

08.04.2019

**Kit Components**

Product code	Description
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<b>A05880</b>	<b>Angiotensin II SPIE-IA kit</b>
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Components:

A08880	Angiotensin II precoated 96-well Strip Plate
A06880	Angiotensin II Standard
A10880	Angiotensin II Quality Control
A04880	Angiotensin II Tracer
A13880.1 ea	Glutaraldehyde
A14880	Borane Trimethylamine
A07000	ELISA Buffer
A17000	Wash Buffer
A12000	Tween 20
A09000_49+1	Ellman's Reagent 49+1

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name:** Angiotensin II precoated 96-well Strip Plate

**Article number:** A08880

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

**Trade name:** Angiotensin II precoated 96-well Strip Plate

(Contd. of page 1)

### **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## **5 Firefighting measures**

### **5.1 Extinguishing media**

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### **5.3 Advice for firefighters**

**Protective equipment:** No special measures required.

## **6 Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:** Pick up mechanically.

### **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## **7 Handling and storage**

**7.1 Precautions for safe handling** No special measures required.

**Information about fire - and explosion protection:** No special measures required.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## **8 Exposure controls/personal protection**

**Additional information about design of technical facilities:** No further data; see item 7.

### **8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.

### **8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

**Trade name:** Angiotensin II precoated 96-well Strip Plate

(Contd. of page 2)

**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information****Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.

**Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	Undetermined.

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not determined.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapour pressure:** Not applicable.

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.

**Solubility in / Miscibility with water:** Insoluble.

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity:**

<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

**Trade name:** Angiotensin II precoated 96-well Strip Plate

(Contd. of page 3)

**Solvent content:**

**Solids content:** 100.0 %  
**9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### LD/LC50 values relevant for classification:

**CAS: 7646-79-9 cobalt dichloride**

Oral LD50 80 mg/kg (rat)

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Additional ecological information:

##### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

**Trade name:** Angiotensin II precoated 96-well Strip Plate

**12.6 Other adverse effects** No further relevant information available.

(Contd. of page 4)

## 13 Disposal considerations

### 13.1 Waste treatment methods

**Recommendation** Smaller quantities can be disposed of with household waste.

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

UN "Model Regulation":

not regulated

## 15 Regulatory information

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

Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

License is granted to make unlimited paper copies of this document for internal use only.

This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.01.2018

**Trade name:** Angiotensin II precoated 96-well Strip Plate

(Contd. of page 5)

information. Users should conduct their own investigations to determine the suitability of the information.

**Contact:** tech@bertin-bioreagent.com**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

\* **Data compared to the previous version altered.**

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Angiotensin II Standard

**Article number:** A06880

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms** Void

**Signal word** Void

##### Hazard statements

H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.




**vPvB:** Not applicable.

### 3 Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

CAS: 26628-22-8	sodium azide	≥0.25-<2.5%
EINECS: 247-852-1	 Acute Tox. 2, H300; Acute Tox. 1, H310;  STOT RE 2, H373;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 1)

## 4 First aid measures

### 4.1 Description of first aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

**Information about fire - and explosion protection:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 2)

## 8.1 Control parameters

### Ingredients with limit values that require monitoring at the workplace:

#### CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m<sup>3</sup>Long-term value: 0.1 mg/m<sup>3</sup>(as NaN<sub>3</sub>), Sk

**Additional information:** The lists valid during the making were used as basis.

## 8.2 Exposure controls

### Personal protective equipment:

**General protective and hygienic measures:** Wash hands before breaks and at the end of work.

**Respiratory protection:** Not required.

### Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

<b>Form:</b>	Solid
<b>Colour:</b>	White
<b>Odour:</b>	Uncharacteristic.
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.

#### Change in condition

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** 100 °C

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not determined.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

#### Explosion limits:

**Lower:** Not determined.

**Upper:** Not determined.

**Vapour pressure:** Not applicable.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 3)

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Soluble.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>Solids content:</b>	100.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### LD/LC50 values relevant for classification:

**CAS: 26628-22-8 sodium azide**

Oral LD50 27 mg/kg (rat)

Dermal LD50 20 mg/kg (rabbit)

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 4)

## 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

#### CAS: 26628-22-8 sodium azide

EC50 96h (static) 0.35 mg/l (Pseudokirchneriella subcapitata)

LC50 96h 5.46 mg/l (Pimephales promelas)

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Ecotoxicological effects:

**Remark:** Harmful to fish

#### Additional ecological information:

#### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### European waste catalogue

HP 6 Acute Toxicity

HP 14 Ecotoxic

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 5)

### Transport/Additional information:

#### IATA

#### Remarks:

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity  
not regulated

#### UN "Model Regulation":

## 15 Regulatory information

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

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

#### Relevant phrases

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Contact:** tech@bertin-bioreagent.com

#### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Standard

(Contd. of page 6)

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 1: Acute toxicity – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**\* Data compared to the previous version altered.**

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Angiotensin II Quality Control

**Article number:** A10880

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms** Void

**Signal word** Void

##### Hazard statements

H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.


**vPvB:** Not applicable.

### 3 Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

CAS: 26628-22-8	sodium azide	≥0.25-<2.5%
EINECS: 247-852-1		

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 1)

## 4 First aid measures

### 4.1 Description of first aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

**Information about fire - and explosion protection:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 3)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 2)

## 8.1 Control parameters

### Ingredients with limit values that require monitoring at the workplace:

#### CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m<sup>3</sup>Long-term value: 0.1 mg/m<sup>3</sup>(as NaN<sub>3</sub>), Sk

**Additional information:** The lists valid during the making were used as basis.

## 8.2 Exposure controls

### Personal protective equipment:

**General protective and hygienic measures:** Wash hands before breaks and at the end of work.

**Respiratory protection:** Not required.

### Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

<b>Form:</b>	Solid
<b>Colour:</b>	White
<b>Odour:</b>	Uncharacteristic.
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.

#### Change in condition

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** 100 °C

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not determined.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

#### Explosion limits:

**Lower:** Not determined.

**Upper:** Not determined.

**Vapour pressure:** Not applicable.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 3)

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Soluble.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>Solids content:</b>	100.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### LD/LC50 values relevant for classification:

**CAS: 26628-22-8 sodium azide**

Oral LD50 27 mg/kg (rat)

Dermal LD50 20 mg/kg (rabbit)

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 4)

## 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

#### CAS: 26628-22-8 sodium azide

EC50 96h (static) 0.35 mg/l (Pseudokirchneriella subcapitata)

LC50 96h 5.46 mg/l (Pimephales promelas)

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Ecotoxicological effects:

**Remark:** Harmful to fish

#### Additional ecological information:

#### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### European waste catalogue

HP 6 Acute Toxicity

HP 14 Ecotoxic

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

#### Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 5)

### Transport/Additional information:

#### IATA

#### Remarks:

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity  
not regulated

#### UN "Model Regulation":

## 15 Regulatory information

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

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

License is granted to make unlimited paper copies of this document for internal use only.

This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

#### Relevant phrases

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Contact:** tech@bertin-bioreagent.com

#### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Quality Control

(Contd. of page 6)

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 1: Acute toxicity – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**\* Data compared to the previous version altered.**

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Angiotensin II Tracer

**Article number:** A04880

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms** Void

**Signal word** Void

##### Hazard statements

H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.






**vPvB:** Not applicable.

### 3 Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

CAS: 26628-22-8	sodium azide	≥0.25-<2.5%
EINECS: 247-852-1	 Acute Tox. 2, H300;  Acute Tox. 1, H310;  STOT RE 2, H373;  Aquatic Acute 1, H400;  Aquatic Chronic 1, H410	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

Trade name: Angiotensin II Tracer

(Contd. of page 1)

## 4 First aid measures

### 4.1 Description of first aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

**Information about fire - and explosion protection:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Tracer

(Contd. of page 2)

## 8.1 Control parameters

### Ingredients with limit values that require monitoring at the workplace:

#### CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m<sup>3</sup>Long-term value: 0.1 mg/m<sup>3</sup>(as NaN<sub>3</sub>), Sk

**Additional information:** The lists valid during the making were used as basis.

## 8.2 Exposure controls

### Personal protective equipment:

**General protective and hygienic measures:** Wash hands before breaks and at the end of work.

**Respiratory protection:** Not required.

### Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

<b>Form:</b>	Solid
<b>Colour:</b>	Whitish
<b>Odour:</b>	Uncharacteristic.
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.

#### Change in condition

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** 100 °C

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not determined.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

#### Explosion limits:

**Lower:** Not determined.

**Upper:** Not determined.

**Vapour pressure:** Not applicable.

(Contd. on page 4)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Tracer

(Contd. of page 3)

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Soluble.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>Solids content:</b>	97.5 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### LD/LC50 values relevant for classification:

**CAS: 26628-22-8 sodium azide**

Oral LD50 27 mg/kg (rat)

Dermal LD50 20 mg/kg (rabbit)

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Tracer

(Contd. of page 4)

## 12 Ecological information

### **12.1 Toxicity**

#### **Aquatic toxicity:**

#### **CAS: 26628-22-8 sodium azide**

EC50 96h (static) 0.35 mg/l (Pseudokirchneriella subcapitata)

LC50 96h 5.46 mg/l (Pimephales promelas)

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### **Ecotoxicological effects:**

**Remark:** Harmful to fish

#### **Additional ecological information:**

#### **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

### **12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### **13.1 Waste treatment methods**

#### **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### **European waste catalogue**

HP 6 Acute Toxicity

HP 14 Ecotoxic

#### **Uncleaned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### **14.1 UN-Number**

ADR, ADN, IMDG, IATA

not regulated

### **14.2 UN proper shipping name**

ADR, ADN, IMDG, IATA

not regulated

### **14.3 Transport hazard class(es)**

ADR, ADN, IMDG, IATA

**Class**

not regulated

### **14.4 Packing group**

ADR, IMDG, IATA

not regulated

### **14.5 Environmental hazards:**

Not applicable.

### **14.6 Special precautions for user**

Not applicable.

### **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Tracer

(Contd. of page 5)

### Transport/Additional information:

#### IATA

#### Remarks:

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

#### UN "Model Regulation":

not regulated

## 15 Regulatory information

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

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

#### Relevant phrases

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Contact:** tech@bertin-bioreagent.com

#### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 20.11.2018

**Trade name:** Angiotensin II Tracer

(Contd. of page 6)

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 1: Acute toxicity – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**\* Data compared to the previous version altered.**

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Glutaraldehyde

**Article number:** A13880.1 ea

**CAS Number:**  
111-30-8

**EC number:**  
203-856-5

**Index number:**  
605-022-00-X

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3      H301 Toxic if swallowed.

Acute Tox. 2      H330 Fatal if inhaled.



GHS08 health hazard

Resp. Sens. 1      H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Skin Corr. 1B      H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Acute 1      H400 Very toxic to aquatic life.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Sens. 1A      H317 May cause an allergic skin reaction.

STOT SE 3      H335 May cause respiratory irritation.

(Contd. on page 2)

GB

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 1)

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS05 GHS06 GHS08 GHS09

**Signal word** Danger

#### Hazard-determining components of labelling:

glutaral

#### Hazard statements

H301 Toxic if swallowed.

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320 Specific treatment is urgent (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## 2.3 Other hazards

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### 3.1 Chemical characterisation: Substances

#### CAS No. Description

111-30-8 glutaral

#### Identification number(s)

**EC number:** 203-856-5

**Index number:** 605-022-00-X

## 4 First aid measures

### 4.1 Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### After inhalation:

Supply fresh air or oxygen; call for doctor.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 2)

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

During heating or in case of fire poisonous gases are produced.

### 5.3 Advice for firefighters

**Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

**Information about fire - and explosion protection:** Keep respiratory protective device available.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 3)

**Further information about storage conditions:** Keep container tightly sealed.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:**

**CAS: 111-30-8 glutaral**

WEL Short-term value: 0.2 mg/m<sup>3</sup>, 0.05 ppm

Long-term value: 0.2 mg/m<sup>3</sup>, 0.05 ppm

Sen

**Additional information:** The lists valid during the making were used as basis.

### 8.2 Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

**Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**

**Form:**

Fluid

**Colour:**

Colourless

(Contd. on page 5)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 4)

<b>Odour:</b>	Unpleasant
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	6 °C
<b>Initial boiling point and boiling range:</b>	101 °C
<b>Flash point:</b>	71 °C
<b>Flammability (solid, gas):</b>	Not applicable.
<b>Decomposition temperature:</b>	Not determined.
<b>Auto-ignition temperature:</b>	Not determined.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure at 20 °C:</b>	0.0203 hPa
<b>Density at 20 °C:</b>	1.05 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Fully miscible.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solids content:</b>	0.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Toxic if swallowed.

Fatal if inhaled.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 5)

### LD/LC50 values relevant for classification:

#### CAS: 111-30-8 glutaral

Oral LD50 134 mg/kg (rat)

Dermal LD50 2,560 mg/kg (rabbit)

#### Primary irritant effect:

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/irritation

Causes severe skin burns and eye damage.

#### Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

#### STOT-single exposure

May cause respiratory irritation.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Ecotoxicological effects:

##### Remark:

Very toxic for fish

Toxic for fish

#### Additional ecological information:

##### General notes:

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for aquatic organisms

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 6)

**European waste catalogue**

HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 Acute Toxicity

HP 8 Corrosive

HP 13 Sensitising

HP 14 Ecotoxic

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

**14.1 UN-Number**

ADR, IMDG, IATA

UN3082

**14.2 UN proper shipping name**

ADR

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (glutaral)

IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (glutaral), MARINE POLLUTANT

IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (glutaral)

**14.3 Transport hazard class(es)**

ADR


**Class  
Label**

 9 Miscellaneous dangerous substances and articles.  
8+6.1

IMDG


**Class  
Label**

 9 Miscellaneous dangerous substances and articles.  
8/6.1

IATA


**Class  
Label**

 9 Miscellaneous dangerous substances and articles.  
8 (6.1)
**14.4 Packing group**

ADR, IMDG, IATA

III

**14.5 Environmental hazards:****Marine pollutant:****Special marking (ADR):****Special marking (IATA):****14.6 Special precautions for user****Danger code (Kemler):****EMS Number:**

Warning: Miscellaneous dangerous substances and articles.

86

F-A,S-F

(Contd. on page 8)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

Trade name: Glutaraldehyde

(Contd. of page 7)

**Stowage Category** A  
**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

**Transport/Additional information:****ADR**

**Limited quantities (LQ)**  
**Excepted quantities (EQ)**

5L  
 Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

**Transport category**

3

**IMDG**

**Limited quantities (LQ)**  
**Excepted quantities (EQ)**

5L  
 Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

**IATA****Excepted quantities (EQ)**

Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml  
 Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

**Remarks:**

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

**UN "Model Regulation":**

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (GLUTARAL), 8 (6.1), III

## 15 Regulatory information

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

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** Substance is not listed.

**Seveso category**

H2 ACUTE TOXIC

E1 Hazardous to the Aquatic Environment

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

**Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

License is granted to make unlimited paper copies of this document for internal use only.

This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely

(Contd. on page 9)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Glutaraldehyde

(Contd. of page 8)

used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

**Contact:** tech@bertin-bioreagent.com

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation – Category 1A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

\* **Data compared to the previous version altered.**

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Borane Trimethylamine

**Article number:** A14880

**CAS Number:**  
75-22-9

**EC number:**  
200-850-4

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

Bertin Technologies  
10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE  
Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Sol. 1 H228 Flammable solid.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms**



GHS02 GHS07

**Signal word** Danger

**Hazard-determining components of labelling:**

trimethylamine--borane (1:1)

**Hazard statements**

H228 Flammable solid.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

(Contd. on page 2)

GB

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 1)

H335 May cause respiratory irritation.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

## 3 Composition/information on ingredients

**3.1 Chemical characterisation: Substances****CAS No. Description**

75-22-9 trimethylamine--borane (1:1)

**Identification number(s)****EC number:** 200-850-4

## 4 First aid measures

**4.1 Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

**5.1 Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**5.3 Advice for firefighters****Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 2)

Ensure adequate ventilation.

#### **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

#### **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

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

##### **Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep container tightly sealed.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

#### **8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

#### **8.2 Exposure controls**

##### **Personal protective equipment:**

##### **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

##### **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

##### **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

##### **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 3)

**Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:	Crystalline
Colour:	White
Odour:	Uncharacteristic.
Odour threshold:	Not determined.

pH-value: Not applicable.

#### Change in condition

Melting point/freezing point:	92-94 °C
Initial boiling point and boiling range:	172 °C

Flash point: 64 °C

Flammability (solid, gas): Product is not flammable.

Decomposition temperature: Not determined.

Auto-ignition temperature: Not determined.

Explosive properties: Not determined.

#### Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 97 °C: 103 hPa

Density at 20 °C:	0.81 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

Solubility in / Miscibility with water: Insoluble.

Partition coefficient: n-octanol/water: Not determined.

#### Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

Solids content: 100.0 %

**9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 4)

**10.2 Chemical stability**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**11.1 Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met.

**LD/LC50 values relevant for classification:**

**CAS: 75-22-9 trimethylamine--borane (1:1)**

LD50 Intraperitoneal 175 mg/kg (rat)

**Primary irritant effect:**

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause respiratory irritation.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

**12.1 Toxicity**

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**13.1 Waste treatment methods**

**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 5)

### European waste catalogue

HP 3 Flammable

HP 4 Irritant - skin irritation and eye damage

HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

### 14.1 UN-Number

ADR, IMDG, IATA

UN1325

### 14.2 UN proper shipping name

ADR

UN1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (trimethylamine--borane (1:1))

IMDG, IATA

FLAMMABLE SOLID, ORGANIC, N.O.S. (trimethylamine--borane (1:1))

### 14.3 Transport hazard class(es)

ADR



Class

4.1 Flammable solids, self-reactive substances and solid desensitised explosives.

IMDG, IATA



Class

4.1 Flammable solids, self-reactive substances and solid desensitised explosives.

Label

4.1

### 14.4 Packing group

ADR, IMDG, IATA

II

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Warning: Flammable solids, self-reactive substances and solid desensitised explosives.

EMS Number:

F-A,S-G

Stowage Category

B

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

### Transport/Additional information:

ADR

Limited quantities (LQ)

1 kg

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

IMDG

Limited quantities (LQ)

1 kg

(Contd. on page 7)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 6)

**Excepted quantities (EQ)**

Code: E2  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 500 g

**IATA**

Code: E2  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 500 g

**Excepted quantities (EQ)**

Code: E2  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 500 g

**Remarks:**

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

**UN "Model Regulation":**

UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (TRIMETHYLAMINE--BORANE (1:1)), 4.1, II

## 15 Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** Substance is not listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

License is granted to make unlimited paper copies of this document for internal use only.

This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

**Contact:** tech@bertin-bioreagent.com

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 8)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** Borane Trimethylamine

(Contd. of page 7)

vPvB: very Persistent and very Bioaccumulative

Flam. Sol. 1: Flammable solids – Category 1

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**\* Data compared to the previous version altered.**

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** ELISA Buffer

**Article number:** A07000

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms** Void

**Signal word** Void

##### Hazard statements

H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.




**vPvB:** Not applicable.

### 3 Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

CAS: 26628-22-8 sodium azide ≥0.25-<2.5%  
EINECS: 247-852-1  Acute Tox. 2, H300; Acute Tox. 1, H310;  STOT RE 2, H373;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** ELISA Buffer

(Contd. of page 1)

## 4 First aid measures

### 4.1 Description of first aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

### 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

**Information about fire - and explosion protection:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

Trade name: ELISA Buffer

(Contd. of page 2)

**8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 26628-22-8 sodium azide**WEL Short-term value: 0.3 mg/m<sup>3</sup>Long-term value: 0.1 mg/m<sup>3</sup>(as NaN<sub>3</sub>), Sk**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:** Wash hands before breaks and at the end of work.**Respiratory protection:** Not required.**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

## 9 Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	Whitish
<b>Odour:</b>	Uncharacteristic.
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.**Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** 1,461 °C**Flash point:** Not applicable.**Flammability (solid, gas):** Not determined.**Decomposition temperature:** Not determined.**Auto-ignition temperature:** Product is not selfigniting.**Explosive properties:** Product does not present an explosion hazard.**Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**Vapour pressure:** Not applicable.

(Contd. on page 4)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

Trade name: ELISA Buffer

(Contd. of page 3)

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Soluble.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>Solids content:</b>	100.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### LD/LC50 values relevant for classification:

**CAS: 26628-22-8 sodium azide**

Oral LD50 27 mg/kg (rat)

Dermal LD50 20 mg/kg (rabbit)

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

Trade name: ELISA Buffer

(Contd. of page 4)

## 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

#### CAS: 26628-22-8 sodium azide

EC50 96h (static) 0.35 mg/l (Pseudokirchneriella subcapitata)

LC50 96h 5.46 mg/l (Pimephales promelas)

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Ecotoxicological effects:

**Remark:** Harmful to fish

#### Additional ecological information:

#### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### European waste catalogue

HP 6 Acute Toxicity

HP 14 Ecotoxic

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** ELISA Buffer

(Contd. of page 5)

**Transport/Additional information:****IATA****Remarks:**

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity  
not regulated

**UN "Model Regulation":**

## 15 Regulatory information

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

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

License is granted to make unlimited paper copies of this document for internal use only.

This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

**Relevant phrases**

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Contact:** tech@bertin-bioreagent.com

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 08.04.2019

**Trade name:** ELISA Buffer

(Contd. of page 6)

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 1: Acute toxicity – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**\* Data compared to the previous version altered.**

GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name:** Wash Buffer

**Article number:** A17000

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Wash Buffer

(Contd. of page 1)

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**5 Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**5.3 Advice for firefighters****Protective equipment:** No special measures required.**6 Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Not required.**6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Recommended storage temperature:** -20 °C**7.3 Specific end use(s)** No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical facilities:** No further data; see item 7.**8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Wash Buffer

(Contd. of page 2)

**Respiratory protection:** Not required.

**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.

**pH-value at 20 °C:** 7.4

**Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	100 °C

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not applicable.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapour pressure at 20 °C:** 23 hPa

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

**Solubility in / Miscibility with water:** Fully miscible.

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity:**

**Dynamic:** Not determined.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

Trade name: Wash Buffer

(Contd. of page 3)

<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Water:</b>	60.0 %
<b>Solids content:</b>	40.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### Primary irritant effect:

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### Additional ecological information:

##### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 5)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Wash Buffer

(Contd. of page 4)

## 13 Disposal considerations

### 13.1 Waste treatment methods

**Recommendation** Smaller quantities can be disposed of with household waste.

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol

and the IBC Code

Not applicable.

UN "Model Regulation":

not regulated

## 15 Regulatory information

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

Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

This product is designed for Research and Development use only. Not for drug for human nor veterinary or other uses. The manufacturer has no responsibility for damage caused by unsuitable use or by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Technologies makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Wash Buffer

(Contd. of page 5)

**Contact:** tech@bertin-bioreagent.com**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

**\* Data compared to the previous version altered.**

GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name:** Tween 20

**Article number:** A12000

**CAS Number:**  
9005-64-5

**NLP Number:**  
500-018-3

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

Bertin Technologies  
10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE  
Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The substance is not classified, according to the CLP regulation.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### 3.1 Chemical characterisation: Substances

**CAS No. Description**  
9005-64-5 Polysorbate 20  
**Identification number(s)**  
**NLP Number:** 500-018-3

## 4 First aid measures

### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Tween 20

(Contd. of page 1)

**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Recommended storage temperature:** 20 °C**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:** Not required.**Additional information:** The lists valid during the making were used as basis.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

Trade name: Tween 20

(Contd. of page 2)

**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.

**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Goggles recommended during refilling

## 9 Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Highly viscous
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not determined.

**Change in condition**

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** Undetermined.

**Flash point:** 275 °C

**Flammability (solid, gas):** Not applicable.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Not determined.

**Explosive properties:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**Vapour pressure:** Not determined.

**Density at 20 °C:** 1.1 g/cm<sup>3</sup>

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

**Solubility in / Miscibility with water:**

Fully miscible.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

Trade name: Tween 20

(Contd. of page 3)

**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:****Dynamic at 20 °C:** 400 mPas**Kinematic:** Not determined.**Solids content:** 0.0 %**9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**11.1 Information on toxicological effects****Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:****CAS: 9005-64-5 Polysorbate 20**

Oral LD50 38,900 mg/kg (rat)

**Primary irritant effect:****Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

**12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Tween 20

(Contd. of page 4)

**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### 13.1 Waste treatment methods

**Recommendation** Smaller quantities can be disposed of with household waste.

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

UN "Model Regulation":

not regulated

## 15 Regulatory information

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

Directive 2012/18/EU

**Named dangerous substances - ANNEX I** Substance is not listed.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

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(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Tween 20

(Contd. of page 5)

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**Contact:** tech@bertin-bioreagent.com**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

**\* Data compared to the previous version altered.**



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

### 1 Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** Ellman's Reagent 49+1

**Article number:** A09000\_49+1

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Laboratory reagent

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Bertin Technologies

10 bis avenue Ampère F-78180 Montigny-le-Bx FRANCE

Tel: +33 1 39 30 60 36 - tech@bertin-bioreagent.com

**Further information obtainable from:** Technical Support of Bioreagent Department

**1.4 Emergency telephone number:** During operating hours 09 am to 05 pm (Paris Time GMT+1) : +33 139 306 036

### 2 Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

##### Hazard pictograms



GHS07

**Signal word** Warning

##### Hazard-determining components of labelling:

2-acetylthioethyltrimethylammonium iodide

##### Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

##### Precautionary statements

P280 Wear protective gloves / eye protection / face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Ellman's Reagent 49+1

(Contd. of page 1)

## 2.3 Other hazards

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

#### Dangerous components:

CAS: 1866-15-5	2-acetylthioethyltrimethylammonium iodide	≥2.5-<10%
EINECS: 217-472-0	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

CAS: 69-78-3	3,3'-dithiobis[6-nitrobenzoic] acid	≥2.5-<10%
EINECS: 200-714-4	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

### 5.3 Advice for firefighters

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Ellman's Reagent 49+1

See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

(Contd. of page 2)

## 7 Handling and storage

**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

**Information about fire - and explosion protection:** No special measures required.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep container tightly sealed.

**Recommended storage temperature:** -20 °C

**7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Respiratory protection:** Not required.

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Ellman's Reagent 49+1

(Contd. of page 3)

**Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:	Solid
Colour:	Light yellow
Odour:	Odourless
Odour threshold:	Not determined.

pH-value: Not applicable.

#### Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	1,461 °C

Flash point: Not applicable.

Flammability (solid, gas): Not determined.

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

#### Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure: Not applicable.

Density:	Not determined.
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

Solubility in / Miscibility with water: Soluble.

Partition coefficient: n-octanol/water: Not determined.

#### Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

#### Solvent content:

Solids content: 100.0 %

**9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

**10.1 Reactivity** No further relevant information available.

(Contd. on page 5)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Ellman's Reagent 49+1

(Contd. of page 4)

**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**11.1 Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

**LD/LC50 values relevant for classification:****CAS: 1866-15-5 2-acetylthioethyltrimethylammonium iodide**

Oral	LD50	100 mg/kg	(rat)
Dermal	LD50	500 mg/kg	(guinea pig)

**CAS: 69-78-3 3,3'-dithiobis[6-nitrobenzoic] acid**

LD50 Intraperitoneal 2,080 mg/kg (mouse)

**Primary irritant effect:****Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12 Ecological information

**12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 6)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

Trade name: Ellman's Reagent 49+1

(Contd. of page 5)

## 13 Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### European waste catalogue

HP 6 Acute Toxicity

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA

not regulated

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

not regulated

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

not regulated

### 14.4 Packing group

ADR, IMDG, IATA

not regulated

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

#### Transport/Additional information:

#### IATA

#### Remarks:

When sold in quantities of less than or equal to 1mL or 1g with an Excepted Quantity Code of E1, E2, E3, E4 or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

#### UN "Model Regulation":

not regulated

## 15 Regulatory information

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

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

### 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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This Material Safety Data Sheet contains data necessary to ensure safety, health and environmental protection in

(Contd. on page 7)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2019

Revision: 11.12.2018

**Trade name:** Ellman's Reagent 49+1

(Contd. of page 6)

working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a laboratory reagent and can be solely used by persons with dedicated education at their own risk.

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**Relevant phrases**

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

**Department issuing SDS:** Technical Support of Bioreagent Department**Contact:** tech@bertin-bioreagent.com**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**\* Data compared to the previous version altered.**