

The Safety Data Sheet is usable for:
KAPDB4240
T4 ELISA KIT

Refer to the instructions for the full list of product components

Single components with dangerous ingredients :

REF	Name	Symbol	Version
-	Stopping Solution	 STOP SOLN	1.0
-	TMB Substrate	- CHROM TMB	1.0

Read the MSDS for the component on the following pages.

Not listed single components contain no hazardous substances in concentrations to be declared, a labelling is not required.

1 Identification of substance/mixture and company

1.1 Product identifier

Product form : Mixture
 Product name : Stopping Solution **STOP SOLN**
 Catalog # : - **REF**

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

1.2.1 Relevant identified uses

Use of the substance/mixture : Laboratory reagent, Immunoassays
 Use by professionals

1.2.2 Uses advised against

No additional information available

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer

DIAsource ImmunoAssays S.A.

Rue du Bosquet, 2

B-1348 Louvain-la-Neuve

Belgium

Tel. Nr. +32 (0)10/84.99.11

E-mail: products.support@diasource.be

1.4 Emergency telephone number

DIAsource (only office hours) : +32 (0)10/84.99.23

Centre Anti-Poisons (BE) : 070 245 245

Please refer to your local Anti-Poison Center!

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) N° 1272/2008 (CLP)

Skin Irritation, category 2 H315 Causes skin irritation

Eye Irritation, category 2 H319 Causes serious eye irritation

(Full test of H-statements: see section16)

2.2 Label element

Labelling according to Regulation (EC) N° 1272/2008 (CLP)

Hazard symbol (CLP) : 

Signal word (CLP) : Warning

Hazard statement (CLP) : H315 Causes skin irritation
 H319 Causes serious eye irritation

Precaution statement (CLP) : P264 Wash exposed skin thoroughly after handling
 P280 Wear protective gloves, protective clothing, eye protection, face protection
 P302+P350 IF ON SKIN: Gently wash with plenty of soap and water
 P332+P313 If skin irritation occurs: Get medical advice/attention
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P501 Dispose of contents/container to comply with local, state and federal regulations

2.3 Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

3 Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sulphuric acid ...%*	(CAS-No.) 7664-93-9 (EC-No.) 231-639-5 (EC Index-No.) 016-020-00-8	< 10	Skin Corr. 1A, H314

Name	Product identifier	Specific concentration limits according to Regulation (EC) No. 1272/2008 [CLP]
Sulphuric acid	(CAS-No.) 7664-93-9 (EC-No.) 231-639-5 (EC Index-No.) 016-020-00-8	(5 ≤ C < 15) Eye Irrit. 2, H319 (5 ≤ C < 15) Skin Irrit. 2, H315 (C ≥ 15) Skin Corr. 1A, H314

Full text of H-statements: see section16

***Note B:** Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ...%'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

4 First aid measures

4.1 Description of first aid measures

- First-aid measures general : In general, in case of doubt or if symptoms persist, always call a doctor. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : If person experiences nausea, headache or dizziness, person should stop work immediately and move to fresh air until these symptoms disappear. If breathing is difficult, administer oxygen by a qualified person, keep the person warm and at rest. Call a physician. In the event that an individual inhales enough vapour to lose consciousness, person should be moved to fresh air at once and a physician should be called immediately. If breathing has stopped, artificial respiration should be given immediately. In all case, ensure adequate ventilation and provide respiratory protection before the person returns to work.
- First-aid measures after skin contact : IF ON SKIN (or hair): Remove contaminated clothing. Rinse skin with water / with vegetable oil. Take a shower.
If irritation or rash occurs: Get medical advice.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with vegetable oil for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : IF SWALLOWED: Rinse thoroughly mouth with water. Immediately call a POISON CENTER/doctor.
Do NOT induce vomiting

4.2 Most important symptom and effects, both acute and delayed

- Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5 Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use water spray or other suitable agent on fires adjacent to non-leaking tanks or intact containers of acid. If only a small amount of combustibles is present, smother fire with dry chemical.
Small fire: Dry powder or CO₂. Move containers from fire area, if it can be done without risk.
Large fire: Flood fire area with large quantities of water, while knocking down vapours with water fog. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Unsuitable extinguishing media : Do not use solid water streams near ruptured tanks or spills of sulfuric acid.

5.2 Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Acid reacts violently with water and can spatter acid onto personnel.
Reacts with most metals, especially when diluted: Hydrogen gas release, which is extremely flammable and explosive. Risk of explosion if acid combines with water, organic materials or base solutions in enclosed spaces. Mixing acids of different strengths/concentrations can also pose an explosive risk in an enclosed space/container.

5.3 Advice for firefighters

- Firefighting instructions : Add chemical safety goggles if eye protection is not provided. Wear full protective clothing.
Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear full protective clothing. Neutralize run-off with lime, soda ash, to prevent corrosion of metals and formation of hydrogen gas.
- Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate air ventilation. Avoid contact with skin and eyes. Do not breathe vapours/spray.
- 6.1.1 For non-emergency personnel : Evacuate unnecessary personnel.
- 6.1.2 For emergency responders : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.
- Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

- Avoid release to the environment.
- Avoid contamination of drains, surface water and groundwater.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : SMALL SPILL: Soak up with dry sand, clay or diatomaceous earth.
LARGE SPILL: Dike. Cautiously dilute and neutralize with lime or soda ash. Adequate ventilation is required during neutralization due to release of CO₂ gas. Transfer to waste water treatment system. Prevent liquid from entering sewers, waterways. Product not recovered or sent as waste for treatment should be reported to authorities..

6.4 Reference to other sections

- Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

7 Handling and storage

7.1 Precautions for safe handling

- Precautions for safe handling : DO NOT get in eyes, on skin, or on clothing.
DO NOT ingest: Avoid breathing vapours or mist.
Wear approved respirators if ventilation is not adequate.
NEVER add water to acid.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a cool, well-ventilated area, away from incompatible substances. Protect from physical damage.
Keep out of sun and away from heat (more than 275°C).
If stored in metal containers, vapours can contain explosive hydrogen gas.
Do not smoke in storage area..
- Prohibitions on mixed storage : Keep away from food, drink and animal feeding stuffs.
- Incompatible materials : Metals.

7.3 Specific end use(s)

- Laboratory reagent, Immunoassays

8 Exposure controls/personnel protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

Sulphuric acid (CAS N° 7664-93-9)	
Limit value (8h)	1 mg/m ³
Limit value (Short term)	3 mg/m ³

8.2 Exposure controls



- Appropriate engineering controls : Good general ventilation should be provided to keep vapour and mist concentrations below the exposure limits.
- Hand protection : Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm. Butyl rubber, 0.5 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection : Wear safety glasses with non-perforated shields. Add a face shield (close-fitting) if pouring liquid. For leak, spills emergency or heavy handling, use chemical safety goggles or a full face shield. Do not wear contact lenses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type P2.

Environmental exposure controls : Avoid release to the environment.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colorless
Odor	: No data available
Melting point/freezing point	: -14°C
Boiling point or initial boiling point and boiling range	: 308°C
Flammability	: No data available
Lower and upper explosion limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: < 1.0
Kinematic viscosity	: No data available
Solubility	: Miscible
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: <0.001 mmHg @ 20°C
Density and/or relative density	: 1.84
Relative vapour density	: 3.4 (air = 1)
Particle size	: Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties	: No explosive properties
Oxidising properties	: No oxidising properties

9.2.2 Other safety characteristics

No additional information available

10 Stability and reactivity

10.1 Reactivity

Reacts violently with water, organic substances and base solutions with evolution of heat.

10.2 Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3 Possibility of hazardous reactions

Under normal conditions of stock and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Not available.

10.5 Incompatible materials

Vigorous reactions with: water, alkaline solutions, metals, carbides, chlorates, fulminates, nitrates, picrates, strong oxidizing, reducing or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides and carbides.

10.6 Hazardous decomposition products

Temperatures of $\geq 275^\circ$ yield sulphur trioxide gas, which is toxic, corrosive and an oxidizer.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	: Highly toxic. Erosion of teeth, lesions of the skin, bronchitis, mouth inflammation, conjunctivitis, gastritis
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Sulphuric acid (7664-93-9)	
LD50 oral rat	2140 mg/kg
LC50 inhalation mouse	160 mg/m ³ (4hrs)
LC50 inhalation rat	375 mg/m ³ (4hrs)

Skin corrosion/irritation	: Can cause severe burns and destruction of tissue. May cause destruction of the dermis with impairment of the skin at site of contact to regenerate
Serious eye damage/irritation	: Extremely corrosive! Liquid contact causes irritation, corneal burns, and conjunctivitis. Blindness may result, or severe or permanent injury. Mist contact may irritate or burn
Ingestion damage	: Can cause irritation and corrosive burns to mouth, throat, and stomach. Can be fatal if swallowed. Risk of vomiting, diarrhea, oesophagus and stomach perforation

Respiratory or skin sensitization	: Highly toxic by inhalation of fumes or acid mist. Causes irritations or corrosive burns to the upper respiratory system, including nose, mouth, and throat. Lung irritation and pulmonary edema can also occur
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met

11.2 Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

12 Ecological information

12.1 Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

Sulphuric acid (7664-93-9)	
LC50 fish	> 16 - < 28 mg/l 96 h, <i>Lepomis macrochirus</i>
EC50 crustacea	> 100 mg/l 48 h, <i>Daphnia magna</i>
EC50 algae	> 100 mg/l 72 h, <i>Desmodesmus subspicatus</i>
NOEC chronic fish	0.31 mg/l 213 d, <i>Salvelinus fontinalis</i>
NOEC chronic crustacea	0.15 mg/l, <i>Tanytarsus dissimilis</i>

12.2 Persistence and degradability

Not required for inorganic substances.

12.3 Bioaccumulative potential

Sulfate ion: Ubiquitous in the environment. Metabolized by micro-organisms and plants without bioaccumulation.

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6 Endocrine disrupting properties

No additional information available.

12.7 Other adverse effects

No additional information available.

13 Disposal considerations

13.1 Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Do not empty into drains. Dispose of this material and its container in a safe way.
Waste code	: The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer.

14 Transport information

In accordance with ADR / IMDG / IATA

14.1 UN number or ID number

UN-No. (ADR) : Not applicable

UN-No. (IMDG) : Not applicable

UN-No. (IATA) : Not applicable

14.2 UN proper shipping name

Proper Shipping Name (ADR) : Not applicable

Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3 Transport hazard class(es)

Transport hazard class(es) (ADR) : Not applicable
Transport hazard class(es) (IMDG) : Not applicable
Transport hazard class(es) (IATA) : Not applicable

14.4 Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5 Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6 Special precautions for user

Overland transport : Not applicable
Transport by sea : Not applicable
Air transport : Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

15 Regulatory information

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

15.1.1 EU-Regulations

Contains no substance on the REACH candidate list.
Contains no REACH Annex XIV substances.

15.1.2 National regulations

Comply with applicable local regulations.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

16 Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Change compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet

STP	Sewage Treatment Plant
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

1 Identification of substance/mixture and company

1.1 Product identifier

Product form : Mixture
Product name : TMB Substrate **CHROM****TMB**
Catalog # : - **REF**

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

1.2.1 Relevant identified uses

Use of the substance/mixture : Laboratory reagent, Immunoassays
Use by professionals

1.2.2 Uses advised against

No additional information available

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer

DIAsource ImmunoAssays S.A.

Rue du Bosquet, 2

B-1348 Louvain-la-Neuve

Belgium

Tel. Nr. +32 (0)10/84.99.11

E-mail: products.support@diasource.be

1.4 Emergency telephone number

DIAsource (only office hours) : +32 (0)10/84.99.23

Centre Anti-Poisons (BE) : 070 245 245

Please refer to your local Anti-Poison Center!

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) N° 1272/2008 (CLP)

Not classified as hazardous

According to EC directives or corresponding national laws, the product does not need to be classified or labelled

2.2 Label element

Labelling according to Regulation (EC) N° 1272/2008 (CLP)

Hazard symbol (CLP) : Not classified as hazardous

Signal word (CLP) : Not classified as hazardous

Hazard statement (CLP) : Not hazard statement

Precaution statement (CLP) : P280 Wear protective gloves, protective clothing, eye protection, face protection
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P309+310 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician

2.3 Other hazards

Contains oxidising substance(s) at <0.5%.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

3 Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Pyrrolidinone	(CAS-No.) 616-45-5 (EC-No.) 210-483-1 (EC Index-No.) -	1 - 6	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Urea, compound with hydrogen peroxide (H2O2) (1:1)	(CAS-No.) 124-43-6 (EC-No.) 204-701-4 (EC Index-No.) -	< 0.4	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Dam. 1, H318

Full text of H-statements: see section16

4 First aid measures

4.1 Description of first aid measures

- First-aid measures general : Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Take off immediately all contaminated clothing. Gently wash with plenty of soap and water.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Drink plenty of water as a precaution.

4.2 Most important symptom and effects, both acute and delayed

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
- Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5 Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Adapt extinguishing agents to the environment. Carbon dioxide. Foam. Dry extinguishing powder. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Oxides of carbon. Contains oxidising substance(s) at <0.5%.

5.3 Advice for firefighters

- Firefighting instructions : Prevent firefighting water from entering the environment. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate air ventilation. Avoid contact with skin and eyes. Do not breathe vapours/spray.

6.1.1 For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2 For emergency responders

- Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

Contain spill to prevent migration. Do not allow the undiluted product to enter sewers/surface or ground water.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Absorb spillage to prevent material damage. Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

6.4 Reference to other sections

Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

7 Handling and storage

7.1 Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in original container. Keep container tightly closed. To maintain product quality, store according to the instructions in the product labeling.
Prohibitions on mixed storage	: Keep away from food, drink and animal feeding stuffs.
Incompatible materials	: No additional information available.

7.3 Specific end use(s)

Laboratory reagent, Immunoassays

8 Exposure controls/personnel protection

8.1 Control parameters

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

8.2 Exposure controls

Appropriate engineering controls	: Provide local exhaust or general room ventilation to minimize vapour concentrations.
Hand protection	: Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm. Butyl rubber, 0.5 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection	: Wear safety glasses (EN 166).
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Under normal conditions, the use of this product should not require respiratory protection.
Environmental exposure controls	: Avoid release to the environment.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear / light blue
Odor	: Characteristic
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: No data available
Flammability	: No data available
Lower and upper explosion limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: [3.1 – 3.5]
Kinematic viscosity	: No data available
Solubility	: Soluble in water
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and/or relative density	: No data available
Relative vapour density	: No data available
Particle size	: Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties	: No explosive properties
Oxidising properties	: No oxidising properties

9.2.2 Other safety characteristics

No additional information available

10 Stability and reactivity

10.1 Reactivity

No dangerous reactions known under normal conditions of use.

10.2 Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3 Possibility of hazardous reactions

None under normal use.

10.4 Conditions to avoid

Avoid exposure to heat and direct sunlight.

10.5 Incompatible materials

No additional information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known at room temperature. In case of fire: Toxic gases may be formed. Carbon dioxide. Carbon monoxide.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity : Not classified
Based on available data, the classification criteria are not met

2-Pyrrolidinone (CAS N° 7664-93-9)	
LD50 oral rat	328 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat	>80 ppm (exposure time: 8 hrs)

Skin corrosion/irritation : Not classified
pH: [3.1 – 3.5]

Serious eye damage/irritation : Not classified
pH: [3.1 – 3.5]

Respiratory or skin sensitization : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

11.2 Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

12 Ecological information

12.1 Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Unknown hazards to the aquatic environment (CLP) : Contains 0.4 % of components with unknown hazards to the aquatic environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

2-Pyrrolidinone (CAS N° 7664-93-9)	
LC50 fish 1	4600 – 10000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 72h algae (1)	250 mg/l (Species: Desmodesmus subspicatus)
EC50 96h algae (1)	84 mg/l (Species: Desmodesmus subspicatus)

12.2 Persistence and degradability

Not required for inorganic substances.

12.3 Bioaccumulative potential

TMB Substrate	
Bioaccumulative potential	Not established
2-Pyrrolidinone (CAS N° 7664-93-9)	
Partition coefficient n-octanol/water	-0.71 @ 25°C

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6 Endocrine disrupting properties

No additional information available.

12.7 Other adverse effects

No additional information available.

13 Disposal considerations
13.1 Waste treatment methods

- | | |
|------------------------------|--|
| Regional legislation (waste) | : Dispose in a safe manner in accordance with local/national regulations. |
| Waste treatment methods | : Do not empty into drains. Dispose of this material and its container in a safe way. |
| Waste code | : The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer. |

14 Transport information

In accordance with ADR / IMDG / IATA

14.1 UN number or ID number

- | | |
|---------------|------------------|
| UN-No. (ADR) | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |

14.2 UN proper shipping name

- | | |
|-----------------------------|------------------|
| Proper Shipping Name (ADR) | : Not applicable |
| Proper Shipping Name (IMDG) | : Not applicable |
| Proper Shipping Name (IATA) | : Not applicable |

14.3 Transport hazard class(es)

- | | |
|-----------------------------------|------------------|
| Transport hazard class(es) (ADR) | : Not applicable |
| Transport hazard class(es) (IMDG) | : Not applicable |
| Transport hazard class(es) (IATA) | : Not applicable |

14.4 Packing group

- | | |
|----------------------|------------------|
| Packing group (ADR) | : Not applicable |
| Packing group (IMDG) | : Not applicable |
| Packing group (IATA) | : Not applicable |

14.5 Environmental hazards

- | | |
|-------------------------------|--|
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

14.6 Special precautions for user

- | | |
|--------------------|------------------|
| Overland transport | : Not applicable |
| Transport by sea | : Not applicable |
| Air transport | : Not applicable |

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

15 Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1 EU-Regulations

Contains no substance on the REACH candidate list.
Contains no REACH Annex XIV substances.

15.1.2 National regulations

Comply with applicable local regulations.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

16 Other information

- | | |
|--------------|---|
| Data sources | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. |
|--------------|---|

Change compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.