# 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>
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<tbody>
<tr>
<td>ChIP-seq grade water</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2 – 9</td>
</tr>
<tr>
<td>hMeDIP buffer H1</td>
<td></td>
<td>1</td>
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</tr>
<tr>
<td>hmeDNA control</td>
<td></td>
<td>1</td>
<td></td>
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<td>20 – 27</td>
</tr>
<tr>
<td>meDNA control</td>
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<td>1</td>
<td></td>
<td></td>
<td>28 – 35</td>
</tr>
<tr>
<td>unDNA control</td>
<td></td>
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<tr>
<td>5-hmC monoclonal antibody (mouse)</td>
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<td>1</td>
<td></td>
<td></td>
<td>44 – 51</td>
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<tr>
<td>Mouse IgG</td>
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<td>52 – 60</td>
</tr>
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<td>DiaMag anti-mouse IgG coated magnetic beads</td>
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<td>61 – 69</td>
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<td>DNA Isolation Buffer (DIB)</td>
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<td></td>
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<td>86 – 93</td>
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<tr>
<td>proteinase K</td>
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<td>1</td>
<td>Resp. Sens. 1 / H334</td>
<td></td>
<td>94 – 102</td>
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<td>hmeDNA primer pair</td>
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<td>1</td>
<td></td>
<td></td>
<td>103 – 110</td>
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<td>meDNA primer pair</td>
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<td>1</td>
<td></td>
<td></td>
<td>111 – 118</td>
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<tr>
<td>unDNA primer pair</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>119 – 126</td>
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<tr>
<td>Mouse Sfi1 primer pair</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>127 – 134</td>
</tr>
</tbody>
</table>
**SECTION 1: Identification**

1.1 **product identifier**
- identification of the substance: **ChIP-seq grade water**
- 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 center</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American Association of Poison Control Centers</td>
<td></td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazard(s) identification**

2.1 **classification of the substance or mixture**

2.2 **label elements**

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**
- name of substance: **ChIP-seq grade water**
- CAS No: 7732-18-5
- molecular formula: H2O
- molar mass: 18.02 g/mol
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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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

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<thead>
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<th>property</th>
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<tr>
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<tr>
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<td>flash point</td>
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</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
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<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
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<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
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<td>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor 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>

**solubility]**

- 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
oxidizing 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
this substance does not meet the criteria for classification.

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 sensitization
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
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question

national regulations (United States)

VOC content

industry or sector specific available guidance(s)

NPCA-HMIS® III

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<thead>
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<th>category</th>
<th>rating</th>
<th>description</th>
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<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
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</table>

NFPA® 704
### category of hazard

<table>
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<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
</tbody>
</table>

### Special hazard

15.2 **Chemical Safety Assessment**

no Chemical Safety Assessment has been carried out for this substance.

### SECTION 16: Other information, including date of preparation or last revision

#### abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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 or rail (49 CFR US DOT), International Maritime Dangerous Goods Code (IMDG), Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### 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

1.1 product identifier
trade name
hMeDIP buffer H1

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 center</th>
<th>name</th>
<th>telephone</th>
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<tbody>
<tr>
<td></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
- signal word not required
- pictograms not required

2.3 other hazards
there is no additional information.

hazards not otherwise classified
harmful to aquatic life with long lasting effects [GHS category 3: aquatic toxicity - acute and/or chronic].

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>
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<tbody>
<tr>
<td>Disodium hydrogen ortho-phosphate</td>
<td>CAS No 7558-79-4</td>
<td>≤ 2</td>
<td>Acute Tox. 3 / H331</td>
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<td>Sodium dihydrogen ortho-phosphate</td>
<td>CAS No 7558-80-7</td>
<td>≤ 2</td>
<td>Acute Tox. 3 / H331</td>
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</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: Fire-fighting 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 vapors/dust/aerosols/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 the 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>
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<tbody>
<tr>
<td>color</td>
<td>colorless</td>
</tr>
<tr>
<td>odor</td>
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</table>

other safety parameters

<table>
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<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>
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<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].

This mixture does not meet the criteria for classification.
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 sensitization
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
harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>name of substance</th>
<th>CAS No</th>
<th>endpoint</th>
<th>value</th>
<th>species</th>
<th>exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium hydrogenorthophosphate</td>
<td>7558-79-4</td>
<td>LC50</td>
<td>&gt;100 mg/l</td>
<td>fish</td>
<td>96 h</td>
</tr>
<tr>
<td>Disodium hydrogenorthophosphate</td>
<td>7558-79-4</td>
<td>EC50</td>
<td>&gt;100 mg/l</td>
<td>aquatic invertebrates</td>
<td>48 h</td>
</tr>
<tr>
<td>Disodium hydrogenorthophosphate</td>
<td>7558-79-4</td>
<td>ErC50</td>
<td>&gt;100 mg/l</td>
<td>algae</td>
<td>72 h</td>
</tr>
<tr>
<td>Sodium dihydrogenorthophosphate</td>
<td>7558-80-7</td>
<td>LC50</td>
<td>&gt;100 mg/l</td>
<td>fish</td>
<td>96 h</td>
</tr>
<tr>
<td>Sodium dihydrogenorthophosphate</td>
<td>7558-80-7</td>
<td>EC50</td>
<td>&gt;100 mg/l</td>
<td>aquatic invertebrates</td>
<td>48 h</td>
</tr>
<tr>
<td>Sodium dihydrogenorthophosphate</td>
<td>7558-80-7</td>
<td>ErC50</td>
<td>&gt;100 mg/l</td>
<td>algae</td>
<td>72 h</td>
</tr>
</tbody>
</table>
aquatic toxicity (chronic) of components of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>CAS No</th>
<th>endpoint</th>
<th>value</th>
<th>species</th>
<th>exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium hydrogenorthophosphate</td>
<td>7558-79-4</td>
<td>EC50</td>
<td>(\geq 1,000 \text{ mg/l})</td>
<td>microorganisms</td>
<td>3 h</td>
</tr>
<tr>
<td>Sodium dihydrogenorthophosphate</td>
<td>7558-80-7</td>
<td>EC50</td>
<td>(\geq 1,000 \text{ mg/l})</td>
<td>microorganisms</td>
<td>3 h</td>
</tr>
</tbody>
</table>

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/packages
  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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
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<td>/</td>
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</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
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</table>

NFPA® 704

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
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<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td>0</td>
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</tbody>
</table>

15.2 Chemical Safety Assessment
chemical safety assessments for substances in this mixture were not carried out.
SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response [e.g. on growth] during a specified time interval</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</td>
</tr>
<tr>
<td>ErC50</td>
<td>≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control</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>LC50</td>
<td>Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>RTECS</td>
<td>Registry of Toxic Effects of Chemical Substances [database of NIOSH with toxicological information]</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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 or rail (49 CFR US DOT). 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>H331</td>
<td>Toxic if inhaled.</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

1.1 product identifier
trade name
hmeDNA control

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>
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<th>poison center</th>
<th>name</th>
<th>telephone</th>
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<tbody>
<tr>
<td></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
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: Fire-fighting 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. 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 vapors/dust/aerosols/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 feedingsuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of the 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

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<thead>
<tr>
<th>appearance</th>
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<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
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<td>color</td>
<td>colorless</td>
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<tr>
<td>odor</td>
<td>odorless</td>
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</table>

other safety parameters

<table>
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</thead>
<tbody>
<tr>
<td>pH (value)</td>
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</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>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor 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>
auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidizing properties | none

9.2 other information | there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity
cconcerning 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].

this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
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</tr>
</tbody>
</table>

NFPA® 704
### Category, Degree of Hazard, Description

<table>
<thead>
<tr>
<th>Category</th>
<th>Degree of Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
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</table>

### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description of Used Abbreviations</th>
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<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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 or rail (49 CFR US DOT), 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

1.1 product identifier

trade name: meDNA control

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></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture

this mixture does not meet the criteria for classification.

2.2 label elements

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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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

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<tr>
<th>appearance</th>
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<tbody>
<tr>
<td>physical state</td>
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<tr>
<td>odor</td>
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other safety parameters

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<td>initial boiling point and boiling range</td>
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</tr>
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<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
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<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor 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>
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</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].

this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

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<tr>
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<th>description</th>
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</thead>
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<td>Chronic</td>
<td>/</td>
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</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
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<tr>
<td>Personal protection</td>
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NFPA® 704
### Category Degree of Hazard Description

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<tr>
<th>Category</th>
<th>Degree of Hazard</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Flammability</td>
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<td>Material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>Material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>Material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td>0</td>
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#### 15.2 Chemical Safety Assessment

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

#### SECTION 16: Other information, including date of preparation or last revision

**Abbreviations and Acronyms**

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<thead>
<tr>
<th>abbr.</th>
<th>Descriptions of Used Abbreviations</th>
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<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
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</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.
unDNA control

SECTION 1: Identification

1.1 product identifier

trade name: unDNA control

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>
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<th>country</th>
<th>name</th>
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<tbody>
<tr>
<td></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture


this mixture does not meet the criteria for classification.

2.2 label elements


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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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

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<thead>
<tr>
<th>physical state</th>
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other safety parameters

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<td>flash point</td>
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<td>evaporation rate</td>
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<td>not relevant, (fluid)</td>
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<td>explosive limits</td>
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<td>not determined</td>
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<td>density</td>
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<tr>
<td>vapor density</td>
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<tr>
<td>relative density</td>
<td>information on this property is not available</td>
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<tr>
<td>solubility[ies]</td>
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<tr>
<td>partition coefficient</td>
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<td>- n-octanol/water (log KOW)</td>
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unDNA control

version number: GHS 1.0

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<td>explosive properties</td>
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<tr>
<td>oxidizing properties</td>
<td>none</td>
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</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).

this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question

national regulations (United States)

VOC content

industry or sector specific available guidance(s)

NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
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<tr>
<td>Chronic</td>
<td>/</td>
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</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
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NFPA® 704
### Flammability

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<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
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<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
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### Health

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<th>description</th>
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<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
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### Instability

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<td>Instability</td>
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<td>material that is normally stable, even under fire conditions</td>
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### Special hazard

<table>
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### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

#### abbreviations and acronyms

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<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<td>49 CFR. U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>
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<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
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<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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

1.1 Product identifier

- trade name: 5-hmC monoclonal antibody (mouse)
- product code(s): C15200200

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 center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
<tr>
<td>name</td>
</tr>
<tr>
<td>telephone</td>
</tr>
<tr>
<td>American Association of Poison Control Centers</td>
</tr>
</tbody>
</table>

Section 2: Hazard(s) identification

2.1 Classification of the substance or mixture

- this mixture does not meet the criteria for classification.

2.2 Label elements

- 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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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>color</td>
<td>colorless</td>
</tr>
<tr>
<td>odor</td>
<td>odorless</td>
</tr>
</tbody>
</table>

other safety parameters  
| pH (value)      | not determined |
| melting point/freezing point | not determined |
| initial boiling point and boiling range | not determined |
| flash point     | not determined |
| evaporation rate | not determined |
| flammability (solid, gas) | not relevant, (fluid) |
| explosive limits | not determined |
| vapor pressure  | not determined |
| density         | not determined |
| vapor density   | this information is not available |
| relative density | information on this property is not available |
| solubility[ies] | not determined |

partition coefficient  
- n-octanol/water (log KOW) | this information is not available |
### 5-hmC monoclonal antibody (mouse)

**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].

  - this mixture does not meet the criteria for classification.

- **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 sensitization**
  - 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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
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<tr>
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<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704
5-hmC monoclonal antibody (mouse)

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment

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

SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
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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

1.1 product identifier
   trade name: Mouse IgG
   product code(s): C15400001

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 center</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Association of Poison Control Centers</td>
<td></td>
<td></td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
   this mixture does not meet the criteria for classification.

2.2 label elements
   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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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>
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<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
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<td></td>
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<td>NIOSH REL</td>
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<td>PEL</td>
<td>15</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>i, dust</td>
<td>29 CFR 1910.1000</td>
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<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
<td>REL</td>
<td>5</td>
<td>(10 h)</td>
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<td></td>
<td></td>
<td></td>
<td>r</td>
<td>NIOSH REL</td>
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<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
<td>PEL</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>r, dust</td>
<td>29 CFR 1910.1000</td>
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</table>
occupational exposure limit values (Workplace Exposure Limits)

<table>
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<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>
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</thead>
<tbody>
<tr>
<td>US</td>
<td>sucrose (saccharose)</td>
<td>57-50-1</td>
<td>TLV®</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH® 2019</td>
</tr>
</tbody>
</table>

Ceiling-C: ceiling value is a limit value above which exposure should not occur
dust: as dust
i: inhalable fraction
r: respirable fraction
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 time-weighted average (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

appearance

<table>
<thead>
<tr>
<th>physical state</th>
<th>color</th>
<th>odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid</td>
<td>colorless</td>
<td>odorless</td>
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</table>
### Other safety parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>pH (value)</td>
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</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>
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<tr>
<td>Flammability [solid, gas]</td>
<td>not relevant, (fluid)</td>
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<tr>
<td>Explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>information on this property is not available</td>
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<tr>
<td>Solubility(ies)</td>
<td>not determined</td>
</tr>
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<td>Partition coefficient - n-octanol/water (log KOW)</td>
<td>this information is not available</td>
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<td>Auto-ignition temperature</td>
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<tr>
<td>Viscosity</td>
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</tr>
<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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</tr>
</tbody>
</table>

### Partition coefficient

<table>
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<tbody>
<tr>
<td>- n-octanol/water (log KOW)</td>
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</table>

### Section 10: Stability and reactivity

#### 10.1 Reactivity

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

#### 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].

this mixture does not meet the criteria for classification.

- **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 sensitization**
  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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question (national regulations (United States))

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

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<th>description</th>
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<td>/</td>
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</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
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NFPA® 704

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</tr>
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<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
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<td>Instability</td>
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<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
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</table>

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

SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
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<tr>
<td>Ceiling-C</td>
<td>Ceiling value</td>
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**Mouse IgG**

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>
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<td>NIOSH REL</td>
<td>National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
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<tr>
<td>PEL</td>
<td>Permissible exposure limit</td>
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<tr>
<td>ppm</td>
<td>Parts per million</td>
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<td>STEL</td>
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</tr>
<tr>
<td>TLV®</td>
<td>Threshold Limit Values</td>
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<td>TWA</td>
<td>Time-weighted average</td>
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<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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

1.1 product identifier

trade name: DiaMag anti-mouse IgG coated magnetic beads

product code(s): C03010022

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

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<td></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture

this mixture does not meet the criteria for classification.

2.2 label elements

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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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

| physical state | liquid (suspension) |
| color          | brown              |
| odor           | odorless           |

other safety parameters

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### DiaMag anti-mouse IgG coated magnetic beads

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<tr>
<td>oxidizing properties</td>
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</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].


   this mixture does not meet the criteria for classification.
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 sensitization
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/packages

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 assigned

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 or rail (49 CFR US DOT)

not subject to transport regulations.

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 specific for the product in question

national regulations (United States)

VOC content


industry or sector specific available guidance(s)

NPCA-HMIS® III

DiaMag anti-mouse IgG coated magnetic beads

version number: GHS 1.0  date of compilation: 2020-03-31

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<th>category</th>
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<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
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<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
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<td>Personal protection</td>
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NFPA® 704


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<th>degree of hazard</th>
<th>description</th>
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<tr>
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</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
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</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment

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

SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</td>
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<td>Occupational Safety and Health Administration [United States]</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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

1.1 product identifier

trade name

hMeDIP buffer H2

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>
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<tr>
<th>poison center</th>
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<tr>
<td>American Association of Poison Control Centers</td>
<td></td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture

this mixture does not meet the criteria for classification.

2.2 label elements

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: Fire-fighting 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 vapors/dust/aerosols/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 the 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>
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<tr>
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other safety parameters

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<td>evaporation rate</td>
<td>not determined</td>
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<td>flammability (solid, gas)</td>
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<td>explosive limits</td>
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<td>not determined</td>
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<tr>
<td>density</td>
<td>not determined</td>
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<td>vapor density</td>
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<td>partition coefficient</td>
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<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].


this mixture does not meet the criteria for classification.

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 sensitization

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/packages
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 assigned

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 or rail (49 CFR US DOT)**
not subject to transport regulations.

**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 specific for the product in question

**national regulations (United States)**

**VOC content**

**industry or sector specific available guidance(s)**

**NPCA-HMIS® III**

<table>
<thead>
<tr>
<th>category</th>
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<th>description</th>
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<tr>
<td>Chronic</td>
<td>/</td>
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</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
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<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
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<td>Personal protection</td>
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**NFPA® 704**
**hMeDIP buffer H2**

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<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
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</table>

15.2 **Chemical Safety Assessment**

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

SECTION 16: Other information, including date of preparation or last revision

**abbreviations and acronyms**

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
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<tbody>
<tr>
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<td>Dangerous Goods Regulations [see IATA/DGR]</td>
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<td>EPA</td>
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<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
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<td>Occupational Safety and Health Administration (United States)</td>
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<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
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<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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

1.1 product identifier
trade name
hMeDIP buffer H3

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 center</th>
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<tr>
<td>American Association of Poison Control Centers</td>
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<td>1-800-222-1222</td>
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SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
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: Fire-fighting 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.
- 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 vapors/dust/aerosols/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
appropriated 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 the 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

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<td>physical state</td>
<td>liquid</td>
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<td>color</td>
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other safety parameters

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<td>not determined</td>
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<td>density</td>
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auto-ignition temperature | not determined
viscosity | not determined
explosive properties | none
oxidizing 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].

this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)

NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
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</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
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</tbody>
</table>

NFPA® 704
### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

#### abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
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</table>

#### key literature references and sources for data


Transport of dangerous goods by road or rail (49 CFR US DOT), 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

1.1 product identifier
trade name
DNA Isolation Buffer (DIB)

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

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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

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<tr>
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<td>physical state</td>
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<td>odor</td>
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</table>

other safety parameters

<table>
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<td>pH (value)</td>
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<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
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<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
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<td>explosive limits</td>
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</tr>
<tr>
<td>vapor pressure</td>
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</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor density</td>
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</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
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</tr>
<tr>
<td>partition coefficient</td>
<td></td>
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<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].

this mixture does not meet the criteria for classification.

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

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
DNA Isolation Buffer (DIB)

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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question

national regulations (United States)

VOC content

industry or sector specific available guidance(s)

NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704
DNA Isolation Buffer (DIB)

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
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<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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**

1.1 **product identifier**

trade name: **proteinase K**

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 center**

<table>
<thead>
<tr>
<th>country</th>
<th>name</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazard(s) Identification**

2.1 **classification of the substance or mixture**


<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
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</thead>
<tbody>
<tr>
<td>A.4R</td>
<td>respiratory sensitization</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**


- signal word: danger
- pictograms: GHS08

- hazard statements:
  - H334: may cause allergy or asthma symptoms or breathing difficulties if inhaled.
- precautionary statements
P261 avoid breathing dust/fume/gas/mist/vapors/spray.
P285 in case of inadequate ventilation wear respiratory protection.
P304+P341 if inhaled: If breathing is difficult, 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>
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</thead>
<tbody>
<tr>
<td>Proteinase, tritirachium album serine</td>
<td>CAS No 39450-01-6</td>
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<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: Fire-fighting 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 vapors/dust/aerosols/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
  - 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 the 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

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<thead>
<tr>
<th>physical state</th>
<th>liquid</th>
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### other safety parameters

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<td>explosive limits</td>
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<td>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
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<tr>
<td>vapor density</td>
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<tr>
<td>relative density</td>
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#### partition coefficient

<table>
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<td>auto-ignition temperature</td>
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<tr>
<td>viscosity</td>
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<td>explosive properties</td>
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<tr>
<td>oxidizing properties</td>
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</tbody>
</table>

### 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].

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)

NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>*</td>
<td>chronic (long-term) health effects may result from repeated overexposure</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 16: Other information, including date of preparation or last revision

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service [service that maintains the most comprehensive list of chemical substances]</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>
</tbody>
</table>
## proteinase K

### description of used abbreviations

<table>
<thead>
<tr>
<th>abbr.</th>
<th>description</th>
</tr>
</thead>
<tbody>
<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>
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<td>International Civil Aviation Organization</td>
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<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
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<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>Resp. Sens.</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>RTECS</td>
<td>Registry of Toxic Effects of Chemical Substances [database of NIOSH with toxicological information]</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>VOC</td>
<td>Volatile Organic Compounds</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

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

1.1 product identifier
trade name
hmeDNA primer pair

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 center</th>
<th>country</th>
<th>name</th>
<th>telephone</th>
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</thead>
<tbody>
<tr>
<td>American Association of Poison Control Centers</td>
<td></td>
<td>1-800-222-1222</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
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: Fire-fighting 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. 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 vapors/dust/aerosols/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 feedingsuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of the 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.
skine 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>
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</thead>
<tbody>
<tr>
<td>physical state</td>
<td>liquid</td>
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<td>color</td>
<td>colorless</td>
</tr>
<tr>
<td>odor</td>
<td>odorless</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>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor 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].

this mixture does not meet the criteria for classification.

cutaneous 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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)**
  - not subject to transport regulations.

- **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 specific for the product in question**

- **national regulations (United States)**
  - **VOC content**
  - **industry or sector specific available guidance(s)**
    - NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**NFPA® 704**

Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

**hmeDNA primer pair**

category | degree of hazard | description
---|---|---
Flammability | 0 | material that will not burn under typical fire conditions
Health | 0 | material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability | 0 | material that is normally stable, even under fire conditions

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**15.2 Chemical Safety Assessment**

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

**SECTION 16: Other information, including date of preparation or last revision**

**abbreviations and acronyms**

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<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
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</table>

**key literature references and sources for data**


transport of dangerous goods by road or rail (49 CFR US DOT), 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.
meDNA primer pair

SECTION 1: Identification

1.1 product identifier

trade name: meDNA primer pair

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

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</tr>
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<tbody>
<tr>
<td>American Association of Poison Control Centers</td>
<td>1-800-222-1222</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture


this mixture does not meet the criteria for classification.

2.2 label elements


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: Fire-fighting 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. 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 vapors/dust/aerosols/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 feedingsuffs.

7.2 conditions for safe storage, including any incompatibilities
   control of the 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>
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<tbody>
<tr>
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<td>liquid</td>
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<td>Color</td>
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<tr>
<td>Odor</td>
<td>odorless</td>
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</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>
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<td>Vapor pressure</td>
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Partition coefficient

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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].
this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

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<td>Flammability</td>
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<td>material that will not burn under typical fire conditions</td>
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<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
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<td>Personal protection</td>
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NFPA® 704
### meDNA primer pair

<table>
<thead>
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<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
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<tr>
<td>Special hazard</td>
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#### 15.2 Chemical Safety Assessment

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

**SECTION 16: Other information, including date of preparation or last revision**

**abbreviations and acronyms**

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tr>
<td>49 CFR US DOT</td>
<td>49 CFR  U.S. Department of Transportation</td>
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<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
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<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
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<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>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
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<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

1.1 product identifier
 trade name
unDNA primer pair

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 center

<table>
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<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture
this mixture does not meet the criteria for classification.

2.2 label elements
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

s symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

**SECTION 5: Fire-fighting 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. 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 vapors/dust/aerosols/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 feedingsuffs.

7.2 conditions for safe storage, including any incompatibilities

control of the 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

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unDNA primer pair

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<td>oxidizing properties</td>
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</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].

this mixture does not meet the criteria for classification.

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 sensitization  
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

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<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
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NFPA® 704
## 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

#### abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
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<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
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<td>International Air Transport Association</td>
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<td>International Maritime Dangerous Goods Code</td>
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<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

1.1 product identifier

trade name

Mouse Sfi1 primer pair

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>
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<th>poison center</th>
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<tr>
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<td>1-800-222-1222</td>
</tr>
</tbody>
</table>

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture

this mixture does not meet the criteria for classification.

2.2 label elements

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: Fire-fighting 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. 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 vapors/dust/aerosols/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 the 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>color</td>
<td>colorless</td>
</tr>
<tr>
<td>odor</td>
<td>odorless</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>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor 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
oxidizing 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].

this mixture does not meet the criteria for classification.

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 sensitization
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/packages
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 assigned

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 or rail (49 CFR US DOT)
not subject to transport regulations.

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 specific for the product in question
national regulations (United States)

VOC content

industry or sector specific available guidance(s)
NPCA-HMIS® III

<table>
<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>no significant risk to health</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704
### Table: Category and Degree of Hazard

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td>15.2</td>
<td></td>
</tr>
</tbody>
</table>

### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other information, including date of preparation or last revision

**abbreviations and acronyms**

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</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>OSHA</td>
<td>Occupational Safety and Health Administration (United States)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</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.