03.04.2023 **Kit Components**

Product code	Description
A05230	**Anthrax Edema Factor Assay kit**

Components:

A08100	Mouse anti-Rabbit precoated 96-well Strip Plate
A06230	Anthrax EF Standard
A10230	Anthrax EF Quality Control
A04230	cAMP Tracer
A03230	cAMP Antiserum
A14230	Sodium Periodate
A15230	Rhamnose
A16230	Acetic Anhydride
A17230	Assay Buffer
A22230	Adenylyl Cyclase Reagent
A23230	Potassium Hydroxide
A07000	ELISA Buffer
A17000	Wash Buffer
A12000	Tween 20
A09000_50	Ellman's Reagent 50

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Mouse anti-Rabbit precoated 96-well Strip Plate

Article number: A08100

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 00 - 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) : +33 139 306 000

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 GB 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 03.04.2023 *Revision: 03.04.2023*

Trade name: Mouse anti-Rabbit precoated 96-well Strip Plate

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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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Mouse anti-Rabbit precoated 96-well Strip Plate

(Contd. of page 2)

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:	
Form:	Solid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	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:	
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:	Insoluble.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Mouse anti-Rabbit 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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Mouse anti-Rabbit precoated 96-well Strip Plate

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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 dédicated 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

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Mouse anti-Rabbit precoated 96-well Strip Plate

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Abbreviations and acronyms:
ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 04.01.2018*

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

1.1 Product identifier

Trade name: Anthrax EF Standard

Article number: A06230

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 00 - 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) : +33 139 306 000

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 GB 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 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Standard

(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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Standard

(Contd. of page 2)

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:	
Form:	Solid
Colour:	White
Odour:	Uncharacteristic.
Odour threshold:	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.
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.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Standard

(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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Standard

(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.
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 dédicated 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 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Standard

(Contd. of page 5)

Contact: tech@bertin-bioreagent.com

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 04.01.2018*

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

1.1 Product identifier

Trade name: Anthrax EF Quality Control

Article number: A10230

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 00 - 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) : +33 139 306 000

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 GB 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 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Quality Control

(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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 3)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Quality Control

(Contd. of page 2)

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:	
Form:	Solid
Colour:	White
Odour:	Uncharacteristic.
Odour threshold:	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.
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.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Quality Control

(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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Quality Control

(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.
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 dédicated 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 03.04.2023 *Revision: 04.01.2018*

Trade name: Anthrax EF Quality Control

(Contd. of page 5)

Contact: tech@bertin-bioreagent.com

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: cAMP Tracer

Article number: A04230

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 00 - 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) : +33 139 306 000

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 GB 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.

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP 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

8.1 Control parameters
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 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Tracer

(Contd. of page 2)

Ingredients with limit values that require monitoring at the workplace:

CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m³
Long-term value: 0.1 mg/m³
(as NaN_3), 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:

Form:	Solid
Colour:	Whitish
Odour:	Uncharacteristic.
Odour threshold:	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.
Density:	Not determined.
Relative density	Not determined.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Tracer

(Contd. of page 3)

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:	98.7 %

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: 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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP 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.
Ecotoxical 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.

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 Quantites exemption, per

(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Tracer

(Contd. of page 5)

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.
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 dédicated 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 relatif au transport international 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
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.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: cAMP Antiserum

Article number: A03230

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 00 - 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) : +33 139 306 000

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 GB 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.

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Antiserum

(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

8.1 Control parameters
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 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Antiserum

(Contd. of page 2)

Ingredients with limit values that require monitoring at the workplace:

CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m³
Long-term value: 0.1 mg/m³
(as NaN_3), 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:

Form:	Solid
Colour:	Whitish
Odour:	Uncharacteristic.
Odour threshold:	Not determined.
pH-value:	Not applicable.

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	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:

Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Antiserum

(Contd. of page 3)

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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Antiserum

(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.
Ecotoxical 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.

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 Quantites exemption, per

(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: cAMP Antiserum

(Contd. of page 5)

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.
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 dédicated 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 relatif au transport international 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
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.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Sodium Periodate

Article number: A14230
CAS Number:
7790-28-5
EC number:
232-197-6

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 00 - 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) : +33 139 306 000

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008


flame over circle

Ox. Sol. 1 H271 May cause fire or explosion; strong oxidiser.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the GB CLP regulation.
Hazard pictograms


GHS03

Signal word Danger
Hazard statements
H271 May cause fire or explosion; strong oxidiser.
Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P283	Wear fire resistant or flame retardant clothing.
P306+P360	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
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 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(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

3.1 Chemical characterisation: Substances
CAS No. Description
CAS: 7790-28-5 sodium periodate
Identification number(s)
EC number: 232-197-6

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 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.

(Contd. on page 3)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(Contd. of page 2)

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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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: Wash hands before breaks and at the end of work.
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.
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:

Form:	Solid
Colour:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	3.5-5.5

Change in condition

Melting point/freezing point:	300 °C
Initial boiling point and boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gas):	Product is not flammable.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(Contd. of page 3)

Ignition temperature:	262 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard. Explosive when mixed with combustible material.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not applicable.
Density at 20 °C:	3.86 g/cm³
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water at 20 °C:	107 g/l
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.
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: 7790-28-5 sodium periodate
LD50 Intraperitoneal 58 mg/kg (mouse)
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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(Contd. of page 4)

Additional toxicological information:
CMR effects (carcinogenity, 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:

CAS: 7790-28-5 sodium periodate
EC50 48h 0.18 mg/l (Daphnia magna)
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.

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 UN3085
14.2 UN proper shipping name
ADR UN3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (sodium periodate)
IMDG OXIDIZING SOLID, CORROSIVE, N.O.S. (sodium periodate), MARINE POLLUTANT
IATA OXIDIZING SOLID, CORROSIVE, N.O.S. (sodium periodate)

(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(Contd. of page 5)

14.3 Transport hazard class(es)

ADR, IMDG

Class	5.1 Oxidising substances.
Label	5.1

IATA

Class	5.1 Oxidising substances.
Label	5.1

14.4 Packing group

ADR, IMDG, IATA I

14.5 Environmental hazards:

Marine pollutant: Symbol (fish and tree)

Special marking (ADR): Symbol (fish and tree)

14.6 Special precautions for user

Warning: Oxidising substances.

EMS Number: F-A,S-Q

Stowage Category D

Handling Code H1 Keep as dry as reasonably practicable

Segregation Code SG38 Stow "separated from" SGG2-ammonium compounds.
SG49 Stow "separated from" SGG6-cyanides
SG60 Stow "separated from" SGG16-peroxides

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

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ) 0

Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

IMDG

Limited quantities (LQ) 0

Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

IATA Code: E0
Not permitted as Excepted Quantity

Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

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 Quantites exemption, per IATA 2.6.10.
Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

UN "Model Regulation": UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (SODIUM PERIODATE), 5.1, I

(Contd. on page 7)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Sodium Periodate

(Contd. of page 6)

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 P8 OXIDISING LIQUIDS AND SOLIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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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
Ox. Sol. 1: Oxidizing solids – Category 1
*** Data compared to the previous version altered.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Rhamnose

Article number: A15230
CAS Number:
10030-85-0

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 00 - 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) : +33 139 306 000

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 GB 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
CAS: 10030-85-0 L-Rhamnose monohydrate

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.

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Rhamnose

(Contd. of page 1)

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: 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

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

(Contd. on page 3)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Rhamnose

(Contd. of page 2)

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: Not required.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid
Colour:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/freezing point:	90 °C
Initial boiling point and boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gas):	Product is not flammable.
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 applicable.
Density:	Not determined.
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.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Rhamnose

(Contd. of page 3)

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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

13 Disposal considerations

13.1 Waste treatment methods
Recommendation Smaller quantities can be disposed of with household waste.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Rhamnose

(Contd. of page 4)

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 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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Abbreviations and acronyms:
ADR: Accord relatif au transport international 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

(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Rhamnose

(Contd. of page 5)

GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Acetic Anhydride

Article number: A16230
CAS Number:
108-24-7
EC number:
203-564-8
Index number:
607-008-00-9

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 00 - 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) : +33 139 306 000

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008


flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


corrosion

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

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the GB CLP regulation.
Hazard pictograms


GHS02 GHS05 GHS07

Signal word Danger

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Acetic Anhydride

(Contd. of page 1)

Hazard-determining components of labelling:
acetic anhydride
Hazard statements
H226 Flammable liquid and vapour.
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
Precautionary statements
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.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
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
CAS: 108-24-7 acetic anhydride
Identification number(s)
EC number: 203-564-8
Index number: 607-008-00-9

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:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
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:
Call for a doctor 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.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Acetic Anhydride

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5 Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents: Water with full jet
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 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.
Prevent formation of aerosols.
Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
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.
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

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

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Acetic Anhydride

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Ingredients with limit values that require monitoring at the workplace:

CAS: 108-24-7 acetic anhydride

WEL Short-term value: 10 mg/m³, 2 ppm
Long-term value: 2.5 mg/m³, 0.5 ppm

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.

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:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.

Change in condition

Melting point/freezing point:	-73 °C
Initial boiling point and boiling range:	138-140 °C
Flash point:	49 °C
Flammability (solid, gas):	Flammable.

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Safety data sheet
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Trade name: Acetic Anhydride

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Ignition temperature:	330 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	2 Vol %
Upper:	10.2 Vol %
Vapour pressure at 20 °C:	5 hPa
Density at 20 °C:	1.08 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water at 20 °C:	136 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	100.0 %
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
Harmful if swallowed or if inhaled.
LD/LC50 values relevant for classification:
CAS: 108-24-7 acetic anhydride
Oral LD50 630 mg/kg (rat)
Dermal LD50 4,320 mg/kg (rabbit)
Primary irritant effect:
Skin corrosion/irritation
Causes severe skin burns and eye damage.

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Safety data sheet
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Trade name: Acetic Anhydride

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Serious eye damage/irritation
Causes severe skin burns and eye damage.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Additional toxicological information:
CMR effects (carcinogenity, 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:

CAS: 108-24-7 acetic anhydride
EC50 96h 55 mg/l (Daphnia magna)
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.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
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.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

*
14 Transport information

14.1 UN-Number
ADR, IMDG, IATA UN1715
14.2 UN proper shipping name
ADR UN1715 ACETIC ANHYDRIDE
IMDG, IATA ACETIC ANHYDRIDE

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

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Trade name: Acetic Anhydride

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14.3 Transport hazard class(es)

ADR

Class	8 Corrosive substances.
Label	8+3

IMDG

Class	8 Corrosive substances.
Label	8/3

IATA

Class	8 Corrosive substances.
Label	8 (3)
14.4 Packing group	
ADR, IMDG, IATA	II
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	83
EMS Number:	F-E,S-C
Segregation groups	(SGG1) Acids, (SGG1) acids
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E

IMDG

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

IATA

	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 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 Quantites exemption, per

(Contd. on page 8)

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Trade name: Acetic Anhydride

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IATA 2.6.10.
Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity

UN "Model Regulation": UN 1715 ACETIC ANHYDRIDE, 8 (3), 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.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
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 dédicated 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 relatif au transport international 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
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B

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

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

Printing date 03.04.2023 *Revision: 04.01.2018*

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

1.1 Product identifier

Trade name: Assay Buffer

Article number: A17230

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 00 - 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) : +33 139 306 000

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 GB 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.

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Assay Buffer

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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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

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Trade name: Assay Buffer

(Contd. of page 2)

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:	
Form:	Solid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	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:	
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.

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Assay Buffer

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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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Assay Buffer

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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

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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.

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Assay Buffer

(Contd. of page 5)

Contact: tech@bertin-bioreagent.com

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 04.01.2018*

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

1.1 Product identifier

Trade name: Adenylyl Cyclase Reagent

Article number: A22230

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 00 - 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) : +33 139 306 000

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 GB 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 03.04.2023 *Revision: 04.01.2018*

Trade name: Adenylyl Cyclase Reagent

(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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Adenylyl Cyclase Reagent

(Contd. of page 2)

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:	
Form:	Solid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	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:	
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:	Insoluble.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Adenylyl Cyclase Reagent

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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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Adenylyl Cyclase Reagent

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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 dédicated 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

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

Printing date 03.04.2023 *Revision: 04.01.2018*

Trade name: Adenylyl Cyclase Reagent

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Abbreviations and acronyms:
ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Potassium Hydroxide

Article number: A23230
CAS Number:
1310-58-3
EC number:
215-181-3
Index number:
019-002-00-8

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 00 - 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) : +33 139 306 000

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008


corrosion

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

Acute Tox. 4 H302 Harmful if swallowed.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the GB CLP regulation.
Hazard pictograms


GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:
potassium hydroxide
Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

(Contd. of page 1)

Precautionary statements
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.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
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
CAS: 1310-58-3 potassium hydroxide
Identification number(s)
EC number: 215-181-3
Index number: 019-002-00-8

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. Then consult a doctor.
After swallowing:
Call for a doctor 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: Use fire extinguishing methods suitable to surrounding conditions.
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.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

(Contd. of page 2)

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 to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
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
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
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.
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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
Ingredients with limit values that require monitoring at the workplace:

CAS: 1310-58-3 potassium hydroxide
WEL Short-term value: 2 mg/m³
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

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

(Contd. of page 3)

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: Solid
Colour: Not determined.
Odour: Characteristic
Odour threshold: Not determined.

pH-value: 13.5

Change in condition
Melting point/freezing point: 361 °C
Initial boiling point and boiling range: 1,320 °C

Flash point: Not applicable.

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

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 at 719 °C: 1 hPa

Density at 20 °C: 2.04 g/cm³
Relative density Not determined.
Vapour density Not applicable.
Evaporation rate Not applicable.

Solubility in / Miscibility with water at 20 °C: 1120 g/l

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

Viscosity:
Dynamic: Not applicable.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

(Contd. of page 4)

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.
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: 1310-58-3 potassium hydroxide
Oral LD50 333 mg/kg (rat)
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 Based on available data, the classification criteria are not met.
Additional toxicological information:
CMR effects (carcinogenity, 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.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

(Contd. of page 5)

Must not reach sewage water or drainage ditch undiluted or unneutralised.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

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.

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 UN1813

14.2 UN proper shipping name
ADR UN1813 POTASSIUM HYDROXIDE, SOLID
IMDG, IATA POTASSIUM HYDROXIDE, SOLID

14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class 8 Corrosive substances.
Label 8

14.4 Packing group
ADR, IMDG, IATA II

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user Warning: Corrosive substances.
Hazard identification number (Kemler code): 80
EMS Number: F-A,S-B
Segregation groups (SGG18) Alkalis
Stowage Category A
Segregation Code SG35 Stow "separated from" SGG1-acids

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

Transport category 2

(Contd. on page 7)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

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Tunnel restriction code	E
IMDG	
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
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 Quantites exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity
UN "Model Regulation":	UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, 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.
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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 dédicated 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 relatif au transport international 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

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: Potassium Hydroxide

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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. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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 00 - 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) : +33 139 306 000

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 GB 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.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

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

8.1 Control parameters
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 03.04.2023 *Revision: 03.04.2023*

Trade name: ELISA Buffer

(Contd. of page 2)

Ingredients with limit values that require monitoring at the workplace:

CAS: 26628-22-8 sodium azide

WEL Short-term value: 0.3 mg/m³
Long-term value: 0.1 mg/m³
(as NaN_3), 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:

Form:	Solid
Colour:	Whitish
Odour:	Uncharacteristic.
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.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: ELISA Buffer

(Contd. of page 3)

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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

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

Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: ELISA Buffer

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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.
Ecotoxical 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.

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 Quantites exemption, per

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Safety data sheet
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Printing date 03.04.2023 *Revision: 03.04.2023*

Trade name: ELISA Buffer

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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 dédicated 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 relatif au transport international 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
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.**

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

Printing date 03.04.2023 *Revision: 13.02.2023*

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 00 - 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) : +33 139 306 000

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 GB 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.

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

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Trade name: Wash Buffer

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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

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

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Wash Buffer

(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: Goggles recommended during refilling

*
9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
pH-value at 20 °C:	7.4
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	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:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Wash Buffer

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Solvent content:
Water: 60.0 %

Solids content: 40.0 %

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.
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

(Contd. on page 5)

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Wash Buffer

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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

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(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Wash Buffer

(Contd. of page 5)

Contact: tech@bertin-bioreagent.com

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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.**

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

Printing date 03.04.2023 *Revision: 13.02.2023*

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 00 - 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) : +33 139 306 000

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 GB 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
CAS: 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.

(Contd. on page 2)

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Tween 20

(Contd. of page 1)

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:
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

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
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 03.04.2023 *Revision: 13.02.2023*

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:

Form:	Highly viscous
Colour:	Light yellow
Odour:	Characteristic
Odour threshold:	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/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined.

(Contd. on page 4)

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Tween 20

(Contd. of page 3)

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.
Additional toxicological information:
CMR effects (carcinogenity, 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 03.04.2023 *Revision: 13.02.2023*

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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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.

(Contd. on page 6)

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

Printing date 03.04.2023 *Revision: 13.02.2023*

Trade name: Tween 20

(Contd. of page 5)

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Contact: tech@bertin-bioreagent.com

Abbreviations and acronyms:
ADR: Accord relatif au transport international 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 03.04.2023 *Revision: 03.04.2023*

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

1.1 Product identifier

Trade name: Ellman's Reagent 50

Article number: A09000_50

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 00 - 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) : +33 139 306 000

*

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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 GB 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 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.

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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.

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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: 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

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

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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.

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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
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.
Additional toxicological information:
CMR effects (carcinogenity, 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.

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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.

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 Quantites 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.

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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 dédicated 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
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 relatif au transport international 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
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.**