# Mouse Anti-dsDNA ELISA Kit

## 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 Anti ss/ds DNA</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>!</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>Wash Stock Solution (10X)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[7] Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop Solution (1 mol/L sulfuric acid)</td>
<td>Met. Corr. 1 / H290</td>
<td>!</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>
</tbody>
</table>
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

<table>
<thead>
<tr>
<th>Trade name</th>
<th>[2] Standard Anti ss/ds DNA</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

<table>
<thead>
<tr>
<th>Relevant identified uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals for various applications</td>
</tr>
<tr>
<td>For research use</td>
</tr>
</tbody>
</table>

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

2.2 Label elements

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

<table>
<thead>
<tr>
<th>Signal word</th>
<th>not required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pictograms</td>
<td>not required</td>
</tr>
</tbody>
</table>

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.

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>
<th>M-Factors</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></td>
<td>M-factor (acute) = 100.0 M-factor (chronic) = 100.0</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.
[2] Standard Anti ss/ds DNA

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), sulphur oxides (SOx)

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**
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

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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<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 ~100 °C
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 ~1 g/cm³ at 20 °C
Vapour density these information are not available
Relative density these information are not available

Solubility(ies)

Water solubility miscible in any proportion
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.
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>Name of substance</th>
<th>CAS No</th>
<th>BCF</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>54</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**
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 **Special precautions for user**
There is no additional information.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

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

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>

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>
<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>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
</tbody>
</table>
**Abbreviations and acronyms**

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-factor</td>
<td>Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present</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>
</tbody>
</table>
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>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

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>
<th>M-Factors</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 Acute Tox. 3 / H311 Acute Tox. 1 / H330 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Skin Sens. 1A / H317 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411</td>
<td></td>
<td>M-factor (acute) = 10.0</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.

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

<table>
<thead>
<tr>
<th>Material</th>
<th>these information are not available</th>
</tr>
</thead>
</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: ~100 °C
Flash point: not applicable
Evaporation rate: these information are not available
### Flammability (solid, gas)

- **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**: $\sim 1 \text{ g/cm}^3$ 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

- **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**

### 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>Endpoint</th>
<th>Value</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>inhalation: vapour</td>
<td>LC50</td>
<td>0.384 mg/l/4h</td>
<td>rat</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>oral</td>
<td>LD50</td>
<td>285 mg/kg</td>
<td>rat</td>
</tr>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg</td>
<td>rat</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><strong>Name of substance</strong></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>
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>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>LC50</td>
<td>4.77 mg/l</td>
<td>rainbow trout (Onco-rhynchus mykiss)</td>
<td>96 h</td>
</tr>
</tbody>
</table>

Aquatic toxicity (chronic)

Test data are not available for the complete 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>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>NOEC</td>
<td>0.04 mg/l</td>
<td>daphnia magna</td>
<td>21 d</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.

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Log KOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2H-isothiazol-3-one</td>
<td>2682-20-4</td>
<td>-0.486</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
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user
There is no additional information.

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

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

Indication of changes (revised safety data sheet)

Indication of changes: Section Xxx

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviations and acronyms</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbr.</td>
<td>Descriptions of used abbreviations</td>
</tr>
<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>Abbrev.</td>
<td>Descriptions of used abbreviations</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------</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>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>M-factor</td>
<td>Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present</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>
</tbody>
</table>
Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<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

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

<table>
<thead>
<tr>
<th>Trade name</th>
<th>[5] Chromogen (TMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>(638-13079)</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>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.</td>
</tr>
</tbody>
</table>

| 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

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

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

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section</strong></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.
**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>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.

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
Viscosity

**Kinematic viscosity**  
not relevant  
(solid matter)

**Dynamic viscosity**  
not relevant  
(solid matter)

Explosive properties  
dust explosion hazards

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**

Danger of dust explosion.

10.4 **Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

10.5 **Incompatible materials**

oxidisers

10.6 **Hazardous decomposition products**

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

SECTION 11: Toxicological information

11.1 **Information on toxicological effects**

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

2012/18/EU (Seveso III)

<table>
<thead>
<tr>
<th>No</th>
<th>Dangerous substance/hazard categories</th>
<th>Qualifying quantity (tonnes) for the application of lower and upper-tier requirements</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>not assigned</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>
<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>
[5] Chromogen (TMB)

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 | Wash Stock Solution (10X) |
| 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 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
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

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

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
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 \(<25 \, ^\circ\text{C}\)

**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>
<th>these information are not available</th>
</tr>
</thead>
</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
**Wash Stock Solution (10X)**

**Viscosity**

- **Kinematic viscosity**: these information are not available
- **Dynamic viscosity**: these information are not available

**10.2 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**

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

**10.5 Incompatible materials**

oxidisers

**10.6 Hazardous decomposition products**

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

---

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**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)

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

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>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. 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
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

---

United Kingdom: en
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>Hazardous ingredients acc. to GHS</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>

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.

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

| 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
Flammability (solid, gas): not relevant (fluid)
**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
oxidisers

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 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.

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.
12.3 Bioaccumulative potential

Data are not available.

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>BCF</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>54</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
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user
There is no additional information.

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

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 navig-</td>
</tr>
<tr>
<td></td>
<td>ation 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 sub-</td>
</tr>
<tr>
<td></td>
<td>stances)</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</td>
</tr>
<tr>
<td></td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>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>
</tbody>
</table>
Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<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>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>M-factor</td>
<td>Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present</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


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>Code</td>
<td>Text</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------</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: Stop Solution (1 mol/L sulfuric acid)
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

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Category</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.16</td>
<td>substance or mixture corrosive to metals</td>
<td>1</td>
<td>Met. Corr. 1</td>
<td>H290</td>
</tr>
<tr>
<td>3.2</td>
<td>skin corrosion/irritation</td>
<td>2</td>
<td>Skin Irrit. 2</td>
<td>H315</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>2</td>
<td>Eye Irrit. 2</td>
<td>H319</td>
</tr>
</tbody>
</table>
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

GHS05

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

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, EC No 231-639-5, Index No 016-020-00-8</td>
<td>5 - &lt; 10</td>
<td>Met. Corr. 1 / H290, Skin Corr. 1A / H314, Eye Dam. 1 / H318</td>
<td></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.
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.
Stop Solution (1 mol/L sulfuric acid)

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
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

<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
Stop Solution (1 mol/L sulfuric acid)

### 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)**
Class 8

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>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>2796</td>
</tr>
<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>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>2796</td>
</tr>
<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

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Stop Solution (1 mol/L sulfuric acid)

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