### Rat or Mouse Albumin (638-04309 or 635-04319)

#### Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>[2] Standard Albumin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[3] HRP labeled Antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[5] Chromogen (TMB)</td>
<td>Skin Irrit. 2 / H315</td>
<td>![Exclamation Mark]</td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2 / H319</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STOT SE 3 / H335</td>
<td></td>
</tr>
<tr>
<td>Stop Solution (1 mol/L sulfuric acid)</td>
<td>Met. Corr. 1 / H290</td>
<td>![Diamond]</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2 / H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2 / H319</td>
<td></td>
</tr>
<tr>
<td>[7] Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash Stock Solution (10X)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- **Trade name**: [2] Standard Albumin

- **Registration number (REACH)**: not relevant (mixture)

- **CAS number**: not relevant (mixture)

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

- **Relevant identified uses**: Chemicals for various applications

- **For research use**

1.3 Details of the supplier of the safety data sheet

- **Wako Chemicals GmbH**
  - Fuggerstr. 12
  - 41468 Neuss
  - Germany

- **Telephone**: +49 (0) 2131 - 311-0

- **Telefax**: +49(0)2131 - 311 100

- **sdb@csb-online.de**

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

For full text of abbreviations: see SECTION 16

**Additional information**

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

2.2 Label elements

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

- **Signal word**: not required

- **Pictograms**: not required
Supplemental hazard information

EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>CAS No 55965-84-9, Index No 613-167-00-5</td>
<td>&lt; 1</td>
<td>Acute Tox. 3 / H301, Acute Tox. 2 / H310, Acute Tox. 2 / H330, Skin Corr. 1B / H314, Eye Dam. 1 / H318, Skin Sens. 1 / H317, Aquatic Acute 1 / H400, Aquatic Chronic 1 / H410</td>
<td>![Pictograms]</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of soap and water.
**SECTION 5: Firefighting measures**

5.1 **Extinguishing media**

*Suitable extinguishing media*

- water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

*Unsuitable extinguishing media*

- water jet

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

Hazardous decomposition products: Section 10.

5.3 **Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

*Special protective equipment for firefighters*

use suitable breathing apparatus
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill
Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.

Specific notes/details
None.

Measures to protect the environment
Avoid release to the environment.
Advice on general occupational hygiene
Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards
None.

Incompatible substances or mixtures
Incompatible materials: see section 10.

Protect against external exposure, such as
heat, frost

Consideration of other advice
Keep away from food, drink and animal feedingstuffs.

Ventilation requirements
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature 2 - 10 °C

Packaging compatibilities
Keep only in original container.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No data available.

8.2 Exposure controls

Appropriate engineering controls
General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
Wear eye/face protection.
Hand protection

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>these information are not available</td>
</tr>
</tbody>
</table>

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

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Form</td>
<td>fluid</td>
</tr>
<tr>
<td>Colour</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Odour</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>these information are not available</td>
</tr>
</tbody>
</table>

**Other safety parameters**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>7.2 - 7.4</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>~100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not relevant (fluid)</td>
</tr>
</tbody>
</table>
Explosive limits

**Lower explosion limit (LEL)**
these information are not available

**Upper explosion limit (UEL)**
these information are not available

**Vapour pressure**
these information are not available

**Density**
~1 g/cm³ at 20 °C

**Vapour density**
these information are not available

**Relative density**
these information are not available

**Solubility(ies)**

**Water solubility**
not miscible in any proportion

**Partition coefficient**

**n-octanol/water (log KOW)**
these information are not available

**Auto-ignition temperature**
these information are not available

**Relative self-ignition temperature for solids**
not relevant

**Decomposition temperature**
these information are not available

**Viscosity**

**Kinematic viscosity**
these information are not available

**Dynamic viscosity**
these information are not available

**Explosive properties**
not explosive

**Oxidising properties**
shall not be classified as oxidising

9.2 **Other information**
None

SECTION 10: Stability and reactivity

10.1 **Reactivity**

This material is not reactive under normal ambient conditions.

10.2 **Chemical stability**

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
10.3 Possibility of hazardous reactions
No known hazardous reactions.

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

10.5 Incompatible materials
There is no additional information.

10.6 Hazardous decomposition products
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure
If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>oral</td>
<td>64 mg/kg</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>dermal</td>
<td>87 mg/kg</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>inhalation: vapour</td>
<td>0.5 mg/l/4h</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>inhalation: dust/mist</td>
<td>0.33 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.
Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation
Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
Test data are not available for the complete mixture.

Aquatic toxicity (chronic)
Test data are not available for the complete mixture.
12.2 Persistence and degradability

Biodegradation
Data are not available.

Persistence
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

<table>
<thead>
<tr>
<th>Bioaccumulative potential of components of the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of substance</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects
Data are not available.

Endocrine disrupting potential
None of the ingredients are listed.

Remarks
Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers(packagings)
Handle contaminated packages in the same way as the substance itself.
Remarks
Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
-

14.3 Transport hazard class(es)
Class
-

14.4 Packing group
-

14.5 Environmental hazards
-

14.6 Special precautions for user
There is no additional information.

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

14.8 Information for each of the UN Model Regulations
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.

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

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

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII
none of the ingredients are listed

List of substances subject to authorisation (REACH, Annex XIV)
none of the ingredients are listed
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

SECTION 16: Other information

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
</tbody>
</table>
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>log KOW</td>
<td>n-Octanol/water</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>Skin sensitisation</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

### Key literature references and sources for data

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H310</td>
<td>Fatal in contact with skin.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

Responsible for the safety data sheet

C.S.B. GmbH
Düsseldorfer Str. 113
47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-online.de
Website: www.csb-online.de

Disclaimer
This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name          [3] HRP labeled Antibody
Registration number (REACH)       not relevant (mixture)
CAS number                not relevant (mixture)

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

Relevant identified uses
Chemicals for various applications
For research use

1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH
Fuggerstr. 12
41468 Neuss
Germany

Telephone: +49 (0) 2131 - 311-0
Telefax: +49(0)2131 - 311 100

e-mail (competent person)   sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

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

2.2 Label elements

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

Signal word          not required
Pictograms             not required
Supplemental hazard information
EUH208  Contains 2-Methyl-2H-isothiazol-3-one. May produce an allergic reaction.
EUH210  Safety data sheet available on request.

2.3  Other hazards
There is no additional information.

Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1  Substances
not relevant (mixture)

3.2  Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>CAS No 2682-20-4</td>
<td>&lt; 1</td>
<td>Acute Tox. 3 / H301</td>
<td>Acute Tox. 3 / H311</td>
</tr>
<tr>
<td></td>
<td>EC No 220-239-6</td>
<td></td>
<td>Acute Tox. 1 / H330</td>
<td>Skin Corr. 1B / H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1 / H318</td>
<td>Skin Sens. 1A / H317</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 1 / H400</td>
<td>STOT SE 3 / H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2 / H411</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1  Description of first aid measures

General notes
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation
Provide fresh air.

Following skin contact
Wash with plenty of soap and water.
Following eye contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion
Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor
None

4.2 Most important symptoms and effects, both acute and delayed
These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed
None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Hazardous decomposition products: Section 10.

5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters
use suitable breathing apparatus
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advises on how to clean up a spill
Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.

Specific notes/details
None.

Measures to protect the environment
Avoid release to the environment.
Advice on general occupational hygiene
Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards
None.

Incompatible substances or mixtures
Incompatible materials: see section 10.

Protect against external exposure, such as
heat, frost, UV-radiation/sunlight

Consideration of other advice
Keep away from food, drink and animal feedingstuffs.

Ventilation requirements
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

| Storage temperature | 2 - 10 °C |

Packaging compatibilities
Keep only in original container.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Environmental compartment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>0.0001 mg/l</td>
<td>marine water</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>0.001 mg/cm³</td>
<td>freshwater</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>8.5 mg/kg</td>
<td>freshwater sediment</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>0.85 mg/cm³</td>
<td>marine sediment</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>45.34 mg/cm³</td>
<td>soil</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>PNEC</td>
<td>1.33 mg/cm³</td>
<td>sewage treatment plant (STP)</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Appropriate engineering controls
General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
Wear eye/face protection.

Hand protection

| Material | these information are not available |

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

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Physical state liquid
Form fluid
Colour these information are not available
Odour these information are not available
Odour threshold these information are not available

Other safety parameters
pH (value) 7.2 - 7.4
Melting point/freezing point these information are not available
Initial boiling point and boiling range ~100 °C
Flash point not applicable
Evaporation rate these information are not available
## [3] HRP labeled Antibody

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>not relevant (fluid)</td>
</tr>
<tr>
<td><strong>Explosive limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Density</td>
<td>~1 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>these information are not available</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>not miscible in any proportion</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td></td>
</tr>
<tr>
<td>n-octanol/water (log KOW)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Relative self-ignition temperature for solids</td>
<td>not relevant (Fluid)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>these information are not available</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>shall not be classified as oxidising</td>
</tr>
</tbody>
</table>

### 9.2 Other information

None
SECTION 10: Stability and reactivity

10.1 Reactivity
This material is not reactive under normal ambient conditions.

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

10.3 Possibility of hazardous reactions
No known hazardous reactions.

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

10.5 Incompatible materials
There is no additional information.

10.6 Hazardous decomposition products
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure
If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>oral</td>
<td>285 mg/kg</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>dermal</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>inhalation: vapour</td>
<td>0.384 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.
Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation
Contains 2-Methyl-2H-isothiazol-3-one. May produce an allergic reaction.

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
Test data are not available for the complete mixture.

<table>
<thead>
<tr>
<th>Aquatic toxicity (acute) of components of the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of substance</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
</tr>
</tbody>
</table>
12.2 Persistence and degradability

Biodegradation

The relevant substances of the mixture are readily biodegradable.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
12.6 Other adverse effects
Data are not available.

Endocrine disrupting potential
None of the ingredients are listed.

Remarks
Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers/packagings
Handle contaminated packages in the same way as the substance itself.

Remarks
Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
-

14.3 Transport hazard class(es)
Class
-

14.4 Packing group
-

14.5 Environmental hazards
-

14.6 Special precautions for user
There is no additional information.

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

14.8 Information for each of the UN Model Regulations
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.
[3] HRP labeled Antibody

**International Maritime Dangerous Goods Code (IMDG)**
Not subject to IMDG.

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

### SECTION 15: Regulatory information

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

**Relevant provisions of the European Union (EU)**

**Restrictions according to REACH, Annex XVII**
none of the ingredients are listed

**List of substances subject to authorisation (REACH, Annex XIV)**
none of the ingredients are listed

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**
none of the ingredients are listed

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**
none of the ingredients are listed

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**
none of the ingredients are listed

**Regulation 98/2013/EU on the marketing and use of explosives precursors**
none of the ingredients are listed

### SECTION 16: Other information

**Abbreviations and acronyms**

<table>
<thead>
<tr>
<th>Abbreviations and acronyms</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
</tbody>
</table>
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>log KOW</td>
<td>n-Octanol/water</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No-Effect Concentration</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>Skin sensitisation</td>
</tr>
<tr>
<td>STOT SE</td>
<td>Specific target organ toxicity - single exposure</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>
**Key literature references and sources for data**
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**
Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

**Responsible for the safety data sheet**
C.S.B. GmbH
Düsseldorfer Str. 113
47809 Krefeld
Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-online.de
Website: www.csb-online.de

**Disclaimer**
This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name

[5] Chromogen (TMB)

Product number

(638-13079)

Registration number (REACH)

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

EC number

224-621-3

CAS number

4430-24-4

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

Relevant identified uses

General use

1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH

Fuggerstr. 12

41468 Neuss

Germany

Telephone: +49 (0) 2131 - 311-0

Telefax: +49(0)2131 - 311 100

sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>3.2</td>
</tr>
<tr>
<td>3.3</td>
</tr>
<tr>
<td>3.8R</td>
</tr>
</tbody>
</table>

for full text of abbreviations: see SECTION 16

Additional information
According to the results of its assessment, this substance is not a PBT or a vPvB.

2.2 Label elements

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

Signal word warning

Pictograms

GHS07

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P260 Do not breathe dust.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P312 Call a POISON CENTER/doctor if you feel unwell.

Labelling of packages where the contents do not exceed 125 ml

Signal word warning
Hazard pictogram(s)

Warning. GHS07

Hazard statements

2.3 Other hazards

Dust explosion hazards.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance: 3',3''',5',5''-Tetraiodophenolsulfonephthalein

Identifiers

CAS No: 4430-24-4
EC No: 224-621-3
Molecular formula: C19H10I4O5S
Molar mass: 858 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.
In case of respiratory tract irritation, consult a physician.

Following skin contact

Rinse skin with water/shower.
Wash with plenty of soap and water.

Following eye contact

Rinse cautiously with water for several minutes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.
Following ingestion
Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor
none

4.2 Most important symptoms and effects, both acute and delayed
Narcotic effects.
Cough, pain, choking, and breathing difficulties.

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
water, foam, alcohol resistant foam, fire extinguishing powder

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Hazardous decomposition products: Section 10.
Danger of dust explosion.
Deposited combustible dust has considerable explosion potential.

Hazardous combustion products
carbon monoxide (CO), carbon dioxide (CO2), sulphur oxides (SOx), hydrogen iodide (HI)

5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters
use suitable breathing apparatus
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Remove persons to safety.
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill
take up mechanically

Advices on how to clean up a spill
Take up mechanically.
Collect spillage.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections
Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.
Only vacuum cleaners containing no ignition sources may be used for combustible dusts.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere. Dust deposits may accumulate on all deposition surfaces in a technical room. Danger of dust explosion.

**Measures to protect the environment**
Avoid release to the environment.

**Advice on general occupational hygiene**
Do not eat, drink and smoke in work areas. Wash hands after use. Preventive skin protection (barrier creams/ointments) is recommended. Remove contaminated clothing and protective equipment before entering eating areas.

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

**Explosive atmospheres**
Removal of dust deposits. Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

**Flammability hazards**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment.

**Incompatible substances or mixtures**
Incompatible materials: see section 10.

**Protect against external exposure, such as**
heat, humidity, UV-radiation/sunlight

**Consideration of other advice**
Keep away from food, drink and animal feedingstuffs.

**Ventilation requirements**
Provision of sufficient ventilation.

**Specific designs for storage rooms or vessels**

**Storage temperature**
<25 °C

**Packaging compatibilities**
Keep only in original container.

**7.3 Specific end use(s)**
No information available.
[5] Chromogen (TMB)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>Notation</th>
<th>Identifier</th>
<th>TWA [mg/m³]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB</td>
<td>dust</td>
<td>i</td>
<td>WEL</td>
<td>10</td>
<td></td>
<td>EH40/2005</td>
</tr>
<tr>
<td>GB</td>
<td>dust</td>
<td>r</td>
<td>WEL</td>
<td>4</td>
<td></td>
<td>EH40/2005</td>
</tr>
</tbody>
</table>

**Notation**

- i: inhalable fraction
- r: respirable fraction
- STEL: short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified
- TWA: time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

8.2 Exposure controls

**Appropriate engineering controls**

General ventilation.

**Individual protection measures (personal protective equipment)**

**Eye/face protection**

Wear eye/face protection.

**Hand protection**

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

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. Particulate filter device (EN 143).
Environmental exposure controls
Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Physical state solid
Form powder
Colour orange - brown
Odour these information are not available
Odour threshold these information are not available

Other safety parameters
pH (value) these information are not available
Melting point/freezing point these information are not available
Initial boiling point and boiling range these information are not available
Flash point not applicable
Evaporation rate these information are not available
Flammability (solid, gas) this material is combustible, but will not ignite readily
Explosion limits of dust clouds not determined
Vapour pressure these information are not available
Density these information are not available
Vapour density these information are not available
Relative density these information are not available

Solubility(ies)
Water solubility these information are not available

Partition coefficient
n-octanol/water (log KOW) these information are not available
Auto-ignition temperature not relevant
(Solid matter)
Relative self-ignition temperature for solids these information are not available
Decomposition temperature 229 °C
This material is not reactive under normal ambient conditions.

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

Danger of dust explosion.

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

Take precautionary measures against static discharge.

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

If not otherwise specified the classification is based on:
Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).
Classification according to GHS (1272/2008/EC, CLP)

**Acute toxicity**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Skin corrosion/irritation**
Causes skin irritation.

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Respiratory sensitisation**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Germ cell mutagenicity**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Carcinogenicity**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Reproductive toxicity**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Specific target organ toxicity - single exposure**
May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Aspiration hazard**
Shall not be classified as presenting an aspiration hazard.
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
No data available.

Aquatic toxicity (chronic)
No data available.

12.2 Persistence and degradability

Biodegradation
Data are not available.

Persistence
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects
Data are not available.

Remarks
Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers/packagings
Handle contaminated packages in the same way as the substance itself.

Remarks
Please consider the relevant national or regional provisions.
SECTION 14: Transport information

14.1 UN number
   not subject to transport regulations

14.2 UN proper shipping name
   -

14.3 Transport hazard class(es)
   Class
   -

14.4 Packing group
   -

14.5 Environmental hazards
   -

14.6 Special precautions for user
   There is no additional information.

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

14.8 Information for each of the UN Model Regulations
   Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
   Not subject to ADR, RID and ADN.

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

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

SECTION 15: Regulatory information

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

    Relevant provisions of the European Union (EU)

    Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TWA</td>
<td>Time-weighted average</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>
Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL</td>
<td>Workplace exposure limit</td>
</tr>
</tbody>
</table>

Key literature references and sources for data

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
</tbody>
</table>

Responsible for the safety data sheet

C.S.B. GmbH
Düsseldorfer Str. 113
47809 Krefeld
Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-online.de
Website: www.csb-online.de

Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Stop Solution (1 mol/L sulfuric acid)

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

Relevant identified uses: Chemicals for various applications
For research use

1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH
Fuggerstr. 12
41468 Neuss
Germany

Telephone: +49 (0) 2131 - 311-0
Telefax: +49(0)2131 - 311 100

sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>2.16</td>
</tr>
<tr>
<td>3.2</td>
</tr>
<tr>
<td>3.3</td>
</tr>
</tbody>
</table>
Stop Solution (1 mol/L sulfuric acid)

for full text of abbreviations: see SECTION 16

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

2.2 Label elements

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

Signal word warning

Pictograms

Hazard statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P312 Call a POISON CENTER/doctor if you feel unwell.

Labelling of packages where the contents do not exceed 125 ml

Signal word warning

Hazard pictogram(s)

Warning. GHS05

Hazard statements

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
SECTION 3: Composition/information on ingredients

3.1 Substances
not relevant (mixture)

3.2 Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>CAS No 7664-93-9</td>
<td>5 - &lt; 10</td>
<td>Met. Corr. 1 / H290&lt;br&gt;Skin Corr. 1A / H314&lt;br&gt;Eye Dam. 1 / H318</td>
<td>![Pictogram]</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Take off immediately all contaminated clothing.
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation
Provide fresh air.
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact
Wash with plenty of soap and water.

Following eye contact
Rinse cautiously with water for several minutes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion
Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.
Notes for the doctor
none

4.2 **Most important symptoms and effects, both acute and delayed**
These information are not available.

4.3 **Indication of any immediate medical attention and special treatment needed**
none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media**
- water spray
- alcohol resistant foam
- fire extinguishing powder
- carbon dioxide (CO2)

**Unsuitable extinguishing media**
- water jet

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

Hazardous decomposition products: Section 10.
Substance or mixture corrosive to metals.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

**Special protective equipment for firefighters**
use suitable breathing apparatus

## SECTION 6: Accidental release measures

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

**For non-emergency personnel**
- Remove persons to safety.
- Ventilate affected area.
- Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

**For emergency responders**
- Wear breathing apparatus if exposed to vapours/dust/spray/gases.
6.2 Environmental precautions
Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill
Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques
Neutralisation techniques.
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.

Specific notes/details
None.

Handling of incompatible substances or mixtures
Do not mix with alkali.

Keep away from
organic absorbing material, pulp/paper

Measures to protect the environment
Avoid release to the environment.

Advice on general occupational hygiene
Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.
7.2 Conditions for safe storage, including any incompatibilities

Corrosive conditions
Store in corrosive resistant container with a resistant inner liner.

Flammability hazards
None.

Incompatible substances or mixtures
Incompatible materials: see section 10.
Observe hints for combined storage.

Protect against external exposure, such as
heat, frost

Consideration of other advice
Keep away from food, drink and animal feedingstuffs.

Ventilation requirements
Provision of sufficient ventilation.

Packaging compatibilities
Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Notation</th>
<th>Identifier</th>
<th>TWA [mg/m³]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>sulphuric acid</td>
<td>7664-93-9</td>
<td>t, mist</td>
<td>IOELV</td>
<td>0.05</td>
<td></td>
<td>2009/161/EU</td>
</tr>
<tr>
<td>GB</td>
<td>sulphuric acid</td>
<td>7664-93-9</td>
<td>t, mist</td>
<td>WEL</td>
<td>0.05</td>
<td></td>
<td>EH40/2005</td>
</tr>
</tbody>
</table>

Notation
- mist: as mists
- STEL: short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified
- t: thoracic fraction
- TWA: time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average
### Relevant DNELs of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Protection goal, route of exposure</th>
<th>Used in</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>DNEL</td>
<td>0.05 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
</tbody>
</table>

### Relevant PNECs of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Environmental compartment</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>2 mg/cm³</td>
<td>soil</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>0.25 mg/cm³</td>
<td>marine water</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>2.5 mg/cm³</td>
<td>freshwater</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>8.8 mg/cm³</td>
<td>sewage treatment plant (STP)</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>0.003 mg/l</td>
<td>freshwater</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>0 mg/l</td>
<td>marine water</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>8.8 mg/l</td>
<td>sewage treatment plant (STP)</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>0.002 mg/kg</td>
<td>freshwater sediment</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>PNEC</td>
<td>0.002 mg/kg</td>
<td>marine sediment</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

**Eye/face protection**

Wear eye/face protection.

**Hand protection**

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>these information are not available</td>
</tr>
</tbody>
</table>
Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
- Physical state: liquid
- Form: fluid
- Colour: colourless
- Odour: odourless
- Odour threshold: these information are not available

Other safety parameters
- pH (value): ≤1, acid
- Melting point/freezing point: these information are not available
- Initial boiling point and boiling range: 100 °C
- Flash point: not applicable
- Evaporation rate: these information are not available
- Flammability (solid, gas): not relevant (fluid)

Explosive limits
- Lower explosion limit (LEL): these information are not available
- Upper explosion limit (UEL): these information are not available
- Vapour pressure: these information are not available
- Density: 1.1 g/cm³
- Vapour density: these information are not available
- Relative density: these information are not available
Stop Solution (1 mol/L sulfuric acid)

Solubility(ies)

Water solubility  
miscible in any proportion

Partition coefficient

n-octanol/water (log KOW)  
these information are not available

Auto-ignition temperature  
these information are not available

Relative self-ignition temperature for solids  
not relevant

(Fluid)

Decomposition temperature  
these information are not available

Viscosity

Kinematic viscosity  
these information are not available

Dynamic viscosity  
these information are not available

Explosive properties  
not explosive

Oxidising properties  
shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

10.5 Incompatible materials

bases

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium)
10.6 Hazardous decomposition products
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure
The mixture does not contain a substance with a skin corrosion/irritation above its concentration limit.

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>oral</td>
<td>LD50</td>
<td>1,540 - 2,990 mg/kg</td>
<td>rat</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Classification procedure
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP).

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.
Carcinogenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>EC50</td>
<td>&gt;100 mg/l</td>
<td>daphnia magna</td>
<td>48 h</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>ErC50</td>
<td>&gt;100 mg/l</td>
<td>algae (Desmodesmus subspicatus)</td>
<td>72 h</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>LC50</td>
<td>16 - 28 mg/l</td>
<td>blue sunfish (Lepomis macrochirus)</td>
<td>96 h</td>
</tr>
</tbody>
</table>

Aquatic toxicity (chronic)
Test data are not available for the complete mixture.

12.2 Persistence and degradability

Biodegradation
The relevant substances of the mixture are readily biodegradable.
Stop Solution (1 mol/L sulfuric acid)

12.3 **Bioaccumulative potential**
Data are not available.

12.4 **Mobility in soil**
Data are not available.

12.5 **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 **Other adverse effects**
Data are not available.

**Endocrine disrupting potential**
None of the ingredients are listed.

**Remarks**
Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

### SECTION 13: Disposal considerations

13.1 **Waste treatment methods**
This material and its container must be disposed of as hazardous waste.

**Sewage disposal-relevant information**
Do not empty into drains.

**Waste treatment of containers/packagings**
It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.
Handle contaminated packages in the same way as the substance itself.

**Remarks**
Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

14.1 **UN number**
2796

14.2 **UN proper shipping name**
SULPHURIC ACID

14.3 **Transport hazard class(es)**

<table>
<thead>
<tr>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

14.4 **Packing group**
II

14.5 **Environmental hazards**
non-environmentally hazardous acc. to the dangerous goods regulations
14.6 **Special precautions for user**
Provisions for dangerous goods (ADR) should be complied within the premises.

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

14.8 **Information for each of the UN Model Regulations**
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

<table>
<thead>
<tr>
<th>UN number</th>
<th>2796</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>UN2796, SULPHURIC ACID, 8, II, (E)</td>
</tr>
<tr>
<td>Class</td>
<td>8</td>
</tr>
<tr>
<td>Classification code</td>
<td>C1</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Danger label(s)</td>
<td>8</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>E2</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>1 L</td>
</tr>
<tr>
<td>Transport category (TC)</td>
<td>2.</td>
</tr>
<tr>
<td>Tunnel restriction code (TRC)</td>
<td>E</td>
</tr>
<tr>
<td>Hazard identification No</td>
<td>80</td>
</tr>
<tr>
<td>Emergency Action Code</td>
<td>2R</td>
</tr>
</tbody>
</table>

**International Maritime Dangerous Goods Code (IMDG)**

<table>
<thead>
<tr>
<th>UN number</th>
<th>2796</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>UN2796, SULPHURIC ACID, 8, II</td>
</tr>
<tr>
<td>Class</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Danger label(s)</td>
<td>8</td>
</tr>
<tr>
<td>Special provisions (SP)</td>
<td>-</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>E2</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>1 L</td>
</tr>
<tr>
<td>EmS</td>
<td>F-A, S-B</td>
</tr>
</tbody>
</table>
Stop Solution (1 mol/L sulfuric acid)

Stowage category: B
Segregation group: 1 - Acids

**International Civil Aviation Organization (ICAO-IATA/DGR)**

- **UN number**: 2796
- **Proper shipping name**: UN2796, Sulphuric acid, 8, II
- **Class**: 8
- **Packing group**: II
- **Danger label(s)**: 8

- **Excepted quantities (EQ)**: E2
- **Limited quantities (LQ)**: 0,5 L

**SECTION 15: Regulatory information**

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

- **Relevant provisions of the European Union (EU)**
- **Restrictions according to REACH, Annex XVII**
  - none of the ingredients are listed
- **List of substances subject to authorisation (REACH, Annex XIV)**
  - none of the ingredients are listed
- **Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**
  - none of the ingredients are listed
- **Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**
  - none of the ingredients are listed
- **Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**
  - none of the ingredients are listed
Stop Solution (1 mol/L sulfuric acid)

Regulation 98/2013/EU on the marketing and use of explosives precursors

Explosives precursors which are subject to restrictions

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Type of registration</th>
<th>Limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfuric acid</td>
<td>7664-93-9</td>
<td>Annex II</td>
<td></td>
</tr>
</tbody>
</table>

Legend
annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

SECTION 16: Other information

Indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Precautionary statements: change in the listing (table)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Labelling of packages where the contents do not exceed 125 ml</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Signal word: warning</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Hazard pictogram(s): change in the listing (table)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Hazard statements: change in the listing (table)</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
</tbody>
</table>
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No-Effect Level</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>IOELV</td>
<td>Indicative occupational exposure limit value</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>Met. Corr.</td>
<td>Substance or mixture corrosive to metals</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No-Effect Concentration</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
</tbody>
</table>
Stop Solution (1 mol/L sulfuric acid)

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>Time-weighted average</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>WEL</td>
<td>Workplace exposure limit</td>
</tr>
</tbody>
</table>

Key literature references and sources for data

Classification procedure
Physical and chemical properties. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H290</td>
<td>May be corrosive to metals.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

Responsible for the safety data sheet
C.S.B. GmbH
Düsseldorfer Str. 113
47809 Krefeld
Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-online.de
Website: www.csb-online.de
Disclaimer
This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: [7] Buffer

Registration number (REACH): not relevant (mixture)

CAS number: not relevant (mixture)

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

Relevant identified uses: Chemicals for various applications

For research use

1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH
Fuggerstr. 12
41468 Neuss
Germany

Telephone: +49 (0) 2131 - 311-0
Telefax: +49 (0) 2131 - 311 100

e-mail (competent person): sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

Additional information

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

2.2 Label elements

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

Signal word: not required

Pictograms: not required
Supplemental hazard information

EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
<th>Pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>CAS No 55965-84-9</td>
<td>&lt; 1</td>
<td>Acute Tox. 3 / H301</td>
<td><img src="image1" alt="pictograms" /></td>
</tr>
<tr>
<td></td>
<td>Index No 613-167-00-5</td>
<td></td>
<td>Acute Tox. 2 / H310</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 2 / H330</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B / H314</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1 / H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1 / H317</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 1 / H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1 / H410</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of soap and water.
Following eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion
Rinse mouth. Do not induce vomiting. Get medical advice/attention if you feel unwell.

Notes for the doctor
none

4.2 Most important symptoms and effects, both acute and delayed
These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Hazardous decomposition products: Section 10.

5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters
use suitable breathing apparatus
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill
Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.
Keep away from sources of ignition - No smoking.

Specific notes/details
None.

Measures to protect the environment
Avoid release to the environment.
Advice on general occupational hygiene
Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards
None.

Incompatible substances or mixtures
Incompatible materials: see section 10.

Protect against external exposure, such as
heat, frost, UV-radiation/sunlight

Consideration of other advice
Keep away from food, drink and animal feedingstuffs.

Ventilation requirements
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature
2 - 10 °C

Packaging compatibilities
Keep only in original container.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No data available.

8.2 Exposure controls

Appropriate engineering controls
General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
Wear eye/face protection.
Hand protection

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

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

- Physical state: liquid
- Form: fluid
- Colour: these information are not available
- Odour: these information are not available
- Odour threshold: these information are not available

**Other safety parameters**

- pH (value): 7.2 - 7.4
- Melting point/freezing point: these information are not available
- Initial boiling point and boiling range: ~100 °C
- Flash point: these information are not available
- Evaporation rate: these information are not available
- Flammability (solid, gas): not relevant
  - (fluid)
### Explosive limits

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Density</td>
<td>~1 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>these information are not available</td>
</tr>
</tbody>
</table>

### Solubility(ies)

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water solubility</td>
<td>not miscible in any proportion</td>
</tr>
</tbody>
</table>

### Partition coefficient

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-octanol/water (log KOW)</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Relative self-ignition temperature for solids</td>
<td>not relevant</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>these information are not available</td>
</tr>
</tbody>
</table>

### Viscosity

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic viscosity</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>shall not be classified as oxidising</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
10.3 Possibility of hazardous reactions
No known hazardous reactions.

10.4 Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials
There is no additional information.

10.6 Hazardous decomposition products
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure
If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>oral</td>
<td>64 mg/kg</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>dermal</td>
<td>87 mg/kg</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>inhalation: vapour</td>
<td>0.5 mg/l/4h</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
<td>55965-84-9</td>
<td>inhalation: dust/mist</td>
<td>0.33 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.
Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation
Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
Test data are not available for the complete mixture.

Aquatic toxicity (chronic)
Test data are not available for the complete mixture.
12.2 Persistence and degradability

Biodegradation
Data are not available.

Persistence
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

<table>
<thead>
<tr>
<th>Bioaccumulative potential of components of the mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of substance</td>
</tr>
<tr>
<td>reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects
Data are not available.

Endocrine disrupting potential
None of the ingredients are listed.

Remarks
Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers-packagings
Handle contaminated packages in the same way as the substance itself.
Remarks
Please consider the relevant national or regional provisions.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1</th>
<th>UN number</th>
<th>not subject to transport regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2</td>
<td>UN proper shipping name</td>
<td>-</td>
</tr>
<tr>
<td>14.3</td>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class</td>
<td>-</td>
</tr>
<tr>
<td>14.4</td>
<td>Packing group</td>
<td>-</td>
</tr>
<tr>
<td>14.5</td>
<td>Environmental hazards</td>
<td>-</td>
</tr>
<tr>
<td>14.6</td>
<td>Special precautions for user</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is no additional information.</td>
<td></td>
</tr>
<tr>
<td>14.7</td>
<td>Transport in bulk according to Annex II of MARPOL and the IBC Code</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The cargo is not intended to be carried in bulk.</td>
<td></td>
</tr>
</tbody>
</table>

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.

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

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

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII
none of the ingredients are listed

List of substances subject to authorisation (REACH, Annex XIV)
none of the ingredients are listed
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II
none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)
none of the ingredients are listed

Regulation 98/2013/EU on the marketing and use of explosives precursors
none of the ingredients are listed

SECTION 16: Other information

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
</tbody>
</table>
Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>log KOW</td>
<td>n-Octanol/water</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>Skin Corr.</td>
<td>Corrosive to skin</td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Irritant to skin</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>Skin sensitisation</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key literature references and sources for data

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H310</td>
<td>Fatal in contact with skin.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

Responsible for the safety data sheet

C.S.B. GmbH
Düsseldorfer Str. 113
47809 Krefeld
Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-online.de
Website: www.csb-online.de

Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Wash Stock Solution (10X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number (REACH)</td>
<td>not relevant (mixture)</td>
</tr>
<tr>
<td>CAS number</td>
<td>not relevant (mixture)</td>
</tr>
</tbody>
</table>

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

Relevant identified uses: Chemicals for various applications
For research use

1.3 Details of the supplier of the safety data sheet

Wako Chemicals GmbH
Fuggerstr. 12
41468 Neuss
Germany

Telephone: +49 (0) 2131 - 311-0
Telefax: +49(0)2131 - 311 100

e-mail (competent person) sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Wako Chemicals GmbH.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

for full text of abbreviations: see SECTION 16

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

2.2 Label elements

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

Signal word not required
Pictograms not required
2.3 Other hazards
There is no additional information.

Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances
not relevant (mixture)

3.2 Mixtures

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation
Provide fresh air.

Following skin contact
Wash with plenty of soap and water.

Following eye contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion
Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor
none

4.2 Most important symptoms and effects, both acute and delayed
These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed
none
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products
carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters
use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advises on how to clean up a spill
Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections
Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation.
Keep away from sources of ignition - No smoking.

Specific notes/details
None.

Measures to protect the environment
Avoid release to the environment.

Advice on general occupational hygiene
Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards
None.

Incompatible substances or mixtures
Incompatible materials: see section 10.

Protect against external exposure, such as
heat, frost, UV-radiation/sunlight

Consideration of other advice
Keep away from food, drink and animal feedingstuffs.
Wash Stock Solution (10X)

Ventilation requirements
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature
<25 °C

Packaging compatibilities
Keep only in original container.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No data available.

8.2 Exposure controls

Appropriate engineering controls
General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
Wear eye/face protection.

Hand protection

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>these information are not available</td>
</tr>
</tbody>
</table>

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

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls
Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

### Appearance
- **Physical state**: liquid
- **Form**: fluid
- **Colour**: these information are not available
- **Odour**: these information are not available
- **Odour threshold**: these information are not available

### Other safety parameters
- **pH (value)**: 7.2 - 7.4
- **Melting point/freezing point**: these information are not available
- **Initial boiling point and boiling range**: these information are not available
- **Flash point**: these information are not available
- **Evaporation rate**: these information are not available
- **Flammability (solid, gas)**: not relevant (fluid)

### Explosive limits
- **Lower explosion limit (LEL)**: these information are not available
- **Upper explosion limit (UEL)**: these information are not available
- **Vapour pressure**: these information are not available
- **Density**: these information are not available
- **Vapour density**: these information are not available
- **Relative density**: these information are not available

### Solubility(ies)
- **Water solubility**: miscible in any proportion

### Partition coefficient
- **n-octanol/water (log KOW)**: these information are not available
- **Auto-ignition temperature**: these information are not available
- **Relative self-ignition temperature for solids**: not relevant (fluid)
- **Decomposition temperature**: these information are not available
This material is not reactive under normal ambient conditions. The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

No known hazardous reactions.

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

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

SECTION 10: Stability and reactivity

Viscosity

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic viscosity</td>
<td>these information are not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>these information are not available</td>
</tr>
</tbody>
</table>

Explosive properties

- not explosive

Oxidising properties

- shall not be classified as oxidising

9.2 Other information

None

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:

- Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Classification could not be established because:

- Data are lacking, inconclusive, or conclusive but not sufficient for classification.
Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)
Test data are not available for the complete mixture.

Aquatic toxicity (chronic)
Test data are not available for the complete mixture.
12.2 Persistence and degradability
   Biodegradation
   The relevant substances of the mixture are readily biodegradable.
   Persistence
   Data are not available.

12.3 Bioaccumulative potential
   Data are not available.

12.4 Mobility in soil
   Data are not available.

12.5 Results of PBT and vPvB assessment
   This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects
   Data are not available.

   Remarks
   Water hazard class - WHC (Wassergefährdungsklasse): 1 (Slightly hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
   Dispose of contents/container in accordance with local/regional/national/international regulations.
   Sewage disposal-relevant information
   Do not empty into drains.
   Waste treatment of containers/packagings
   Handle contaminated packages in the same way as the substance itself.
   Remarks
   Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number
   not subject to transport regulations

14.2 UN proper shipping name
   -

14.3 Transport hazard class(es)
   Class
   -

14.4 Packing group
   -

14.5 Environmental hazards
   -
14.6 Special precautions for user
There is no additional information.

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

14.8 Information for each of the UN Model Regulations
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.

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

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

SECTION 15: Regulatory information

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Trade name: [6] Wash Stock Solution (10X)</td>
<td>Trade name: Wash Stock Solution (10X)</td>
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</table>

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
</tbody>
</table>
Abbreviations and acronyms

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key literature references and sources for data

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Responsible for the safety data sheet

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Disclaimer

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