# OneDay ChIP kit

**C01010080**

**Flyleaf**

Date of compilation: 2020-06-23

## Bill of materials

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Number of pieces</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChIP Buffer 5x</td>
<td></td>
<td>1</td>
<td>Eye Dam. 1 / H318</td>
<td></td>
<td>2–12</td>
</tr>
<tr>
<td>Protease Inhibitor Mix</td>
<td></td>
<td>1</td>
<td>Flam. Liq. 4 / H227</td>
<td></td>
<td>13–23</td>
</tr>
<tr>
<td>Ab binding beads</td>
<td></td>
<td>1</td>
<td>Carc. 1A / H350 Flam. Liq. 2 / H225</td>
<td></td>
<td>24–35</td>
</tr>
<tr>
<td>rabbit IgG</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>36–44</td>
</tr>
<tr>
<td>5% BSA</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>45–52</td>
</tr>
<tr>
<td>DNA purifying slurry</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>53–60</td>
</tr>
<tr>
<td>proteinase K</td>
<td></td>
<td>1</td>
<td>Resp. Sens. 1 / H334</td>
<td></td>
<td>61–69</td>
</tr>
<tr>
<td>ChIP-seq grade water</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>70–77</td>
</tr>
</tbody>
</table>
SECTION 1: Identification

1.1 product identifier

trade name: ChIP Buffer 5x

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

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>
</tr>
</thead>
<tbody>
<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


<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.3</td>
<td>serious eye damage/eye irritation</td>
<td>1</td>
<td>Eye Dam. 1</td>
<td>H318</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

2.2 label elements


- signal word: danger
- pictograms: GHS05
- hazard statements: H318 causes serious eye damage.
- precautionary statements:
  - P280: wear eye protection/face protection.
  - P305+P351+P338: if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P310: immediately call a poison center/doctor.
Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

ChIP Buffer 5x

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

3.2 mixtures
description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>CAS No 9002-93-1</td>
<td>≤ 5</td>
<td>Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318</td>
<td><img src="image" alt="Pictograms" /></td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>CAS No 9016-45-9</td>
<td>≤ 5</td>
<td>Skin Irrit. 2 / H315 Eye Irrit. 2 / H319</td>
<td><img src="image" alt="Pictograms" /></td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 description of first-aid measures
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

- hazardous ingredients for labelling
  Triton X-100

2.3 other hazards
hazards not otherwise classified
- toxic to aquatic life with long lasting effects (GHS category 2: 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 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), carbon monoxide (CO), carbon dioxide (CO2)

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. if substance has entered a water course or sewer, inform the responsible authority.

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

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

7.1 precautions for safe handling

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

- packaging compatibilities
  only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls
  general ventilation.

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

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

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

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

### 9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>physical state</strong></td>
<td>liquid</td>
</tr>
<tr>
<td><strong>color</strong></td>
<td>colorless</td>
</tr>
<tr>
<td><strong>odor</strong></td>
<td>odorless</td>
</tr>
<tr>
<td><strong>pH (value)</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>melting point/freezing point</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>initial boiling point and boiling range</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>flash point</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>evaporation rate</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>flammability (solid, gas)</strong></td>
<td>not relevant, fluid</td>
</tr>
<tr>
<td><strong>explosive limits</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>vapor pressure</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>density</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>vapor density</strong></td>
<td>this information is not available</td>
</tr>
<tr>
<td><strong>relative density</strong></td>
<td>information on this property is not available</td>
</tr>
<tr>
<td><strong>solubility(ies)</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>partition coefficient</strong></td>
<td>this information is not available</td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
<tr>
<td><strong>auto-ignition temperature</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>viscosity</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>explosive properties</strong></td>
<td>none</td>
</tr>
<tr>
<td><strong>oxidizing properties</strong></td>
<td>none</td>
</tr>
</tbody>
</table>

### 9.2 other information

There is no additional information.
SECTION 10: Stability and reactivity

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

10.2 chemical stability
   see below "Conditions to avoid".

10.3 possibility of hazardous reactions
   no known hazardous reactions.

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

10.5 incompatible materials
   oxidizers

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
   causes serious eye damage.

   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
toxic 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>Nonylphenol, ethoxylated</td>
<td>9016-45-9</td>
<td>LC50</td>
<td>1.821 mg/l</td>
<td>aquatic invertebrates</td>
<td>48 h</td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>9016-45-9</td>
<td>EC50</td>
<td>20 mg/l</td>
<td>algae</td>
<td>48 h</td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>9016-45-9</td>
<td>ErC50</td>
<td>50 mg/l</td>
<td>algae</td>
<td>48 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
only packagings which are approved [e.g. acc. to DOT] may be used. completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

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

14.1 UN number 3082

14.2 UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

technical name [hazardous ingredients] Triton X-100, Nonylphenol, ethoxylated

14.3 transport hazard class(es)

class 9 [environmentally hazardous]

14.4 packing group III [substance presenting low danger]

14.5 environmental hazards hazardous to the aquatic environment

environmentally hazardous substance [aquatic environment] Triton X-100, Nonylphenol, ethoxylated

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)

| class     | 9    |
| danger label(s) | 9, fish and tree |
| packing group | III |
| environmental hazards | yes [hazardous to the aquatic environment] |
| special provisions [SP] | 8, 146, 173, 335, IB3, T4, TP1, TP29 |
| ERG No | 171 |

International Maritime Dangerous Goods Code (IMDG)

| UN number | 3082 |
| proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| class | 9 |
| marine pollutant | yes [hazardous to the aquatic environment] |
| packing group | III |
| danger label(s) | 9, fish and tree |
**ChIP Buffer 5x**

**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>3</td>
<td>major injury likely unless prompt action is taken and medical treatment is given</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
<td>material that must be preheated before ignition can occur</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**

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>DOT</td>
<td>Department of Transportation (USA)</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>EmS</td>
<td>Emergency Schedule</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>ERG No</td>
<td>Emergency Response Guidebook - Number</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport [IATA]</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>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>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
</tbody>
</table>
Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

ChIP Buffer 5x

version number: GHS 1.0
date of compilation: 2020-04-10

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<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>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
</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: Protease Inhibitor Mix
product code(s): C12010010/C12010011/C12010012

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

<table>
<thead>
<tr>
<th>section</th>
<th>hazard class</th>
<th>category</th>
<th>hazard class and category</th>
<th>hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.6</td>
<td>flammable liquid</td>
<td>4</td>
<td>Flam. Liq. 4</td>
<td>H227</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.
the most important adverse physicochemical, human health and environmental effects
the product is combustible and can be ignited by potential ignition sources.

2.2 label elements
- signal word: warning
- pictograms: not required
- hazard statements:
  H227 combustible liquid.
Precautionary statements

- P210 keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P280 wear protective gloves/eye protection/face protection.
- P370+P378 in case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
- P403+P235 store in a well-ventilated place. Keep cool.
- P501 dispose of contents/container to industrial combustion plant.

2.3 other hazards

results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>CAS No 67-68-5</td>
<td>≤ 100</td>
<td>Flam. Liq. 4 / H227</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
   - in case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.
   - hazardous combustion products
     - carbon monoxide (CO), carbon dioxide (CO2)

5.3 advice for firefighters
   - in case of fire and/or explosion do not breathe fumes. 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. avoidance of ignition sources. keep away from sources of ignition - No smoking. take pre-
cautionsary measures against static discharge. use only in well-ventilated areas. due to danger of explosion, prevent leak-
age of vapours into cellars, flues and ditches. ground/bond container and receiving equipment. use explosion-proof electric-
al/ventilating/lighting/equipment. use only non-sparking tools.
- specific notes/details
  places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are partic-
ularly prone to the presence of flammable substances or mixtures. vapors are heavier than air, spread along floors and form
explosive mixtures with air. vapors may form explosive mixtures with air.

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

managing of associated risks
- explosive atmospheres
  keep container tightly closed and in a well-ventilated place. use local and general ventilation. keep cool. protect from sun-
light.
- flammability hazards
  keep away from sources of ignition - No smoking. keep away from heat, hot surfaces, sparks, open flames and other ignition
sources. No smoking. take precautionary measures against static discharge. protect from sunlight.
- ventilation requirements
  use local and general ventilation. ground/bond container and receiving equipment.

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.

<table>
<thead>
<tr>
<th>name of substance</th>
<th>CAS No</th>
<th>endpoint</th>
<th>threshold level</th>
<th>protection goal, route of exposure</th>
<th>used in</th>
<th>exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>DNEL</td>
<td>484 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>DNEL</td>
<td>265 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>DNEL</td>
<td>200 mg/kg bw/day</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
</tbody>
</table>
relevant PNECs of components of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>CAS No</th>
<th>endpoint</th>
<th>threshold level</th>
<th>organism</th>
<th>environmental compartment</th>
<th>exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>PNEC</td>
<td>17 mg/l</td>
<td>aquatic organisms</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>PNEC</td>
<td>1.7 mg/l</td>
<td>aquatic organisms</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>PNEC</td>
<td>11 mg/l</td>
<td>aquatic organisms</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>PNEC</td>
<td>13.4 mg/kg</td>
<td>aquatic organisms</td>
<td>freshwater sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>PNEC</td>
<td>3.02 mg/kg</td>
<td>terrestrial organisms</td>
<td>soil</td>
<td>short-term (single instance)</td>
</tr>
</tbody>
</table>

8.2 exposure controls

appropiate 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>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[i(es)]</td>
<td>not determined</td>
</tr>
</tbody>
</table>

**partition coefficient**

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

**9.2 other information**

<table>
<thead>
<tr>
<th>Information</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>there is no additional information</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

**10.1 reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". the mixture contains reactive substances(s). risk of ignition.

If heated:

- risk of ignition

**10.2 chemical stability**

See below "Conditions to avoid".

**10.3 possibility of hazardous reactions**

No known hazardous reactions.
10.4 **conditions to avoid**

keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

hints to prevent fire or explosion

use explosion-proof electrical/ventilating/lighting/equipment. use only non-sparking tools. take precautionary measures against static discharge.

10.5 **incompatible materials**

oxidizers

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

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
solvent reclamation/regeneration.

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>2</td>
<td>material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur</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>2</td>
<td>material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur</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

indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>section</th>
<th>former entry (text/value)</th>
<th>actual entry (text/value)</th>
<th>safety-relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>trade name: protease inhibitor cocktail</td>
<td>trade name: Protease Inhibitor Mix</td>
<td>yes</td>
</tr>
<tr>
<td>1.1</td>
<td>product code(s): C12010011</td>
<td>product code(s): C12010010/C12010011/C12010012</td>
<td>yes</td>
</tr>
</tbody>
</table>

abbreviations and acronyms

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>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>DNEL</td>
<td>Derived No-Effect Level</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>Flam. Liq.</td>
<td>Flammable liquid</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>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>PNEC</td>
<td>Predicted No-Effect Concentration</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


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).
**Protease Inhibitor Mix**

**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>H227</td>
<td>Combustible liquid.</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 Ab binding beads

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></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>
</tr>
</thead>
<tbody>
<tr>
<td>A.6</td>
<td>carcinogenicity</td>
<td>1A</td>
<td>Carc. 1A</td>
<td>H350</td>
</tr>
<tr>
<td>B.6</td>
<td>flammable liquid</td>
<td>2</td>
<td>Flam. Liq. 2</td>
<td>H225</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

the most important adverse physicochemical, human health and environmental effects
the product is combustible and can be ignited by potential ignition sources.

2.2 label elements
- signal word danger
- pictograms GHS02, GHS08

- hazard statements
  H225 highly flammable liquid and vapor.
  H350 may cause cancer.
- precautionary statements

P202  do not handle until all safety precautions have been read and understood.
P210  keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233  keep container tightly closed.
P240  ground/bond container and receiving equipment.
P241  use explosion-proof electrical/ventilating/lighting equipment.
P242  use only non-sparking tools.
P243  take precautionary measures against static discharge.
P280  wear protective gloves/eye protection/face protection.
P303+P361+P353  if on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313  if exposed or concerned: Get medical advice/attention.
P370+P378  in case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P235  store in a well-ventilated place. Keep cool.
P405  store locked up.
P501  dispose of contents/container to industrial combustion plant.

- hazardous ingredients for labelling

Ethanol

2.3 other hazards

results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

description of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>identifier</th>
<th>wt%</th>
<th>classification acc. to GHS</th>
<th>pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>CAS No 64-17-5</td>
<td>15 – 20</td>
<td>Carc. 1A / H350 Flam. Liq. 2 / H225</td>
<td><img src="flame_carcinogen" alt="" /></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
in case of insufficient ventilation and/or in use, may form flammable/explosive vapor–air mixture. solvent vapors are heavier than air and may spread along floors. places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.
hazardous combustion products
carbon monoxide (CO), carbon dioxide (CO2)

5.3 advice for firefighters
in case of fire and/or explosion do not breathe fumes. 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. avoidance of ignition sources. keep away from sources of ignition - No smoking. take precautionary measures against static discharge. use only in well-ventilated areas. due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. ground/bond container and receiving equipment. use explosion-proof electrical/ventilating/lighting/equipment. use only non-sparking tools.

- specific notes/details
  places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. vapors are heavier than air, spread along floors and form explosive mixtures with air. vapors may form explosive mixtures with air.

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
managing of associated risks
- explosive atmospheres
  keep container tightly closed and in a well-ventilated place. use local and general ventilation. keep cool. protect from sunlight.

- flammability hazards
  keep away from sources of ignition - No smoking. keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. take precautionary measures against static discharge. protect from sunlight.

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

- ventilation requirements
  use local and general ventilation. ground/bond container and receiving equipment.

- packaging compatibilities
  only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

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

SECTION 8: Exposure controls/personal protection

8.1 control parameters

<table>
<thead>
<tr>
<th>country</th>
<th>name of agent</th>
<th>CAS No</th>
<th>identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Ceiling-C [ppm]</th>
<th>Ceiling-C [mg/m³]</th>
<th>notation</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>ethanol</td>
<td>64-17-5</td>
<td>TLV®</td>
<td></td>
<td></td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH® 2019</td>
</tr>
<tr>
<td>US</td>
<td>ethyl alcohol</td>
<td>64-17-5</td>
<td>REL</td>
<td>1,000 (10 h)</td>
<td>1,900 (10 h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>
occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>country</th>
<th>name of agent</th>
<th>CAS No</th>
<th>identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Ceiling-C [ppm]</th>
<th>Ceiling-C [mg/m³]</th>
<th>notation</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>ethyl alcohol [ethanol]</td>
<td>64-17-5</td>
<td>PEL [CA]</td>
<td>1,000</td>
<td>1,900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cal/OSHA PEL</td>
</tr>
<tr>
<td>US</td>
<td>ethyl alcohol [ethanol]</td>
<td>64-17-5</td>
<td>PEL</td>
<td>1,000</td>
<td>1,900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29 CFR 1910.100 0</td>
</tr>
</tbody>
</table>

**8.2 exposure controls**

**appropriate engineering controls**
- general ventilation.

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

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

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

**SECTION 9: Physical and chemical properties**

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

**appearance**

<table>
<thead>
<tr>
<th>physical state</th>
<th>liquid (suspension)</th>
</tr>
</thead>
<tbody>
<tr>
<td>color</td>
<td>white</td>
</tr>
<tr>
<td>odor</td>
<td>odorless</td>
</tr>
</tbody>
</table>
### other safety parameters

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

#### 9.2 other information

there is no additional information

### SECTION 10: Stability and reactivity

#### 10.1 reactivity

concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". the mixture contains reactive substances. risk of ignition.

if heated:

risk of ignition

#### 10.2 chemical stability

see below "Conditions to avoid".

#### 10.3 possibility of hazardous reactions

no known hazardous reactions.
10.4 **conditions to avoid**
keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
hints to prevent fire or explosion
use explosion-proof electrical/ventilating/lighting/equipment. use only non-sparking tools. take precautionary measures against static discharge.

10.5 **incompatible materials**
oxidizers

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
shall not be classified as a respiratory or skin sensitizer.

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

carcinogenicity
may cause cancer.

<table>
<thead>
<tr>
<th>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>name of substance</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>ethanol</td>
</tr>
</tbody>
</table>

**legend**
1 Carcinogenic to humans

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
solvent reclamation/regeneration.

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
only packagings which are approved [e.g. acc. to DOT] may be used. completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

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

SECTION 14: Transport information

14.1 UN number 1170
14.2 UN proper shipping name Ethanol
14.3 transport hazard class(es) 3 (flammable liquids)
14.4 packing group II [substance presenting medium danger]
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)**

<table>
<thead>
<tr>
<th>index number</th>
<th>1170</th>
</tr>
</thead>
<tbody>
<tr>
<td>proper shipping name</td>
<td>Ethanol</td>
</tr>
<tr>
<td>- particulars in the shipper's declaration</td>
<td>UN1170, Ethanol, 3, II</td>
</tr>
<tr>
<td>class</td>
<td>3</td>
</tr>
<tr>
<td>packing group</td>
<td>II</td>
</tr>
<tr>
<td>danger label(s)</td>
<td>3</td>
</tr>
</tbody>
</table>

- special provisions (SP) | 24, IB2, T4, TP1 |
- ERG No | 127 |

**International Maritime Dangerous Goods Code (IMDG)**

| UN number | 1170 |
| proper shipping name | ETHANOL |
| class | 3 |
| marine pollutant | - |
| packing group | II |
| danger label(s) | 3 |

- special provisions (SP) | 144 |
- excepted quantities (EQ) | E2 |
- limited quantities (LQ) | 1 L |
- EmS | F-E, S-D |
- stowage category | A |

**International Civil Aviation Organization (ICAO-IATA/DGR)**

| UN number | 1170 |
| proper shipping name | Ethanol |
| class | 3 |
| packing group | II |
| danger label(s) | 3 |

- special provisions (SP) | A3, A58, A180 |
- excepted quantities (EQ) | E2 |
- limited quantities (LQ) | 1 L |
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>3</td>
<td>material that can be ignited under almost all ambient temperature 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>3</td>
<td>material that can be ignited under almost all ambient temperature 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/OSHA PEL</td>
<td>California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)</td>
</tr>
<tr>
<td>Cal ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>Carc.</td>
<td>Carcinogenicity</td>
</tr>
</tbody>
</table>
Ab binding beads

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>Ceiling-C</td>
<td>Ceiling value</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation (USA)</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</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>ERG No</td>
<td>Emergency Response Guidebook - Number</td>
</tr>
<tr>
<td>Flam. Liq.</td>
<td>Flammable liquid</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of “Marine Pollutant”]</td>
</tr>
<tr>
<td>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>
</tr>
<tr>
<td>PEL</td>
<td>Permissible exposure limit</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>RTECS</td>
<td>Registry of Toxic Effects of Chemical Substances [database of NIOSH with toxicological information]</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TLV®</td>
<td>Threshold Limit Values</td>
</tr>
<tr>
<td>TWA</td>
<td>Time-weighted average</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 (additively 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>H225</td>
<td>Highly flammable liquid and vapor.</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</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  
rabbit IgG

product code(s)  
C15410206

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>---------</td>
</tr>
<tr>
<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.  
It contains 0,02% 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>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
<td>REL</td>
<td>10</td>
<td>(10 h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NIOSH</td>
</tr>
<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
<td>PEL</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>i, dust</td>
<td>29 CFR</td>
</tr>
<tr>
<td>US</td>
<td>sucrose</td>
<td>57-50-1</td>
<td>REL</td>
<td>5</td>
<td>(10 h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>r</td>
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<td>r, dust</td>
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</table>
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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other safety parameters

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<td>vapor pressure</td>
<td>not determined</td>
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<td>explosive properties</td>
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<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

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<th>rating</th>
<th>description</th>
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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>
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<td>Personal protection</td>
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NFPA® 704

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<tr>
<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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<tr>
<td>Instability</td>
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<td>material that is normally stable, even under fire conditions</td>
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<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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<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>Ceiling-C</td>
<td>Ceiling value</td>
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rabit IgG

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tbody>
<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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<td>ICAO</td>
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</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</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>NIOSH REL</td>
<td>National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)</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>PEL</td>
<td>Permissible exposure limit</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TLV®</td>
<td>Threshold Limit Values</td>
</tr>
<tr>
<td>TWA</td>
<td>Time-weighted average</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.
SECTION 1: Identification

1.1 product identifier
    trade name
    5% BSA

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

carbon monoxide (CO), carbon dioxide (CO2)

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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<td>color</td>
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other safety parameters

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<td>vapor pressure</td>
<td>not determined</td>
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<tr>
<td>density</td>
<td>not determined</td>
</tr>
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<td>vapor density</td>
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<td>relative density</td>
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<tr>
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<tr>
<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>
## 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
- oxidizers

### 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.

## 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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<thead>
<tr>
<th>category</th>
<th>rating</th>
<th>description</th>
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</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>
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<tr>
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**NFPA® 704**
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<th>degree of hazard</th>
<th>description</th>
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<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>

## 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>
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<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
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<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  DNA purifying slurry

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

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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<td><strong>other safety parameters</strong></td>
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<tr>
<td>oxidizing properties</td>
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</tbody>
</table>

9.2 **other 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**

t here 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>
<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>
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<th>category</th>
<th>degree of hazard</th>
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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>
<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 &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>
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<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

<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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<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.
Safety Data Sheet
acc. to 29 CFR 1910.1200 App D

proteinase K

- 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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<tbody>
<tr>
<td>Proteinase, tritirachium al-</td>
<td>CAS No 39450-01-6</td>
<td>2</td>
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<tr>
<td>bum serine</td>
<td></td>
<td></td>
<td>Eye Irrit. 2 / H319</td>
<td></td>
</tr>
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<td></td>
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<td>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
   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>
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<th>property</th>
<th>value</th>
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<td>physical state</td>
<td>liquid</td>
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proteinase K

other safety parameters

<table>
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<th>Parameter</th>
<th>Value</th>
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<td>pH (value)</td>
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partition coefficient

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<tr>
<td>oxidizing properties</td>
<td>none</td>
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</tbody>
</table>

9.2 other information

there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity

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

10.2 chemical stability

see below “Conditions to avoid”.

10.3 possibility of hazardous reactions

no known hazardous reactions.

10.4 conditions to avoid

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

10.5 incompatible materials

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

**SECTION 11: Toxicological information**

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

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


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.
protease K

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>
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<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>
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<tr>
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NFPA® 704

<table>
<thead>
<tr>
<th>category</th>
<th>degree of hazard</th>
<th>description</th>
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</thead>
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<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>
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</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**

### abbr. | descriptions of used abbreviations
---|---
GHS | “Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations
IATA | International Air Transport Association
IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO | International Civil Aviation Organization
IMDG | International Maritime Dangerous Goods Code
MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”) 
OSHA | Occupational Safety and Health Administration (United States)
PBT | Persistent, Bioaccumulative and Toxic
Resp. Sens. | Respiratory sensitization
RTECS | Registry of Toxic Effects of Chemical Substances [database of NIOSH with toxicological information]
Skin Corr. | Corrosive to skin
Skin Irrit. | Irritant to skin
VOC | Volatile Organic Compounds
vPvB | Very Persistent and very Bioaccumulative

### 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
identification of the substance
CAS number
ChIP-seq grade water
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

SECTION 2: Hazard(s) identification

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

2.2 label elements
not required

2.3 other hazards
results of PBT and vPvB assessment
according to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 substances
name of substance
ChIP-seq grade water
identifiers
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

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

<table>
<thead>
<tr>
<th>other safety parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
</tr>
<tr>
<td>melting point/freezing point</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
</tr>
<tr>
<td>flash point</td>
</tr>
<tr>
<td>evaporation rate</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
</tr>
<tr>
<td>explosive limits</td>
</tr>
<tr>
<td>vapor pressure</td>
</tr>
<tr>
<td>density</td>
</tr>
<tr>
<td>vapor density</td>
</tr>
<tr>
<td>relative density</td>
</tr>
</tbody>
</table>

solubility(ies)
  - water solubility           | miscible in any proportion |
### 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/irritable 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.

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not subject to IMDG.

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SECTION 15: Regulatory information

15.1 safety, health and environmental regulations specific for the product in question

national regulations (United States)

VOC content

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NPCA-HMIS® III

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</tr>
</thead>
<tbody>
<tr>
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<td>none</td>
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<tr>
<td>Health</td>
<td>0</td>
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<td>material that will not burn under typical fire conditions</td>
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NFPA® 704
### Flammability
- Degree of hazard: 0
- Description: material that will not burn under typical fire conditions

### Health
- Degree of hazard: 0
- Description: material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material

### Instability
- Degree of hazard: 0
- Description: material that is normally stable, even under fire conditions

### Special hazard
- Degree of hazard: 15.2

#### 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

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<td>Very Persistent and very Bioaccumulative</td>
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#### Key literature references and sources for data


#### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.