure**

the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**classification according to GHS (1272/2008/EC, CLP)**

this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**acute toxicity**

shall not be classified as acutely toxic.

**skin corrosion/irritation**

shall not be classified as corrosive/irritant to skin.

**serious eye damage/eye irritation**

shall not be classified as seriously damaging to the eye or eye irritant.

**respiratory or skin sensitisation**

shall not be classified as a respiratory or skin sensitiser.

**germ cell mutagenicity**

shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers-packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
MagBuffer C

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**


**classification procedure**

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**disclaimer**

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

- trade name: 5-mC monoclonal antibody 33D3
- registration number (REACH): not relevant (mixture)
- product code(s): C15200081

1.2 relevant identified uses of the substance or mixture and uses advised against

- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number

- emergency information service: +32 4 364 20 50
- this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

- classification according to Regulation (EC) No 1272/2008 (CLP):
  - this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements

- labelling according to Regulation (EC) No 1272/2008 (CLP):
  - not required

2.3 other hazards

- results of PBT and vPvB assessment:
  - this mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This product is composed of antibodies in aqueous buffer solution. It contains 0.05% sodium azide as preservative.

SECTION 4: First aid measures

4.1 description of first aid measures

general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 extinguishing media
suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture
hazardous combustion products
nitrogen oxides (NOx)

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.
SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls

general ventilation.

individual protection measures (personal protective equipment)

eye/face protection

wear eye/face protection.

skin protection

- hand protection

wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures

respiratory protection

in case of inadequate ventilation wear respiratory protection.

environmental exposure controls

use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

appearance

<table>
<thead>
<tr>
<th>physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
</tbody>
</table>
vapour pressure | not determined
---|---
density | not determined
vapour density | this information is not available
relative density | information on this property is not available
solubility[ies] | not determined

**SECTION 10: Stability and reactivity**

10.1 **Reactivity**  
Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **Chemical stability**  
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **Possibility of hazardous reactions**  
No known hazardous reactions.

10.4 **Conditions to avoid**  
There are no specific conditions known which have to be avoided.

10.5 **Incompatible materials**  
There is no additional information.

10.6 **Hazardous decomposition products**  
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information**

11.1 **Information on toxicological effects**  
Test data are not available for the complete mixture.

Classification procedure  
The method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**Classification according to GHS (1272/2008/EC, CLP)**  
This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.
acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitizer.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.
SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.
## abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

### key literature references and sources for data


### classification procedure

- physical and chemical properties: the classification is based on tested mixture.
- health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### disclaimer

- this information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
trade name
Methylated spike-in control
registration number (REACH)
not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
relevant identified uses
for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium
telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number
emergency information service
+32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisins Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
classification according to Regulation (EC) No 1272/2008 (CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
labelling according to Regulation (EC) No 1272/2008 (CLP)
not required

2.3 other hazards
results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

- do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation

- if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

- wash with plenty of soap and water.

following eye contact

- remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

- rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

- water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

- water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

- nitrogen oxides (NOx)

5.3 advice for firefighters

- in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

- remove persons to safety.

for emergency responders

- wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

- keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up

- advice on how to contain a spill
  - covering of drains

- advice on how to clean up a spill
  - wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

- appropriate containment techniques
  - use of adsorbent materials.

- other information relating to spills and releases
  - place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections

- hazardous combustion products: see section 5.
- personal protective equipment: see section 8.
- incompatible materials: see section 10.
- disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling

- recommendations
  - measures to prevent fire as well as aerosol and dust generation
  - use local and general ventilation. use only in well-ventilated areas.

- advice on general occupational hygiene
  - wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

- control of effects
  - protect against external exposure, such as frost

7.3 specific end use(s)

- see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

- this information is not available.

8.2 exposure controls

- appropriate engineering controls
  - general ventilation.

- individual protection measures (personal protective equipment)
  - eye/face protection
    - wear eye/face protection.
Methylated spike-in control

skin protection
- hand protection
  wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
  take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
  use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
</tbody>
</table>

partition coefficient
- n-octanol/water (log KOW) | this information is not available |
SECTION 10: Stability and reactivity

10.1 reactivity
   concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
   the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
   no known hazardous reactions.

10.4 conditions to avoid
   there are no specific conditions known which have to be avoided.

10.5 incompatible materials
   there is no additional information.

10.6 hazardous decomposition products
   reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not
   known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
   test data are not available for the complete mixture.

   classification procedure
   the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

   classification according to GHS (1272/2008/EC, CLP)
   this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

   acute toxicity
   shall not be classified as acutely toxic.

   skin corrosion/irritation
   shall not be classified as corrosive/irritant to skin.

   serious eye damage/eye irritation
   shall not be classified as seriously damaging to the eye or eye irritant.

   respiratory or skin sensitisation
   shall not be classified as a respiratory or skin sensitiser.

   germ cell mutagenicity
   shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Methylated spike-in control

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**


**classification procedure**

- physical and chemical properties: the classification is based on tested mixture.
- health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**disclaimer**

- this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
- trade name: Unmethylated spike-in control
- registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
- Diagenode SA
  LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
  4102 Seraing
  Belgium
- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number
- emergency information service: +32 4 364 20 50
  this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
- classification according to Regulation (EC) No 1272/2008 (CLP)
  this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
- labelling according to Regulation (EC) No 1272/2008 (CLP)
  not required

2.3 other hazards
- results of PBT and vPvB assessment
  this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
- not relevant (mixture)

3.2 mixtures
- description of the mixture
  This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products
nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 **Methods and material for containment and cleaning up**

- Advice on how to contain a spill
  - Covering of drains

- Advice on how to clean up a spill
  - Wipe up with absorbent material (e.g., cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

- Appropriate containment techniques
  - Use of adsorbent materials.

- Other information relating to spills and releases
  - Place in appropriate containers for disposal. Ventilate affected area.

6.4 **Reference to other sections**

- Hazardous combustion products: see section 5.
- Personal protective equipment: see section 8.
- Incompatible materials: see section 10.
- Disposal considerations: see section 13.

### SECTION 7: Handling and storage

7.1 **Precautions for safe handling**

- Recommendations
  - Measures to prevent fire as well as aerosol and dust generation
  - Use local and general ventilation. Use only in well-ventilated areas.

- Advice on general occupational hygiene
  - Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 **Conditions for safe storage, including any incompatibilities**

- Control of effects
- Protect against external exposure, such as frost

7.3 **Specific end use(s)**

- See section 16 for a general overview.

### SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

- This information is not available.

8.2 **Exposure controls**

- Appropriate engineering controls
  - General ventilation.

- Individual protection measures (personal protective equipment)
  - Eye/face protection
  - Wear eye/face protection.
skin protection
- hand protection
  wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well.
  for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- other protection measures
  take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.
  respiratory protection
  in case of inadequate ventilation wear respiratory protection.
  environmental exposure controls
  use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td>- n-octanol/water (log KOW)</td>
</tr>
</tbody>
</table>
auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidising properties | none

9.2 **other information** | there is no additional information

**SECTION 10: Stability and reactivity**

10.1 **reactivity**
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **chemical stability**
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **possibility of hazardous reactions**
no known hazardous reactions.

10.4 **conditions to avoid**
there are no specific conditions known which have to be avoided.

10.5 **incompatible materials**
there is no additional information.

10.6 **hazardous decomposition products**
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

**SECTION 11: Toxicological information**

11.1 **information on toxicological effects**
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Unmethylated spike-in control

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**

**classification procedure**
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**disclaimer**
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
trade name
MagWash buffer-1
registration number (REACH)
not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
relevant identified uses
for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium
telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number
emergency information service +32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>country</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
classification according to Regulation (EC) No 1272/2008 (CLP)

<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>2</td>
<td>Eye Irrit. 2</td>
<td>H319</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>3</td>
<td>Aquatic Chronic 3</td>
<td>H412</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.
the most important adverse physicochemical, human health and environmental effects spillage and fire water can cause pollution of watercourses.

2.2 label elements
labelling according to Regulation (EC) No 1272/2008 (CLP)
- signal word warning
- pictograms GHS07
- hazard statements
  H319 causes serious eye irritation.
  H412 harmful to aquatic life with long lasting effects.

- precautionary statements
  P273 avoid release to the environment.
  P280 wear protective gloves/protective clothing/eye protection/face protection.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P337+P313 if eye irritation persists: Get medical advice/attention.
  P501 dispose of contents/container to industrial combustion plant.

2.3 other hazards
results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>CAS No 9002-93-1</td>
<td>≤ 2</td>
<td>Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410</td>
<td>![pictograms]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>EC No 618-344-0</td>
<td>≤ 2</td>
<td>Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410</td>
<td>![pictograms]</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 description of first aid measures
genral notes
  do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
  if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
  wash with plenty of soap and water.

following eye contact
  remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
  rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
  symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
  none
SECTION 5: Firefighting measures

5.1 extinguishing media
   suitable extinguishing media
   water spray, BC-powder, carbon dioxide (CO2)
   unsuitable extinguishing media
   water jet

5.2 special hazards arising from the substance or mixture
   hazardous combustion products
   nitrogen oxides (NOx)

5.3 advice for firefighters
   in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
   for non-emergency personnel
   remove persons to safety.
   for emergency responders
   wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
   keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
   covering of drains
   advice on how to clean up a spill
   wipe up with absorbent material e.g. cloth, fleece. collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
   appropriate containment techniques
   use of adsorbent materials.
   other information relating to spills and releases
   place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.
SECTION 7: Handling and storage

7.1 precautions for safe handling

recommendations
- measures to prevent fire as well as aerosol and dust generation
  use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
  wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

control of effects
  protect against external exposure, such as frost

7.3 specific end use(s)
  see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
  this information is not available.

8.2 exposure controls

appropriate engineering controls
  general ventilation.

individual protection measures (personal protective equipment)
  eye/face protection
    wear eye/face protection.

  skin protection
    - hand protection
      wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/ impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

    - other protection measures
      take recovery periods for skin regeneration. preventive skin protection [barrier creams/ointments] is recommended. wash hands thoroughly after handling.

  respiratory protection
    in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
  use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.
### SECTION 9: Physical and chemical properties

#### 9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th><strong>appearance</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>other safety parameters</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
<td>not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>partition coefficient</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>oxidising properties</td>
<td>none</td>
</tr>
</tbody>
</table>

#### 9.2 other information

there is no additional information
SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
see below "Conditions to avoid".

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
there is no additional information.

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

classification according to GHS (1272/2008/EC, CLP)

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
causes serious eye irritation.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germs cell mutagenicity
shall not be classified as germ cell mutagenic.

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].
SECTION 12: Ecological information

12.1 toxicity
harmful to aquatic life with long lasting effects.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
not assigned

14.4 packing group
not assigned

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.
Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR. not subject to RID.

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)
identifier number 9006
proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
class 9
number of cones/blue lights 0
International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU [European Union]</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
</tbody>
</table>
Safety Data Sheet
designed to Regulation (EC) No. 1907/2006 (REACH)

MagWash buffer-1

version number: GHS 1.0
date of compilation: 2020-04-07

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of</td>
</tr>
<tr>
<td></td>
<td>Annex VI to Regulation [EC] No 1272/2008</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of</td>
</tr>
<tr>
<td></td>
<td>&quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises</td>
</tr>
<tr>
<td></td>
<td>Dangereuses [Regulations concerning the International carriage of Dangerous</td>
</tr>
<tr>
<td></td>
<td>goods by Rail]</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data
transport of dangerous goods by road, rail and inland waterway [ADR/RID/ADN]. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport [IATA].

classification procedure
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

list of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>code</th>
<th>text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

disclaimer
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

<table>
<thead>
<tr>
<th>Substances</th>
<th>MagWash buffer-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>trade name</td>
<td>MagWash buffer-2</td>
</tr>
<tr>
<td>registration number (REACH)</td>
<td>not relevant (mixture)</td>
</tr>
</tbody>
</table>

1.2 relevant identified uses of the substance or mixture and uses advised against

| Relevant identified uses | for research use only, not for use in diagnostic or therapeutic procedures. |

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number

<table>
<thead>
<tr>
<th>Poison centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>country</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

emergency information service

+32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification according to Regulation (EC) No 1272/2008 (CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements

labelling according to Regulation (EC) No 1272/2008 (CLP)
not required

2.3 other hazards

results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

<table>
<thead>
<tr>
<th>Description of the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>This mixture does not contain any potentially hazardous products.</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
      covering of drains
   advice on how to clean up a spill
      wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
   appropriate containment techniques
      use of adsorbent materials.
   other information relating to spills and releases
      place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
   recommendations
      - measures to prevent fire as well as aerosol and dust generation
         use local and general ventilation. use only in well-ventilated areas.
   advice on general occupational hygiene
      wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of effects
      protect against external exposure, such as frost

7.3 specific end use(s)
   see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
   this information is not available.

8.2 exposure controls
   appropriate engineering controls
      general ventilation.
   individual protection measures (personal protective equipment)
      eye/face protection
         wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- other protection measures
take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.
respiratory protection
in case of inadequate ventilation wear respiratory protection.
environmental exposure controls
use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>parameter</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, fluid</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

#### 10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 possibility of hazardous reactions
no known hazardous reactions.

#### 10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

#### 10.5 incompatible materials
there is no additional information.

#### 10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 information on toxicological effects
test data are not available for the complete mixture.

**classification procedure**
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**classification according to GHS (1272/2008/EC, CLP)**
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

#### acute toxicity
shall not be classified as acutely toxic.

#### skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

#### serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

#### respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitizer.

#### germ cell mutagenicity
shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
MagWash buffer-2

version number: GHS 1.0  date of compilation: 2020-04-07

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

DNA Isolation Buffer (DIB)

registration number (REACH)
not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against

relevant identified uses
for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number

emergency information service
+32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

poison centre

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification according to Regulation (EC) No 1272/2008 (CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements

labelling according to Regulation (EC) No 1272/2008 (CLP)
not required

2.3 other hazards

results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

description of the mixture

This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products
nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up

advice on how to contain a spill
covering of drains

advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

appropriate containment techniques
use of adsorbent materials.

other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.

individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>appearance physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>appearance colour</td>
<td>colourless</td>
</tr>
<tr>
<td>appearance odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, fluid</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

**10.1 reactivity**
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

**10.2 chemical stability**
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.3 possibility of hazardous reactions**
no known hazardous reactions.

**10.4 conditions to avoid**
there are no specific conditions known which have to be avoided.

**10.5 incompatible materials**
there is no additional information.

**10.6 hazardous decomposition products**
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

**11.1 information on toxicological effects**
test data are not available for the complete mixture.

**classification procedure**
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**classification according to GHS (1272/2008/EC, CLP)**
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**acute toxicity**
shall not be classified as acutely toxic.

**skin corrosion/irritation**
shall not be classified as corrosive/irritant to skin.

**serious eye damage/eye irritation**
shall not be classified as seriously damaging to the eye or eye irritant.

**respiratory or skin sensitisation**
shall not be classified as a respiratory or skin sensitiser.

**germ cell mutagenicity**
shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
DNA Isolation Buffer (DIB)

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**


**classification procedure**

Physical and chemical properties: the classification is based on tested mixture.

Health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

<table>
<thead>
<tr>
<th>trade name</th>
<th>proteinase K</th>
</tr>
</thead>
<tbody>
<tr>
<td>registration number (REACH)</td>
<td>not relevant (mixture)</td>
</tr>
</tbody>
</table>

1.2 relevant identified uses of the substance or mixture and uses advised against

<table>
<thead>
<tr>
<th>relevant identified uses</th>
<th>for research use only, not for use in diagnostic or therapeutic procedures.</th>
</tr>
</thead>
</table>

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number

<table>
<thead>
<tr>
<th>emergency information service</th>
<th>+32 4 364 20 50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>poison centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
</tr>
<tr>
<td>telephone</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification according to Regulation (EC) No 1272/2008 (CLP)

<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4R</td>
<td>respiratory sensitisation</td>
<td>1</td>
<td>Resp. Sens. 1</td>
<td>H334</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

2.2 label elements

labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word danger
- pictograms
 GH508

- hazard statements
 H334 may cause allergy or asthma symptoms or breathing difficulties if inhaled.
- precautionary statements
P261 avoid breathing dust/fume/gas/mist/vapours/spray.
P284 in case of inadequate ventilation wear respiratory protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 if experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P501 dispose of contents/container to industrial combustion plant.

- hazardous ingredients for labelling
Proteinase, tritirachium album serine

2.3 other hazards
results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proteinase, tritirachium album serine</td>
<td>CAS No 39450-01-6</td>
<td>2</td>
<td>Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Resp. Sens. 1A / H334</td>
<td>![ ]</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 description of first aid measures
general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
none
SECTION 5: Firefighting measures

5.1 extinguishing media
   suitable extinguishing media
   water spray, BC-powder, carbon dioxide (CO2)
   unsuitable extinguishing media
   water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters
   in case of fire and/or explosion do not breathe fumes. coordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
   for non-emergency personnel
   remove persons to safety.
   for emergency responders
   wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
   keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
   covering of drains
   advice on how to clean up a spill
   wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
   appropriate containment techniques
   use of adsorbent materials.
   other information relating to spills and releases
   place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
   recommendations
   - measures to prevent fire as well as aerosol and dust generation
     use local and general ventilation. use only in well-ventilated areas.
   advice on general occupational hygiene
   wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingsuffs.
7.2 **conditions for safe storage, including any incompatibilities**

control of effects

protect against external exposure, such as frost

7.3 **specific end use(s)**

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 **control parameters**

this information is not available.

8.2 **exposure controls**

appropriate engineering controls

- general ventilation.

individual protection measures (personal protective equipment)

- eye/face protection
  - wear eye/face protection.

- skin protection
  - hand protection
    - wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
  - other protection measures
    - take recovery periods for skin regeneration. preventive skin protection [barrier creams/ointments] is recommended. wash hands thoroughly after handling.

respiratory protection

- in case of inadequate ventilation wear respiratory protection.

environmental exposure controls

- use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 **information on basic physical and chemical properties**

**appearance**

<table>
<thead>
<tr>
<th>physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>
### Other safety parameters

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>not determined</td>
</tr>
</tbody>
</table>

### Partition coefficient

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>{\textit{n}}-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>none</td>
</tr>
</tbody>
</table>

### Other information

There is no additional information.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below “Conditions to avoid” and “Incompatible materials”.

#### 10.2 Chemical stability

See below “Conditions to avoid”.

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

There is no additional information.
10.6 **hazardous decomposition products**
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

11.1 **information on toxicological effects**
test data are not available for the complete mixture.

**classification procedure**
the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**classification according to GHS (1272/2008/EC, CLP)**

- **acute toxicity**
  shall not be classified as acutely toxic.

- **skin corrosion/irritation**
  shall not be classified as corrosive/irritant to skin.

- **serious eye damage/eye irritation**
  shall not be classified as seriously damaging to the eye or eye irritant.

- **respiratory or skin sensitisation**
  may cause allergy or asthma symptoms or breathing difficulties if inhaled.

- **germ cell mutagenicity**
  shall not be classified as germ cell mutagenic.

- **carcinogenicity**
  shall not be classified as carcinogenic.

- **reproductive toxicity**
  shall not be classified as a reproductive toxicant.

- **specific target organ toxicity - single exposure**
  shall not be classified as a specific target organ toxicant (single exposure).

- **specific target organ toxicity - repeated exposure**
  shall not be classified as a specific target organ toxicant (repeated exposure).

- **aspiration hazard**
  shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

12.1 **toxicity**
shall not be classified as hazardous to the aquatic environment.

12.2 **persistence and degradability**
data are not available.

12.3 **bioaccumulative potential**
data are not available.

12.4 **mobility in soil**
data are not available.
12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
  do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
  completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
  not subject to transport regulations

14.2 UN proper shipping name
  not relevant

14.3 transport hazard class(es)
  none

14.4 packing group
  not assigned to a packing group

14.5 environmental hazards
  non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
  there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
  the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
  not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
  not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
  not subject to ICAO-IATA.
SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU [European Union]</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation [EC] No 1272/2008</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>Resp. Sens.</td>
<td>Respiratory sensitisation</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


**classification procedure**

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**list of relevant phrases (code and full text as stated in chapter 2 and 3)**

<table>
<thead>
<tr>
<th>code</th>
<th>text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled.</td>
</tr>
</tbody>
</table>

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

disclaimer

dischl
section 1: identification of the substance/mixture and of the company/undertaking

1.1 product identifier
   trade name: Primer pair for meDNA spike-in ctrl
   registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
   relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
   Diagenode SA
   LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
   4102 Seraing
   Belgium
   telephone: +32 4 364 20 50
   e-mail: info@diagenode.com

1.4 emergency telephone number
   emergency information service: +32 4 364 20 50
   this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<p>| poison centre                                                                 |</p>
<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

section 2: hazards identification

2.1 classification of the substance or mixture
   classification according to Regulation (EC) No 1272/2008 (CLP)
   this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
   labelling according to Regulation (EC) No 1272/2008 (CLP)
   not required

2.3 other hazards
   results of PBT and vPvB assessment
   this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

section 3: composition/information on ingredients

3.1 substances
   not relevant (mixture)

3.2 mixtures
   description of the mixture
   This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material [e.g. cloth, fleece]. collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage
7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection
8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.
individual protection measures [personal protective equipment]
eye/face protection
wear eye/face protection.
skin protection

- hand protection
wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1 reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions

No known hazardous reactions.

10.4 conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 incompatible materials

There is no additional information.

10.6 hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal–relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number  
not subject to transport regulations

14.2 UN proper shipping name 
not relevant

14.3 transport hazard class(es)  
none

14.4 packing group  
not assigned to a packing group

14.5 environmental hazards  
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user  
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code  
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)  
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)  
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment  
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labeling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to Regulation [EC] No. 1907/2006 (REACH)

Primer pair for meDNA spike-in ctrl

version number: GHS 1.0

date of compilation: 2020-04-07

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships</td>
</tr>
<tr>
<td></td>
<td>(abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des</td>
</tr>
<tr>
<td></td>
<td>marchandises Dangereuses [Regulations concerning the International</td>
</tr>
<tr>
<td></td>
<td>carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data

classification procedure
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

<table>
<thead>
<tr>
<th>trade name</th>
<th>Primer pair for unDNA spike-in ctrl</th>
</tr>
</thead>
<tbody>
<tr>
<td>registration number (REACH)</td>
<td>not relevant (mixture)</td>
</tr>
</tbody>
</table>

1.2 relevant identified uses of the substance or mixture and uses advised against

| relevant identified uses                     | for research use only, not for use in diagnostic or therapeutic procedures. |

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number

<table>
<thead>
<tr>
<th>emergency information service</th>
<th>+32 4 364 20 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM</td>
<td></td>
</tr>
</tbody>
</table>

### poison centre

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification according to Regulation (EC) No 1272/2008 (CLP)

this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements

labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

2.3 other hazards

results of PBT and vPvB assessment

this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

<table>
<thead>
<tr>
<th>description of the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>This mixture does not contain any potentially hazardous products.</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide [CO2]

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides [NOx]

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 **methods and material for containment and cleaning up**

- advice on how to contain a spill
  - covering of drains
- advice on how to clean up a spill
  - wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselguhr (diatomite), sand, universal binder
- appropriate containment techniques
  - use of adsorbent materials.
- other information relating to spills and releases
  - place in appropriate containers for disposal. Ventilate affected area.

6.4 **reference to other sections**

- hazardous combustion products: see section 5.
- personal protective equipment: see section 8.
- incompatible materials: see section 10.
- disposal considerations: see section 13.

**SECTION 7: Handling and storage**

7.1 **precautions for safe handling**

- recommendations
  - measures to prevent fire as well as aerosol and dust generation
    - use local and general ventilation. Use only in well-ventilated areas.
  - advice on general occupational hygiene
    - wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 **conditions for safe storage, including any incompatibilities**

- control of effects
- protect against external exposure, such as frost

7.3 **specific end use(s)**

- See section 16 for a general overview.

**SECTION 8: Exposure controls/personal protection**

8.1 **control parameters**

- This information is not available.

8.2 **exposure controls**

- appropriate engineering controls
  - general ventilation.
- individual protection measures (personal protective equipment)
  - eye/face protection
    - Wear eye/face protection.
### Primer pair for unDNA spike-in ctrl

**Skin Protection**

- **Hand Protection**
  - Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- **Other Protection Measures**
  - Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

**Respiratory Protection**

- In case of inadequate ventilation wear respiratory protection.

**Environmental Exposure Controls**

- Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

### SECTION 9: Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other Safety Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>pH (value)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not relevant, fluid</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>This information is not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Information on this property is not available</td>
</tr>
</tbody>
</table>

**Partition Coefficient**

- n-octanol/water (log KOW)

  - This information is not available
### SECTION 10: Stability and reactivity

#### 10.1 reactivity

Concerning incompatibility: see below “Conditions to avoid” and “Incompatible materials”.

#### 10.2 chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 incompatible materials

There is no additional information.

#### 10.6 hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 information on toxicological effects

Test data are not available for the complete mixture.

**classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**classification according to GHS (1272/2008/EC, CLP)**

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

- **acute toxicity**
  - Shall not be classified as acutely toxic.

- **skin corrosion/irritation**
  - Shall not be classified as corrosive/irritant to skin.

- **serious eye damage/eye irritation**
  - Shall not be classified as seriously damaging to the eye or eye irritant.

- **respiratory or skin sensitisation**
  - Shall not be classified as a respiratory or skin sensitisier.

- **germ cell mutagenicity**
  - Shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number  
not subject to transport regulations

14.2 UN proper shipping name  
not relevant

14.3 transport hazard class(es)  
none

14.4 packing group  
not assigned to a packing group

14.5 environmental hazards  
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user  
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code  
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations  
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)  
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)  
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)  
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment  
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
key literature references and sources for data

classification procedure
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1 product identifier

- **trade name**: TSH2B primer pair
- **registration number (REACH)**: not relevant (mixture)
- **product code(s)**: C17011041

1.2 relevant identified uses of the substance or mixture and uses advised against

- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number

- emergency information service: +32 4 364 20 50
- this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazards identification**

2.1 classification of the substance or mixture

- classification according to Regulation [EC] No 1272/2008 (CLP)
  this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements

- labelling according to Regulation [EC] No 1272/2008 (CLP)
  not required

2.3 other hazards

- results of PBT and vPvB assessment
  this mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This product is composed of synthetic DNA oligonucleotides in an aqueous buffer solution. It does not contain any hazardous ingredients.

SECTION 4: First aid measures

4.1 description of first aid measures
general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 extinguishing media
suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
for non-emergency personnel
remove persons to safety.
for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
  use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
  wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
  protect against external exposure, such as frost

7.3 specific end use(s)
  see section 16 for a general overview.
SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
   general ventilation.

   individual protection measures (personal protective equipment)

   eye/face protection
   wear eye/face protection.

   skin protection
   - hand protection
     wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374, check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
   - other protection measures
     take recovery periods for skin regeneration. preventive skin protection [barrier creams/ointments] is recommended. wash hands thoroughly after handling.

   respiratory protection
   in case of inadequate ventilation wear respiratory protection.

   environmental exposure controls
   use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
</tr>
<tr>
<td>colour</td>
</tr>
<tr>
<td>odour</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

10.1 **reactivity**
- concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **chemical stability**
- the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **possibility of hazardous reactions**
- no known hazardous reactions.

10.4 **conditions to avoid**
- there are no specific conditions known which have to be avoided.

10.5 **incompatible materials**
- there is no additional information.

10.6 **hazardous decomposition products**
- reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

11.1 **information on toxicological effects**
- test data are not available for the complete mixture.

**classification procedure**
- the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**classification according to GHS (1272/2008/EC, CLP)**
- this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.
acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.
**SECTION 13: Disposal considerations**

### 13.1 waste treatment methods

- sewage disposal-relevant information
  - do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
- waste treatment of containers/packagings
  - completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

**remarks**

please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

---

**SECTION 14: Transport information**

### 14.1 UN number

- not subject to transport regulations

### 14.2 UN proper shipping name

- not relevant

### 14.3 transport hazard class(es)

- none

### 14.4 packing group

- not assigned to a packing group

### 14.5 environmental hazards

- non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 special precautions for user

- there is no additional information.

### 14.7 transport in bulk according to Annex II of MARPOL and the IBC Code

- the cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations**

- transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
  - not subject to ADR, RID and ADN.

- International Maritime Dangerous Goods Code (IMDG)
  - not subject to IMDG.

- International Civil Aviation Organization (ICAO-IATA/DGR)
  - not subject to ICAO-IATA.

---

**SECTION 15: Regulatory information**

### 15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.2 Chemical Safety Assessment

- chemical safety assessments for substances in this mixture were not carried out.
SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 **product identifier**
   - **trade name**: ChIP-seq grade GAPDH TSS primer pair
   - **registration number (REACH)**: not relevant (mixture)
   - **product code(s)**: C17011047

1.2 **relevant identified uses of the substance or mixture and uses advised against**
   - relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 **details of the supplier of the safety data sheet**
   - Diagenode SA
   - LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
   - 4102 Seraing
   - Belgium
   - telephone: +32 4 364 20 50
   - e-mail: info@diagenode.com

1.4 **emergency telephone number**
   - **emergency information service**: +32 4 364 20 50
   - this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 **classification of the substance or mixture**
   - classification according to Regulation [EC] No 1272/2008 (CLP)
     - this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 **label elements**
   - labelling according to Regulation [EC] No 1272/2008 (CLP)
     - not required

2.3 **other hazards**
   - results of PBT and vPvB assessment
     - this mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This product is composed of synthetic DNA oligonucleotides in an aqueous buffer solution. It does not contain any hazardous ingredients. This mixture does not contain any potentially hazardous products.

SECTION 4: First aid measures

4.1 description of first aid measures

general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 extinguishing media
suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)
unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
remove persons to safety.

for emergency responders
wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up

advice on how to contain a spill
covering of drains

advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

appropriate containment techniques
use of adsorbent materials.

other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling

recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.
SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.

individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.

skin protection
- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties
appearance

<table>
<thead>
<tr>
<th>physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>pH (value)</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability [solid, gas]</td>
<td>not relevant, (fluid)</td>
</tr>
</tbody>
</table>
**SECTION 10: Stability and reactivity**

10.1 **reactivity**

   concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **chemical stability**

   the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **possibility of hazardous reactions**

   no known hazardous reactions.

10.4 **conditions to avoid**

   there are no specific conditions known which have to be avoided.

10.5 **incompatible materials**

   there is no additional information.

10.6 **hazardous decomposition products**

   reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.
SECTION 11: Toxicological information

11.1 information on toxicological effects

test data are not available for the complete mixture.

classification procedure
 the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
 this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
 shall not be classified as acutely toxic.

skin corrosion/irritation
 shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
 shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
 shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity
 shall not be classified as germ cell mutagenic.

carcinogenicity
 shall not be classified as carcinogenic.

reproductive toxicity
 shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
 shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity - repeated exposure
 shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
 shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
 shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
 data are not available.

12.3 bioaccumulative potential
 data are not available.

12.4 mobility in soil
 data are not available.

12.5 results of PBT and vPvB assessment
 data are not available.
12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations
14.2 UN proper shipping name
not relevant
14.3 transport hazard class(es)
none
14.4 packing group
not assigned to a packing group
14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.
SECTION 16: Other information

indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>section</th>
<th>former entry (text/value)</th>
<th>actual entry (text/value)</th>
<th>safety-relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td></td>
<td>product code(s): C17011047</td>
<td>yes</td>
</tr>
</tbody>
</table>

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


transport of dangerous goods by road, rail and inland waterway [ADR/RID/ADN]. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport [IATA].

classification procedure

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
trade name: GenDNA Digestion buffer
registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium
telephone: +32 4 364 20 50
e-mail: info@diagenode.com

1.4 emergency telephone number
emergency information service: +32 4 364 20 50
this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
classification according to Regulation (EC) No 1272/2008 (CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
labelling according to Regulation (EC) No 1272/2008 (CLP)
not required

2.3 other hazards
results of PBT and vPvB assessment
this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes
- do not leave affected person unattended.
- remove victim out of the danger area.
- keep affected person warm, still and covered.
- take off immediately all contaminated clothing.
- in all cases of doubt, or when symptoms persist, seek medical advice.
- in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
- if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.
- provide fresh air.

following skin contact
- wash with plenty of soap and water.

following eye contact
- remove contact lenses, if present and easy to do. Continue rinsing.
- irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
- rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media
- water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
- water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products
- nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes.
- co-ordinate firefighting measures to the fire surroundings.
- do not allow firefighting water to enter drains or water courses.
- collect contaminated firefighting water separately.
- fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
- remove persons to safety.

for emergency responders
- wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

- keep away from drains, surface and ground water.
- retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wiped up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. Ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage
7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection
8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
skin protection
- hand protection
  wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
  take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
  use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>colour</td>
<td>colourless</td>
</tr>
<tr>
<td>odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, fluid</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td>not determined</td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidising properties | none

9.2 other information | there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below “Conditions to avoid” and “Incompatible materials”.

10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
there is no additional information.

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

acute toxicity
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitisier.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods
sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.
waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
GenDNA Digestion buffer

SECTION 14: Transport information

14.1 UN number  
not subject to transport regulations

14.2 UN proper shipping name  
not relevant

14.3 transport hazard class(es)  
none

14.4 packing group  
not assigned to a packing group

14.5 environmental hazards  
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user  
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code  
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)  
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)  
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)  
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment  
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
GenDNA Digestion buffer

version number: GHS 1.0

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**key literature references and sources for data**

**classification procedure**
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**disclaimer**
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
- trade name: GenDNA precipitant
- registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
- Diagenode SA
- LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
- 4102 Seraing
- Belgium
- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number
- emergency information service: +32 4 364 20 50
- this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
- classification according to Regulation (EC) No 1272/2008 (CLP)
- this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
- labelling according to Regulation (EC) No 1272/2008 (CLP)
- not required

2.3 other hazards
- results of PBT and vPvB assessment
- this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
- not relevant (mixture)

3.2 mixtures
- description of the mixture
- This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes
Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness, place person in the recovery position. Never give anything by mouth.

following inhalation
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

following skin contact
Wash with plenty of soap and water.

following eye contact
Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
Rinse mouth with water (only if the person is conscious). Do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 extinguishing media

Suitable extinguishing media
Water spray, BC-powder, carbon dioxide (CO2)

Unsuitable extinguishing media
Water jet

5.2 special hazards arising from the substance or mixture

Hazardous combustion products
Carbon monoxide (CO), carbon dioxide (CO2)

5.3 advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Remove persons to safety.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up

advice on how to contain a spill
covering of drains
advice on how to clean up a spill
wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
appropriate containment techniques
use of adsorbent materials.
other information relating to spills and releases
place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
recommendations
- measures to prevent fire as well as aerosol and dust generation
use local and general ventilation. use only in well-ventilated areas.
advice on general occupational hygiene
wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
control of effects
protect against external exposure, such as frost

7.3 specific end use(s)
see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
this information is not available.

8.2 exposure controls
appropriate engineering controls
general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
skin protection

- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. preventive skin protection [barrier creams/ointments] is recommended. wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
</tr>
<tr>
<td>colour</td>
</tr>
<tr>
<td>odour</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
</tr>
<tr>
<td>melting point/freezing point</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
</tr>
<tr>
<td>flash point</td>
</tr>
<tr>
<td>evaporation rate</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
</tr>
<tr>
<td>explosive limits</td>
</tr>
<tr>
<td>vapour pressure</td>
</tr>
<tr>
<td>density</td>
</tr>
<tr>
<td>vapour density</td>
</tr>
<tr>
<td>relative density</td>
</tr>
<tr>
<td>solubility[ies]</td>
</tr>
<tr>
<td>partition coefficient</td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
oxidisers

10.6 hazardous decomposition products
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on toxicological effects
test data are not available for the complete mixture.

classification procedure
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

classification according to GHS (1272/2008/EC, CLP)
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

delayed skin effects
shall not be classified as acutely toxic.

skin corrosion/irritation
shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation
shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation
shall not be classified as a respiratory or skin sensitisier.

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
GenDNA precipitant

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure
shall not be classified as a specific target organ toxicant (single exposure).

specific target organ toxicity - repeated exposure
shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal-relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number  
not subject to transport regulations

14.2 UN proper shipping name  
not relevant

14.3 transport hazard class(es)  
none

14.4 packing group  
not assigned to a packing group

14.5 environmental hazards  
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user  
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code  
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)  
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)  
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)  
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment  
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
GenDNA precipitant

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure
physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer
this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
- trade name: GenDNA TE
- registration number (REACH): not relevant (mixture)

1.2 relevant identified uses of the substance or mixture and uses advised against
- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
- Diagenode SA
- LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
- 4102 Seraing
- Belgium
- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number
- emergency information service:
  - +32 4 364 20 50
  - this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Poisons Information Service</td>
<td>United Kingdom</td>
<td></td>
<td>111</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
- classification according to Regulation (EC) No 1272/2008 (CLP)
  - this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
- labelling according to Regulation (EC) No 1272/2008 (CLP)
  - not required

2.3 other hazards
- results of PBT and vPvB assessment
  - this mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
- not relevant (mixture)

3.2 mixtures
- description of the mixture
  - This mixture does not contain any potentially hazardous products.
SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended, remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do not induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides (NOx)

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.
6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
   covering of drains
   advice on how to clean up a spill
       wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselguhr (diatomite), sand, universal binder
   appropriate containment techniques
       use of adsorbent materials.
   other information relating to spills and releases
       place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
   recommendations
       - measures to prevent fire as well as aerosol and dust generation
       use local and general ventilation. use only in well-ventilated areas.
   advice on general occupational hygiene
       wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of effects
       protect against external exposure, such as frost

7.3 specific end use(s)
       see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters
       this information is not available.

8.2 exposure controls
       appropriate engineering controls
           general ventilation.
       individual protection measures (personal protective equipment)
           eye/face protection
           wear eye/face protection.
skin protection
- hand protection
wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures
take recovery periods for skin regeneration. preventive skin protection [barrier creams/ointments] is recommended. wash hands thoroughly after handling.

respiratory protection
in case of inadequate ventilation wear respiratory protection.

environmental exposure controls
use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical state</td>
</tr>
<tr>
<td>colour</td>
</tr>
<tr>
<td>odour</td>
</tr>
</tbody>
</table>

other safety parameters

<table>
<thead>
<tr>
<th>parameter</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, fluid</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility[ies]</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
**GenDNA TE**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>oxidising properties</td>
<td>none</td>
</tr>
</tbody>
</table>

9.2 other information there is no additional information

### SECTION 10: Stability and reactivity

10.1 **reactivity**
Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 **chemical stability**
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 **possibility of hazardous reactions**
No known hazardous reactions.

10.4 **conditions to avoid**
There are no specific conditions known which have to be avoided.

10.5 **incompatible materials**
There is no additional information.

10.6 **hazardous decomposition products**
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

11.1 **information on toxicological effects**
Test data are not available for the complete mixture.

**classification procedure**
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**classification according to GHS (1272/2008/EC, CLP)**
This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**acute toxicity**
Shall not be classified as acutely toxic.

**skin corrosion/irritation**
Shall not be classified as corrosive/irritant to skin.

**serious eye damage/eye irritation**
Shall not be classified as seriously damaging to the eye or eye irritant.

**respiratory or skin sensitisation**
Shall not be classified as a respiratory or skin sensitiser.

**germ cell mutagenicity**
Shall not be classified as germ cell mutagenic.
carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

specific target organ toxicity – single exposure
shall not be classified as a specific target organ toxicant [single exposure].

specific target organ toxicity – repeated exposure
shall not be classified as a specific target organ toxicant [repeated exposure].

aspiration hazard
shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 toxicity
shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

12.5 results of PBT and vPvB assessment
data are not available.

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal–relevant information
do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings
completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks
please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 transport hazard class(es)
none

14.4 packing group
not assigned to a packing group

14.5 environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user
there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code
the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

GenDNA TE

version number: GHS 1.0
date of compilation: 2020-04-01

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure

physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier
- trade name: GenDNA RNAse (DNAse-free)
- registration number (REACH): not relevant (mixture)
- product code(s): C06060010

1.2 relevant identified uses of the substance or mixture and uses advised against
- relevant identified uses: for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet
- Diagenode SA
  LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
  4102 Seraing
  Belgium
- telephone: +32 4 364 20 50
- e-mail: info@diagenode.com

1.4 emergency telephone number
- emergency information service: +32 4 364 20 50
  this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

<table>
<thead>
<tr>
<th>poison centre</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service</td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1 classification of the substance or mixture
- classification according to Regulation (EC) No 1272/2008 (CLP)
  this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 label elements
- labelling according to Regulation (EC) No 1272/2008 (CLP)
  not required

2.3 other hazards
- results of PBT and vPvB assessment
  this mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture
This mixture does not contain any potentially hazardous products.

SECTION 4: First aid measures

4.1 description of first aid measures
general notes
do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation
if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact
wash with plenty of soap and water.

following eye contact
remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion
rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed
symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 extinguishing media
suitable extinguishing media
water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media
water jet

5.2 special hazards arising from the substance or mixture
hazardous combustion products
carbon monoxide [CO], carbon dioxide [CO2]

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures
   for non-emergency personnel
   remove persons to safety.
   for emergency responders
   wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions
   keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up
   advice on how to contain a spill
   covering of drains
   advice on how to clean up a spill
   wipe up with absorbent material [e.g. cloth, fleece]. collect spillage: sawdust, kieselgur (diatomite), sand, universal binder
   appropriate containment techniques
   use of adsorbent materials.
   other information relating to spills and releases
   place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections
   hazardous combustion products: see section 5. personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling
   recommendations
   - measures to prevent fire as well as aerosol and dust generation
     use local and general ventilation. use only in well-ventilated areas.
   advice on general occupational hygiene
     wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of effects
   protect against external exposure, such as frost

7.3 specific end use(s)
   see section 16 for a general overview.
SECTION 8: Exposure controls/personal protection

8.1 control parameters

<table>
<thead>
<tr>
<th>country</th>
<th>name of agent</th>
<th>CAS No</th>
<th>identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Ceiling-C [ppm]</th>
<th>Ceiling-C [mg/m³]</th>
<th>notation</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB</td>
<td>glycerol</td>
<td>56-81-5</td>
<td>WEL</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mist</td>
<td>EH40/2005</td>
</tr>
</tbody>
</table>

- **Ceiling-C**: ceiling value is a limit value above which exposure should not occur
- **mists**: as mists
- **STEL**: short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
- **TWA**: time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours (unless otherwise specified)

8.2 exposure controls

- **Appropriate engineering controls**: general ventilation.

- **Individual protection measures (personal protective equipment)**
  - **Eye/face protection**: wear eye/face protection.
  - **Skin protection**
    - **Hand protection**: wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
    - **Other protection measures**: take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.
  - **Respiratory protection**: in case of inadequate ventilation wear respiratory protection.
  - **Environmental exposure controls**: use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>
other safety parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapour density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>oxidising properties</td>
<td>none</td>
</tr>
</tbody>
</table>

9.2 other information

there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity
concerning incompatibility: see below “Conditions to avoid” and “Incompatible materials”.

10.2 chemical stability
the material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 possibility of hazardous reactions
no known hazardous reactions.

10.4 conditions to avoid
there are no specific conditions known which have to be avoided.

10.5 incompatible materials
oxidisers
10.6 **hazardous decomposition products**
reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

11.1 **information on toxicological effects**
test data are not available for the complete mixture.

**classification procedure**
the method for classification of the mixture is based on ingredients of the mixture [additivity formula].

**classification according to GHS (1272/2008/EC, CLP)**
this mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**acute toxicity**
shall not be classified as acutely toxic.

**skin corrosion/irritation**
shall not be classified as corrosive/irritant to skin.

**serious eye damage/eye irritation**
shall not be classified as seriously damaging to the eye or eye irritant.

**respiratory or skin sensitisation**
shall not be classified as a respiratory or skin sensitiser.

**germ cell mutagenicity**
shall not be classified as germ cell mutagenic.

**carcinogenicity**
shall not be classified as carcinogenic.

**reproductive toxicity**
shall not be classified as a reproductive toxicant.

**specific target organ toxicity - single exposure**
shall not be classified as a specific target organ toxicant [single exposure].

**specific target organ toxicity - repeated exposure**
shall not be classified as a specific target organ toxicant [repeated exposure].

**aspiration hazard**
shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

12.1 **toxicity**
shall not be classified as hazardous to the aquatic environment.

12.2 **persistence and degradability**
data are not available.

12.3 **bioaccumulative potential**
data are not available.

12.4 **mobility in soil**
data are not available.
12.5  results of PBT and vPvB assessment
       data are not available.

12.6  other adverse effects
       data are not available.

SECTION 13: Disposal considerations

13.1  waste treatment methods
       sewage disposal-relevant information
       do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

       waste treatment of containers/packagings
       completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

       remarks
       please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1  UN number  not subject to transport regulations

14.2  UN proper shipping name  not relevant

14.3  transport hazard class(es)  none

14.4  packing group  not assigned to a packing group

14.5  environmental hazards  non-environmentally hazardous acc. to the dangerous goods regulations

14.6  special precautions for user
       there is no additional information.

14.7  transport in bulk according to Annex II of MARPOL and the IBC Code
       the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
       not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)
       not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
       not subject to ICAO-IATA.
SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment

chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures [European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways]</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route [European Agreement concerning the International Carriage of Dangerous Goods by Road]</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>Ceiling-C</td>
<td>Ceiling value</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses [Regulations concerning the International carriage of Dangerous goods by Rail]</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TWA</td>
<td>Time-weighted average</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>WEL</td>
<td>Workplace exposure limit</td>
</tr>
</tbody>
</table>

key literature references and sources for data


classification procedure

physical and chemical properties: the classification is based on tested mixture.

health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).
disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.