

## Chromatin EasyShear Kit -HighSDS

**C01020012**

### Flyleaf

Date of compilation: 2020-07-28

#### Bill of materials

Name of substance	Identifier	Number of pieces	Classification acc. to GHS	Pictograms	Page
Glycine		1			2 - 9
Lysis Buffer tL1		1			10 - 19
Elution Buffer tE1		1			20 - 29
Elution Buffer tE2		1			30 - 37
TE buffer		1			38 - 45
Co-precipitant tCP2		1	Skin Sens. 1 / H317 Muta. 1B / H340 Carc. 1B / H350 Repr. 2 / H361f		46 - 56
Co-precipitant tCP1		1			57 - 64
Protease Inhibitor Mix		1	Flam. Liq. 4 / H227		65 - 75

## Glycine

version number: GHS 1.0

date of compilation: 2019-12-23

### SECTION 1: Identification

#### 1.1 product identifier

trade name

**Glycine**

#### 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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

### SECTION 2: Hazard(s) identification

#### 2.1 classification of the substance or mixture

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

#### 2.2 label elements

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
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.

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## 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 (CO<sub>2</sub>)

#### unsuitable extinguishing media

water jet

### 5.2 special hazards arising from the substance or mixture

#### hazardous combustion products

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### 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.

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### 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.

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date of compilation: 2019-12-23

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

physical state	liquid
color	colorless
odor	odorless

##### other safety parameters

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

partition coefficient

- n-octanol/water (log KOW)	this information is not available
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## Glycine

version number: GHS 1.0

date of compilation: 2019-12-23

auto-ignition temperature	not determined
viscosity	not determined
explosive properties	none
oxidizing properties	none
<b>9.2 other information</b>	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

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).

#### **classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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.

## Glycine

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date of compilation: 2019-12-23

### 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.

## Glycine

version number: GHS 1.0

date of compilation: 2019-12-23

### 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**

Hazardous Materials Identification System. American Coatings Association.

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

##### **NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

## Glycine

version number: GHS 1.0

date of compilation: 2019-12-23

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

### 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

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal ARB	California Air Resources Board
DGR	Dangerous Goods Regulations (see IATA/DGR)
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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.

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 1: Identification**

**1.1 product identifier**

trade name

**Lysis Buffer tL1**

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word not required
- pictograms not required

**2.3 other hazards**

there is no additional information.

hazards not otherwise classified

safety data sheet available on request.

results of PBT and vPvB assessment

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

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 3: Composition/information on ingredients**

**3.1 substances**

not relevant (mixture)

**3.2 mixtures**

description of the mixture

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Sodium dodecyl sulphate	CAS No 151-21-3	≤ 2	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 Flam. Sol. 2 / H228	

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 (CO<sub>2</sub>)

unsuitable extinguishing media

water jet

**5.2 special hazards arising from the substance or mixture**

hazardous combustion products

nitrogen oxides (NO<sub>x</sub>)

## Lysis Buffer tL1

version number: GHS 1.0

date of compilation: 2020-03-24

### 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.

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 8: Exposure controls/personal protection**

**8.1 control parameters**

this information is not available.

relevant DNELs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	protection goal, route of exposure	used in	exposure time
Sodium dodecyl sulphate	151-21-3	DNEL	285 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium dodecyl sulphate	151-21-3	DNEL	4,060 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

relevant PNECs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Sodium dodecyl sulphate	151-21-3	PNEC	0.176 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	0.018 mg/l	aquatic organisms	marine water	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	1.35 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	6.97 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	0.697 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	1.29 mg/kg	terrestrial organisms	soil	short-term (single instance)

**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.

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 9: Physical and chemical properties**

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

**appearance**

physical state	liquid
color	colorless
odor	odorless

**other safety parameters**

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

partition coefficient

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

**9.2 other information**

	there is no additional information
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## Lysis Buffer tL1

version number: GHS 1.0

date of compilation: 2020-03-24

### SECTION 10: Stability and reactivity

#### 10.1 reactivity

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

#### 10.2 chemical stability

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

#### 10.3 possibility of hazardous reactions

no known hazardous reactions.

#### 10.4 conditions to avoid

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

#### 10.5 incompatible materials

there is no additional information.

#### 10.6 hazardous decomposition products

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

### SECTION 11: Toxicological information

#### 11.1 information on toxicological effects

test data are not available for the complete mixture.

classification procedure

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

#### **classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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).

## Lysis Buffer tL1

version number: GHS 1.0

date of compilation: 2020-03-24

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

- |  |   |
|--|---|
| <b>14.1 UN number</b>  | not subject to transport regulations                                  |
| <b>14.2 UN proper shipping name</b>  | not assigned  |
| <b>14.3 transport hazard class(es)</b>   | not assigned  |
| <b>14.4 packing group</b>  | not assigned  |
| <b>14.5 environmental hazards</b>  | non-environmentally hazardous acc. to the dangerous goods regulations |
| <b>14.6 special precautions for user</b>                                       | there is no additional information.                                   |
| <b>14.7 transport in bulk according to Annex II of MARPOL and the IBC Code</b> | the cargo is not intended to be carried in bulk.                      |

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

**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**

Hazardous Materials Identification System. American Coatings Association.

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

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

category	degree of hazard	description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**15.2 Chemical Safety Assessment**

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

## Lysis Buffer tL1

version number: GHS 1.0

date of compilation: 2020-03-24

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

#### abbreviations and acronyms

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Sol.	Flammable solid
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STOT SE	Specific target organ toxicity - single exposure
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

#### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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).

**Lysis Buffer tL1**

version number: GHS 1.0

date of compilation: 2020-03-24

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

<b>code</b>	<b>text</b>
H228	Flammable solid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

**disclaimer**

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

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 1: Identification**

**1.1 product identifier**

trade name **Elution Buffer tE1**

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word not required
- pictograms not required

**2.3 other hazards**

there is no additional information.

hazards not otherwise classified

safety data sheet available on request.

results of PBT and vPvB assessment

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

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 3: Composition/information on ingredients**

**3.1 substances**

not relevant (mixture)

**3.2 mixtures**

description of the mixture

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Sodium dodecyl sulphate	CAS No 151-21-3	≤ 2	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 Flam. Sol. 2 / H228	

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

## Elution Buffer tE1

version number: GHS 1.0

date of compilation: 2020-03-24

### 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.

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 8: Exposure controls/personal protection**

**8.1 control parameters**

this information is not available.

relevant DNELs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	protection goal, route of exposure	used in	exposure time
Sodium dodecyl sulphate	151-21-3	DNEL	285 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium dodecyl sulphate	151-21-3	DNEL	4,060 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

relevant PNECs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Sodium dodecyl sulphate	151-21-3	PNEC	0.176 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	0.018 mg/l	aquatic organisms	marine water	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	1.35 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	6.97 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	0.697 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Sodium dodecyl sulphate	151-21-3	PNEC	1.29 mg/kg	terrestrial organisms	soil	short-term (single instance)

**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.

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 9: Physical and chemical properties**

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

**appearance**

physical state	liquid
color	colorless
odor	odorless

**other safety parameters**

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

partition coefficient

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

**9.2 other information**

	there is no additional information
--	------------------------------------

## Elution Buffer tE1

version number: GHS 1.0

date of compilation: 2020-03-24

### SECTION 10: Stability and reactivity

#### 10.1 reactivity

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

#### 10.2 chemical stability

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

#### 10.3 possibility of hazardous reactions

no known hazardous reactions.

#### 10.4 conditions to avoid

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

#### 10.5 incompatible materials

there is no additional information.

#### 10.6 hazardous decomposition products

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

### SECTION 11: Toxicological information

#### 11.1 information on toxicological effects

test data are not available for the complete mixture.

classification procedure

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

#### classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

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).

## Elution Buffer tE1

version number: GHS 1.0

date of compilation: 2020-03-24

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

- |  |   |
|--|---|
| <b>14.1 UN number</b>  | not subject to transport regulations                                  |
| <b>14.2 UN proper shipping name</b>  | not assigned  |
| <b>14.3 transport hazard class(es)</b>   | not assigned  |
| <b>14.4 packing group</b>  | not assigned  |
| <b>14.5 environmental hazards</b>  | non-environmentally hazardous acc. to the dangerous goods regulations |
| <b>14.6 special precautions for user</b>                                       | there is no additional information.                                   |
| <b>14.7 transport in bulk according to Annex II of MARPOL and the IBC Code</b> | the cargo is not intended to be carried in bulk.                      |

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

**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**

Hazardous Materials Identification System. American Coatings Association.

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

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

category	degree of hazard	description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**15.2 Chemical Safety Assessment**

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

## Elution Buffer tE1

version number: GHS 1.0

date of compilation: 2020-03-24

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

#### abbreviations and acronyms

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Sol.	Flammable solid
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STOT SE	Specific target organ toxicity - single exposure
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

#### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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).

**Elution Buffer tE1**

version number: GHS 1.0

date of compilation: 2020-03-24

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

<b>code</b>	<b>text</b>
H228	Flammable solid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

**disclaimer**

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

## Elution Buffer tE2

version number: GHS 1.0

date of compilation: 2020-03-24

### SECTION 1: Identification

#### 1.1 product identifier

trade name

**Elution Buffer tE2**

#### 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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

### SECTION 2: Hazard(s) identification

#### 2.1 classification of the substance or mixture

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

#### 2.2 label elements

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
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.

## Elution Buffer tE2

version number: GHS 1.0

date of compilation: 2020-03-24

### 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 (CO<sub>2</sub>)

##### 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.

## Elution Buffer tE2

version number: GHS 1.0

date of compilation: 2020-03-24

### 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.

**Elution Buffer tE2**

version number: GHS 1.0

date of compilation: 2020-03-24

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**

physical state	liquid
color	colorless
odor	odorless

**other safety parameters**

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

partition coefficient

- n-octanol/water (log KOW)	this information is not available
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**Elution Buffer tE2**

version number: GHS 1.0

date of compilation: 2020-03-24

auto-ignition temperature	not determined
viscosity	not determined
explosive properties	none
oxidizing properties	none
<b>9.2 other information</b>	there is no additional information

**SECTION 10: Stability and reactivity**

**10.1 reactivity**

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

**10.2 chemical stability**

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

**10.3 possibility of hazardous reactions**

no known hazardous reactions.

**10.4 conditions to avoid**

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

**10.5 incompatible materials**

there is no additional information.

**10.6 hazardous decomposition products**

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

**SECTION 11: Toxicological information**

**11.1 information on toxicological effects**

test data are not available for the complete mixture.

classification procedure

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

**classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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.

## Elution Buffer tE2

version number: GHS 1.0

date of compilation: 2020-03-24

**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.

**Elution Buffer tE2**

version number: GHS 1.0

date of compilation: 2020-03-24

**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**

Hazardous Materials Identification System. American Coatings Association.

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

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

## Elution Buffer tE2

version number: GHS 1.0

date of compilation: 2020-03-24

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

### 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

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal ARB	California Air Resources Board
DGR	Dangerous Goods Regulations (see IATA/DGR)
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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.

**TE buffer**

version number: GHS 1.0

date of compilation: 2020-02-20

**SECTION 1: Identification**

**1.1 product identifier**

trade name **TE buffer**

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
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.

## TE buffer

version number: GHS 1.0

date of compilation: 2020-02-20

### 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 (CO<sub>2</sub>)

##### unsuitable extinguishing media

water jet

#### 5.2 special hazards arising from the substance or mixture

##### hazardous combustion products

nitrogen oxides (NO<sub>x</sub>)

#### 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.

## TE buffer

version number: GHS 1.0

date of compilation: 2020-02-20

### 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.

**TE buffer**

version number: GHS 1.0

date of compilation: 2020-02-20

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**

physical state	liquid
color	various
odor	characteristic

**other safety parameters**

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

partition coefficient

- n-octanol/water (log KOW)	this information is not available
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**TE buffer**

version number: GHS 1.0

date of compilation: 2020-02-20

auto-ignition temperature	not determined
viscosity	not determined
explosive properties	none
oxidizing properties	none
<b>9.2 other information</b>	there is no additional information

**SECTION 10: Stability and reactivity**

**10.1 reactivity**

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

**10.2 chemical stability**

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

**10.3 possibility of hazardous reactions**

no known hazardous reactions.

**10.4 conditions to avoid**

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

**10.5 incompatible materials**

there is no additional information.

**10.6 hazardous decomposition products**

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

**SECTION 11: Toxicological information**

**11.1 information on toxicological effects**

test data are not available for the complete mixture.

classification procedure

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

**classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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.

## TE buffer

version number: GHS 1.0

date of compilation: 2020-02-20

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.

**TE buffer**

version number: GHS 1.0

date of compilation: 2020-02-20

**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**

Hazardous Materials Identification System. American Coatings Association.

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

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

**TE buffer**

version number: GHS 1.0

date of compilation: 2020-02-20

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

**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**

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal ARB	California Air Resources Board
DGR	Dangerous Goods Regulations (see IATA/DGR)
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

**key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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.

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 1: Identification**

**1.1 product identifier**

trade name

**Co-precipitant tCP2**

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

section	hazard class	category	hazard class and category	hazard statement
A.4S	skin sensitization	1	Skin Sens. 1	H317
A.5	germ cell mutagenicity	1B	Muta. 1B	H340
A.6	carcinogenicity	1B	Carc. 1B	H350
A.7	reproductive toxicity	2	Repr. 2	H361f

for full text of abbreviations: see SECTION 16.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word danger

- pictograms

GHS07, GHS08



**Co-precipitant tCP2**

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- hazard statements
  - H317 may cause an allergic skin reaction.
  - H340 may cause genetic defects.
  - H350 may cause cancer.
  - H361f suspected of damaging fertility.
- precautionary statements
  - P202 do not handle until all safety precautions have been read and understood.
  - P261 avoid breathing dust/fume/gas/mist/vapors/spray.
  - P272 contaminated work clothing must not be allowed out of the workplace.
  - P280 wear protective gloves/protective clothing/eye protection/face protection.
  - P302+P352 if on skin: Wash with plenty of water.
  - P308+P313 if exposed or concerned: Get medical advice/attention.
  - P321 specific treatment (see on this label).
  - P333+P313 if skin irritation or rash occurs: Get medical advice/attention.
  - P363 wash contaminated clothing before reuse.
  - P405 store locked up.
  - P501 dispose of contents/container to industrial combustion plant.
- hazardous ingredients for labelling Acrylamide (linear)

**2.3 other hazards**

hazards not otherwise classified

contains acrylamide. May produce an allergic reaction.

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

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Acrylamide (linear)	CAS No 79-06-1 122775-19-3	≤ 1	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Muta. 1B / H340 Carc. 1B / H350 Repr. 2 / H361f STOT RE 1 / H372	

for full text of abbreviations: see SECTION 16.

## Co-precipitant tCP2

version number: GHS 1.0

date of compilation: 2020-03-24

### 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 (CO<sub>2</sub>)

unsuitable extinguishing media

water jet

#### 5.2 special hazards arising from the substance or mixture

hazardous combustion products

nitrogen oxides (NO<sub>x</sub>)

#### 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.

## Co-precipitant tCP2

version number: GHS 1.0

date of compilation: 2020-03-24

### 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

occupational exposure limit values (Workplace Exposure Limits)											
country	name of agent	CAS No	identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	notation	source
US	acrylamide	79-06-1	PEL (CA)		0.03						Ca/ OSHA PEL
US	acrylamide	79-06-1	PEL		0.3						29 CFR 1910.1000
US	acrylamide	79-06-1	REL		0.03 (10 h)					appx-A	NIOSH REL
US	acrylamide	79-06-1	TLV®		0.03					iv	ACGIH® 2019

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

notation	
appx-A	NIOSH Potential Occupational Carcinogen (Appendix A)
Ceiling-C	ceiling value is a limit value above which exposure should not occur
iv	inhalable fraction and vapor
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

relevant DNELs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	protection goal, route of exposure	used in	exposure time
Acrylamide (linear)	79-06-1 122775-19-3	DNEL	120 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
Acrylamide (linear)	79-06-1 122775-19-3	DNEL	120 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
Acrylamide (linear)	79-06-1 122775-19-3	DNEL	3 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects

relevant PNECs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Acrylamide (linear)	79-06-1 122775-19-3	PNEC	0.032 mg/l	aquatic organisms	freshwater	short-term (single instance)
Acrylamide (linear)	79-06-1 122775-19-3	PNEC	2 µg/l	aquatic organisms	marine water	short-term (single instance)
Acrylamide (linear)	79-06-1 122775-19-3	PNEC	0.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

**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.

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 9: Physical and chemical properties**

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

**appearance**

physical state	liquid
color	colorless
odor	odorless

**other safety parameters**

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

partition coefficient

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

**9.2 other information**

	there is no additional information
--	------------------------------------

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 10: Stability and reactivity**

**10.1 reactivity**

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

**10.2 chemical stability**

see below "Conditions to avoid".

**10.3 possibility of hazardous reactions**

no known hazardous reactions.

**10.4 conditions to avoid**

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

**10.5 incompatible materials**

there is no additional information.

**10.6 hazardous decomposition products**

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

**SECTION 11: Toxicological information**

**11.1 information on toxicological effects**

test data are not available for the complete mixture.

classification procedure

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

**classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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 an allergic skin reaction.

germ cell mutagenicity

may cause genetic defects.

carcinogenicity

may cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
name of substance	CAS No	classification	number
acrylamide	79-06-1	2A	

Legend

2A Probably carcinogenic to humans

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

National Toxicology Program (United States): Report on Carcinogens			
name of substance	CAS No	classification	number
acrylamide	79-06-1	Reasonably anticipated to be a human carcinogen	6th Report on Carcinogens

reproductive toxicity

suspected of damaging fertility.

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.

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

**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**

Hazardous Materials Identification System. American Coatings Association.

category	rating	description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

## Co-precipitant tCP2

version number: GHS 1.0

date of compilation: 2020-03-24

category	degree of hazard	description
Flammability	0	material that will not burn under typical fire conditions
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

### 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

abbr.	descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: <a href="http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement">http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement</a>
Acute Tox.	Acute toxicity
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
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")
Muta.	Germ cell mutagenicity
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)

**Co-precipitant tCP2**

version number: GHS 1.0

date of compilation: 2020-03-24

abbr.	descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

**key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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

**classification procedure**

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

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

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

code	text
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.

**disclaimer**

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

**Co-precipitant tCP1**

version number: GHS 1.0

date of compilation: 2020-03-24

**SECTION 1: Identification**

**1.1 product identifier**

trade name

**Co-precipitant tCP1**

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
this mixture does not meet the criteria for classification.

**2.2 label elements**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)  
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.

## Co-precipitant tCP1

version number: GHS 1.0

date of compilation: 2020-03-24

### 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 (CO<sub>2</sub>)

##### 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.

## Co-precipitant tCP1

version number: GHS 1.0

date of compilation: 2020-03-24

### 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.

**Co-precipitant tCP1**

version number: GHS 1.0

date of compilation: 2020-03-24

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**

physical state	liquid
color	colorless
odor	odorless

**other safety parameters**

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

partition coefficient

- n-octanol/water (log KOW)	this information is not available
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**Co-precipitant tCP1**

version number: GHS 1.0

date of compilation: 2020-03-24

auto-ignition temperature	not determined
viscosity	not determined
explosive properties	none
oxidizing properties	none
<b>9.2 other information</b>	there is no additional information

**SECTION 10: Stability and reactivity**

**10.1 reactivity**

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

**10.2 chemical stability**

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

**10.3 possibility of hazardous reactions**

no known hazardous reactions.

**10.4 conditions to avoid**

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

**10.5 incompatible materials**

there is no additional information.

**10.6 hazardous decomposition products**

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

**SECTION 11: Toxicological information**

**11.1 information on toxicological effects**

test data are not available for the complete mixture.

classification procedure

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

**classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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.

## Co-precipitant tCP1

version number: GHS 1.0

date of compilation: 2020-03-24

**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.

**Co-precipitant tCP1**

version number: GHS 1.0

date of compilation: 2020-03-24

**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**

Hazardous Materials Identification System. American Coatings Association.

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

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

## Co-precipitant tCP1

version number: GHS 1.0

date of compilation: 2020-03-24

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

### 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

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal ARB	California Air Resources Board
DGR	Dangerous Goods Regulations (see IATA/DGR)
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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.

**Protease Inhibitor Mix**

version number: GHS 2.0  
replaces version of: 2019-12-23 (GHS 1)

revision: 2020-02-28

**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 of-  
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
	American Association of Poison Control Centers	1-800-222-1222

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

**2.1 classification of the substance or mixture**

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

section	hazard class	category	hazard class and category	hazard statement
B.6	flammable liquid	4	Flam. Liq. 4	H227

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**

labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word warning
- pictograms not required
- hazard statements  
H227 combustible liquid.

## Protease Inhibitor Mix

version number: GHS 2.0  
replaces version of: 2019-12-23 (GHS 1)

revision: 2020-02-28

### - 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

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Dimethyl sulfoxide	CAS No 67-68-5	≤ 100	Flam. Liq. 4 / H227	

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

## Protease Inhibitor Mix

version number: GHS 2.0  
replaces version of: 2019-12-23 (GHS 1)

revision: 2020-02-28

### SECTION 5: Fire-fighting measures

#### 5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO<sub>2</sub>)

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 (CO<sub>2</sub>)

#### 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.

## Protease Inhibitor Mix

version number: GHS 2.0  
replaces version of: 2019-12-23 (GHS 1)

revision: 2020-02-28

### 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.

- 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.

relevant DNELs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	protection goal, route of exposure	used in	exposure time
Dimethyl sulfoxide	67-68-5	DNEL	484 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Dimethyl sulfoxide	67-68-5	DNEL	265 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Dimethyl sulfoxide	67-68-5	DNEL	200 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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relevant PNECs of components of the mixture						
name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Dimethyl sulfoxide	67-68-5	PNEC	17 mg/l	aquatic organisms	freshwater	short-term (single instance)
Dimethyl sulfoxide	67-68-5	PNEC	1.7 mg/l	aquatic organisms	marine water	short-term (single instance)
Dimethyl sulfoxide	67-68-5	PNEC	11 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Dimethyl sulfoxide	67-68-5	PNEC	13.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Dimethyl sulfoxide	67-68-5	PNEC	3.02 mg/kg	terrestrial organisms	soil	short-term (single instance)

**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**

physical state	liquid
color	colorless
odor	odorless

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### other safety parameters

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

### partition coefficient

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

9.2

<b>other information</b>	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 substance(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.

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### 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).

#### **classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

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.

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### 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 | <b>UN number</b>  | not subject to transport regulations                                  |
| 14.2 | <b>UN proper shipping name</b>  | not assigned  |
| 14.3 | <b>transport hazard class(es)</b>   | not assigned  |
| 14.4 | <b>packing group</b>  | not assigned  |
| 14.5 | <b>environmental hazards</b>  | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 | <b>special precautions for user</b>                                       | there is no additional information.                                   |
| 14.7 | <b>transport in bulk according to Annex II of MARPOL and the IBC Code</b> | the cargo is not intended to be carried in bulk.                      |

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**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**

Hazardous Materials Identification System. American Coatings Association.

category	rating	description
Chronic	/	none
Health	0	no significant risk to health
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

category	degree of hazard	description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**15.2 Chemical Safety Assessment**

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

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

#### indication of changes (revised safety data sheet)

section	former entry (text/value)	actual entry (text/value)	safety-relevant
1.1	trade name: protease inhibitor cocktail	trade name: Protease Inhibitor Mix	yes
1.1	product code(s): C12010011	product code(s): C12010010/C12010011/C12010012	yes

#### abbreviations and acronyms

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Flam. Liq.	Flammable liquid
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

#### key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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).

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

code	text
H227	Combustible liquid.

**disclaimer**

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