# MicroChIP DiaPure columns

**C03040001**

Flyleaf

Date of compilation: 2020-06-08

## 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 DNA Binding Buffer</td>
<td></td>
<td>1</td>
<td>Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319</td>
<td>![Icon]</td>
<td>2 – 11</td>
</tr>
<tr>
<td>DNA Wash Buffer</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>12 – 19</td>
</tr>
<tr>
<td>DNA Elution Buffer</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>20 – 27</td>
</tr>
</tbody>
</table>
SECTION 1: Identification

1.1 product identifier
trade name
ChIP DNA Binding Buffer
product code(s)
K07391001

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

<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.10</td>
<td>acute toxicity (oral)</td>
<td>4</td>
<td>Acute Tox. 4</td>
<td>H302</td>
</tr>
<tr>
<td>A.2</td>
<td>skin corrosion/irritation</td>
<td>2</td>
<td>Skin Irrit. 2</td>
<td>H315</td>
</tr>
<tr>
<td>A.3</td>
<td>serious eye damage/eye irritation</td>
<td>2</td>
<td>Eye Irrit. 2</td>
<td>H319</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16.

2.2 label elements
- signal word warning
- pictograms GHS07
- hazard statements
  H302 harmful if swallowed.
  H315 causes skin irritation.
  H319 causes serious eye irritation.

- precautionary statements
  P270 do not eat, drink or smoke when using this product.
  P280 wear protective gloves.
  P201+P312 if swallowed: Call a poison center/doctor if you feel unwell.
  P302+P352 if on skin: Wash with plenty of water.
  P305+P351+P338 if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P321 specific treatment (see on this label).
  P330 rinse mouth.
  P332+P313 if skin irritation occurs: Get medical advice/attention.
  P337+P313 if eye irritation persists: Get medical advice/attention.
  P362 take off contaminated clothing and wash it before reuse.
  P501 dispose of contents/container to industrial combustion plant.

- hazardous ingredients for labelling
  Guanidinium chloride

2.3 other hazards
hazards not otherwise classified
may be harmful if inhaled (GHS category 5: acutely toxic - inhalation).

harmful to aquatic life (GHS category 3: aquatic toxicity - acute).

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>Guanidinium chloride</td>
<td>CAS No 50-01-1</td>
<td>≤ 30</td>
<td>Acute Tox. 4 / H302</td>
<td>!</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 / H332</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2 / H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2 / H319</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. in case of respiratory tract irritation, consult a physician. 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.

<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>Guanidinium chloride</td>
<td>50-01-1</td>
<td>DNEL</td>
<td>3.5 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>Guanidinium chloride</td>
<td>50-01-1</td>
<td>DNEL</td>
<td>10.5 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>Guanidinium chloride</td>
<td>50-01-1</td>
<td>DNEL</td>
<td>1 mg/kg bw/day</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
</tbody>
</table>

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

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>appearance</td>
<td></td>
</tr>
<tr>
<td>physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>color</td>
<td>colorless</td>
</tr>
<tr>
<td>odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>other safety parameters</td>
<td></td>
</tr>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
<tr>
<td>explosive limits</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>density</td>
<td>not determined</td>
</tr>
<tr>
<td>vapor density</td>
<td>this information is not available</td>
</tr>
<tr>
<td>relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>solubility(ies)</td>
<td>not determined</td>
</tr>
<tr>
<td>partition coefficient</td>
<td></td>
</tr>
<tr>
<td>- n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>
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

harmful if swallowed.

GHS of the United Nations, annex 4: may be harmful if inhaled.

- acute toxicity estimate [ATE]

oral $1,855 \text{mg/kg}$

acute toxicity estimate [ATE] of components of the mixture

<table>
<thead>
<tr>
<th>name of substance</th>
<th>CAS No</th>
<th>exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>50-01-1</td>
<td>oral</td>
<td>556.5 \text{mg/kg}</td>
</tr>
<tr>
<td>guanidinium chloride</td>
<td>50-01-1</td>
<td>inhalation: dust/mist</td>
<td>3.181 \text{mg/l/4h}</td>
</tr>
</tbody>
</table>
skin corrosion/irritation
causes skin irritation.

serious eye damage/eye irritation
causes serious eye irritation.

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

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

carcinogenicity
shall not be classified as carcinogenic.

reproductive toxicity
shall not be classified as a reproductive toxicant.

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

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

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

SECTION 12: Ecological information

12.1 toxicity

harmful to aquatic life.

<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>guanidinium chloride</td>
<td>50-01-1</td>
<td>LC50</td>
<td>1,758 mg/l</td>
<td>fish</td>
<td>48 h</td>
</tr>
<tr>
<td>guanidinium chloride</td>
<td>50-01-1</td>
<td>EC50</td>
<td>70.2 mg/l</td>
<td>aquatic invertebrates</td>
<td>48 h</td>
</tr>
<tr>
<td>guanidinium chloride</td>
<td>50-01-1</td>
<td>ErC50</td>
<td>33.5 mg/l</td>
<td>algae</td>
<td>72 h</td>
</tr>
</tbody>
</table>

12.2 persistence and degradability

data are not available.

12.3 bioaccumulative potential

data are not available.

12.4 mobility in soil

data are not available.

12.5 results of PBT and vPvB assessment

data are not available.

12.6 other adverse effects

data are not available.
SECTION 13: Disposal considerations

13.1 waste treatment methods

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

remarks

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

SECTION 14: Transport information

14.1 UN number

- not subject to transport regulations

14.2 UN proper shipping name

- not assigned

14.3 transport hazard class(es)

- not assigned

14.4 packing group

- not assigned

14.5 environmental hazards

- non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user

- there is no additional information.

14.7 transport in bulk according to Annex II of MARPOL and the IBC Code

- the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

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

- not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG)

- not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

- not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

national regulations (United States)

VOC content


industry or sector specific available guidance(s)

NPCA-HMIS® III

### SAFETY DATA SHEET

**ChIP DNA Binding Buffer**

**Date of Compilation:** 2020-06-08

**Version Number:** GHS 1.0

<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>2</td>
<td>temporary or minor injury may occur</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**


<table>
<thead>
<tr>
<th>Category</th>
<th>Degree of Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
<td>material that must be preheated before ignition can occur</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>material that, under emergency conditions, can cause temporary incapacitation or residual injury</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>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>Calif. 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>EC50</td>
<td>Effective Concentration 50%. The EC50 corresponds to the concentration of a tested substance causing 50% changes in response (e.g. on growth) during a specified time interval</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment</td>
</tr>
<tr>
<td>ErC50</td>
<td>≡ EC50: in this method, that concentration of test substance which results in a 50% reduction in either growth (EbC50) or growth rate (ErC50) relative to the control</td>
</tr>
<tr>
<td>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>
</tbody>
</table>
ChIP DNA Binding Buffer

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>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
</tbody>
</table>

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

1.1 product identifier
trade name DNA Wash Buffer
product code(s) K07391002

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

1.3 details of the supplier of the safety data sheet
Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

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

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

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

SECTION 2: Hazard(s) identification

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

2.2 label elements
not required

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

SECTION 3: Composition/information on ingredients

3.1 substances
not relevant (mixture)

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

4.1 description of first-aid measures

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

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

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

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

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

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 extinguishing media

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

unsuitable extinguishing media
- water jet

5.2 special hazards arising from the substance or mixture

hazardous combustion products
- nitrogen oxides (NOx)

5.3 advice for firefighters

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

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel
- remove persons to safety.

for emergency responders
- wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 environmental precautions

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

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

6.4 reference to other sections

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

SECTION 7: Handling and storage

7.1 precautions for safe handling

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

7.2 conditions for safe storage, including any incompatibilities

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

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls
general ventilation.
individual protection measures (personal protective equipment)
eye/face protection
wear eye/face protection.
skin protection

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

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

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

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

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

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other safety parameters

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<td>evaporation rate</td>
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<td>flammability (solid, gas)</td>
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<tr>
<td>explosive limits</td>
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partition coefficient

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<td>- n-octanol/water (log KOW)</td>
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United States: en

page: 4 / 8
SECTION 10: Stability and reactivity

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

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

10.3 possibility of hazardous reactions
no known hazardous reactions.

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

10.5 incompatible materials
there is no additional information.

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

SECTION 11: Toxicological information

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

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

this mixture does not meet the criteria for classification.

acute toxicity
shall not be classified as acutely toxic.

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

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

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

germ cell mutagenicity
shall not be classified as germ cell mutagenic.
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>
<tr>
<td>Physical hazard</td>
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<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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NFPA® 704  
DNA Wash Buffer

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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></td>
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</table>

15.2 **Chemical Safety Assessment**

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

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

**abbreviations and acronyms**

<table>
<thead>
<tr>
<th>abbr.</th>
<th>descriptions of used abbreviations</th>
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<tbody>
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<td>49 CFR U.S. Department of Transportation</td>
</tr>
<tr>
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<td>California Air Resources Board</td>
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<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations [see IATA/DGR]</td>
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<tr>
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<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
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<tr>
<td>ICAO</td>
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<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships [abbr. of &quot;Marine Pollutant&quot;]</td>
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<td>Occupational Safety and Health Administration (United States)</td>
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<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: DNA Elution Buffer
- product code(s): K07391003

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

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

1.3 details of the supplier of the safety data sheet

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

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

1.4 emergency telephone number

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

<table>
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<th>poison center</th>
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<td>American Association of Poison Control Centers</td>
<td></td>
<td>1-800-222-1222</td>
<td></td>
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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
  - nitrogen oxides (NOx)

5.3 advice for firefighters

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

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

- for non-emergency personnel
  - remove persons to safety.

- for emergency responders
  - wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 environmental precautions

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

advice on how to contain a spill

covering of drains

advice on how to clean up a spill

wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

appropriate containment techniques

use of adsorbent materials.

other information relating to spills and releases

place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections

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

SECTION 7: Handling and storage

7.1 precautions for safe handling

recommendations

- measures to prevent fire as well as aerosol and dust generation

use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene

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

7.2 conditions for safe storage, including any incompatibilities

control of the effects

protect against external exposure, such as frost

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

8.2 exposure controls

appropriate engineering controls

general ventilation.

individual protection measures (personal protective equipment)

eye/face protection

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

respiratory protection
  in case of inadequate ventilation wear respiratory protection.

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

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

<table>
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<tr>
<th>appearance</th>
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<td>odor</td>
<td>characteristic</td>
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<td>explosive limits</td>
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auto-ignition temperature | not determined  
viscosity | not determined  
explosive properties | none  
oxidizing properties | none

9.2 other information | there is no additional information

SECTION 10: Stability and reactivity

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

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

10.3 possibility of hazardous reactions  
no known hazardous reactions.

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

10.5 incompatible materials  
there is no additional information.

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

SECTION 11: Toxicological information

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

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

this mixture does not meet the criteria for classification.

acute toxicity  
shall not be classified as acutely toxic.

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

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

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

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

reproductive toxicity
shall not be classified as a reproductive toxicant.

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

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

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

SECTION 12: Ecological information

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

12.2 persistence and degradability
data are not available.

12.3 bioaccumulative potential
data are not available.

12.4 mobility in soil
data are not available.

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

12.6 other adverse effects
data are not available.

SECTION 13: Disposal considerations

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

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

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
not assigned

14.3 transport hazard class(es)
not assigned

14.4 packing group
not assigned

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

14.6 special precautions for user
there is no additional information.

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

Information for each of the UN Model Regulations
transport of dangerous goods by road or rail (49 CFR US DOT)
not subject to transport regulations.

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

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

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations specific for the product in question
national regulations (United States)

VOC content
Regulated Volatile Organic Compounds (VOC-EPA); Regulated Volatile Organic Compounds (VOC-Cal ARB);

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

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

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<tr>
<th>category</th>
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<td>material that will not burn under typical fire conditions</td>
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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>
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<td>material that is normally stable, even under fire conditions</td>
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<tr>
<td>Special hazard</td>
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### 15.2 Chemical Safety Assessment

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

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

#### abbreviations and acronyms

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

#### key literature references and sources for data

Transport of dangerous goods by road or rail (49 CFR US DOT).  
International Maritime Dangerous Goods Code (IMDG).  
Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### classification procedure

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

#### disclaimer

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