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

1.1 Product identifier

Trade name

Schuetze reagent

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

Relevant identified uses of the substance or mixture
chemical analysis

Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet

Address
ELTRA GmbH
Retsch-Allee 1-5
42781 Haan
GERMANY

Telephone no. +49 (0) 2104 23 33-400
Fax no. +49 (0) 2104 23 33-499

Information provided by / telephone
+49 (0) 2104 23 33-192
Advice on Safety Data Sheet
info@eltra.com

1.4 Emergency telephone number
For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Eye Dam. 1; H318
Ox. Sol. 3; H272
Skin Corr. 1B; H314

Classification information
This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

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

Hazard pictograms

GHS03
GHS05

Signal word
Danger

Hazardous component(s) to be indicated on label:
diiodine-pentaoxide
Hazard statement(s)
H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.

Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P221 Take any precaution to avoid mixing with combustibles.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P370+P378 In case of fire: Use water spray, extinguishing powder, foam or CO2 to extinguish.

2.3 Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances
Not applicable. The product is not a substance.

3.2 Mixtures
Chemical characterization
Mixture

Hazardous ingredients

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>Classification (EC) 1272/2008 (CLP)</th>
<th>Concentration</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>diiodine-pentaoxide</td>
<td>Ox. Sol. 3; H272 Skin Corr. 1B; H314</td>
<td>&gt;= 10.00 - &lt; 25.00</td>
<td>%-b.w.</td>
</tr>
<tr>
<td></td>
<td>12029-98-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>234-740-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>sulphuric acid</td>
<td>Skin Corr. 1A; H314</td>
<td>&gt;= 10.00 - &lt; 25.00</td>
<td>%-b.w.</td>
</tr>
<tr>
<td></td>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>231-639-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>016-020-00-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text for all H-phrases and EUH-phrases: pls. see section 16

<table>
<thead>
<tr>
<th>No</th>
<th>Note</th>
<th>Specific concentration limits</th>
<th>M-factor (acute)</th>
<th>M-factor (chronic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>B</td>
<td>Eye Irrit. 2; H319: C &gt;= 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Irrit. 2; H315: C &gt;= 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Corr. 1A; H314: C &gt;= 15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text for the notes: pls. see section 16 "Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)."

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Change contaminated clothing.

After inhalation
Remove affected person from the immediate area. Ensure supply of fresh air. In case of persisting adverse effects consult a physician.
After skin contact
When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.

After eye contact
Separate eyelids, wash the eyes thoroughly with water (15 min.). Get medical attention if pain still persists.

After ingestion
Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Dry chemical extinguisher; Carbon dioxide

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
In case of fires, hazardous combustion gases are formed: Carbon dioxide (CO2); Carbon monoxide (CO); Nitrogen oxides (NOx); Sulphur oxides (SxOy); Iodine; Hydrogen; Contact with combustible materials, flammable material or powdered metals can cause fire or explosion. Product reacts with water. Contact with water or moisture may generate heat and may lead to ignition of combustible materials.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Containers close to fire should be transferred to a safe place. Cool endangered containers with water in case of fire. Wear protective clothing. Do not allow water to get into container.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid dust formation.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up
Take up mechanically. When collected, handle material as described under the section heading "Disposal considerations". Do not flush with water or aqueous cleaning agents.

6.4 Reference to other sections
No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Provide good ventilation at the work area (local exhaust ventilation, if necessary). Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far as possible by the state of the art.

General protective and hygiene measures
Keep away from foodstuffs and beverages. Do not eat, drink or smoke during work time. Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Avoid contact with eyes and skin. Do not inhale dust. Provide eye wash fountain in work area. Have emergency shower available.

**Advice on protection against fire and explosion**
Keep away from sources of heat and ignition.

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

**Technical measures and storage conditions**
Keep container tightly closed and dry in a cool, well-ventilated place. Protect from atmospheric moisture and water.

**Requirements for storage rooms and vessels**
Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

**Incompatible products**
Do not store together with: Hydrogen fluoride; Reducing agents; inflammatory substances; Bases; oxidizing agents; Metals

### 7.3 Specific end use(s)
No data available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**Occupational exposure limit values**

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sulphuric acid</td>
<td>7664-93-9</td>
<td>231-639-5</td>
</tr>
<tr>
<td></td>
<td>2009/161/EU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sulphuric acid (mist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>0.05 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**List of approved workplace exposure limits (WELs) / EH40**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid mist</td>
<td></td>
</tr>
<tr>
<td>WEL long-term (8-hr TWA reference period)</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

**Comments**
The mist is defined as the thoracic fraction

#### 8.2 Exposure controls

**Appropriate engineering controls**
No data available.

**Personal protective equipment**

**Respiratory protection**
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust, aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

**Eye / face protection**
Safety glasses with side protection shield (EN 166)

**Hand protection**
In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

**Other**
Normal chemical work clothing.

**Environmental exposure controls**
No data available.

### SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form/Colour</td>
<td>granules, yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition point / decomposition range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Comments: easily soluble</td>
</tr>
<tr>
<td>Solubility (ies)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
EC safety data sheet

Trade name: Schuetze reagent

Current version: 5.0.1, issued: 31.01.2020
Replaced version: 5.0.0, issued: 22.08.2018
Region: GB

Partition coefficient: n-octanol/water
No data available

Viscosity
Not applicable

9.2 Other information
Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Protect against humidity.

10.5 Incompatible materials
hydrogen fluoride; organic materials; Reducing agents; Metals; strong bases; Oxidizing agents; Sulphides; Cyanide; combustible materials

10.6 Hazardous decomposition products
Carbon monoxide and carbon dioxide; Iodine; Sulphurous oxides (SOx); Hydrogen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schuetze reagent</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

Acute oral toxicity
No Product Name

Acute dermal toxicity
No Product Name

Acute inhalational toxicity
No Product Name

Skin corrosion/irritation
No Product Name

Serious eye damage/irritation
No Product Name

Respiratory tract irritation
No data available

Respiratory or skin sensitisation
No data available
### Germ cell mutagenicity
No data available

### Reproduction toxicity
No data available

### Carcinogenicity
No data available

### STOT - single exposure
No data available

### STOT - repeated exposure
No data available

### Aspiration hazard
No data available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure
Irritates the eyes and the skin.

### SECTION 12: Ecological information

#### 12.1 Toxicity

<table>
<thead>
<tr>
<th>Toxicity to fish (acute)</th>
<th>No</th>
<th>Product Name</th>
<th>1</th>
<th>Schuetze reagent</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to fish (chronic)</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to Daphnia (acute)</th>
<th>No</th>
<th>Product Name</th>
<th>1</th>
<th>Schuetze reagent</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to Daphnia (chronic)</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae (acute)</th>
<th>No</th>
<th>Product Name</th>
<th>1</th>
<th>Schuetze reagent</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae (chronic)</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bacteria toxicity</th>
<th>No</th>
<th>Product Name</th>
<th>1</th>
<th>Schuetze reagent</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>No</th>
<th>Product Name</th>
<th>1</th>
<th>Schuetze reagent</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 12.3 Bioaccumulative potential
No data available.

#### 12.4 Mobility in soil
No data available.
12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No data available.

12.7 Other information

<table>
<thead>
<tr>
<th>Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not discharge product unmonitored into the environment.</td>
</tr>
</tbody>
</table>

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

<table>
<thead>
<tr>
<th>Class</th>
<th>5.1</th>
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</thead>
<tbody>
<tr>
<td>Classification code</td>
<td>OC2</td>
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<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Hazard identification no.</td>
<td>58</td>
</tr>
<tr>
<td>UN number</td>
<td>UN3085</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>OXIDIZING SOLID, CORROSIVE, N.O.S.</td>
</tr>
<tr>
<td>Technical name</td>
<td>diiodine-pentaoxide</td>
</tr>
<tr>
<td>sulphuric acid</td>
<td></td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>E</td>
</tr>
<tr>
<td>Label</td>
<td>5.1+8</td>
</tr>
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</table>

14.2 Transport IMDG

<table>
<thead>
<tr>
<th>Class</th>
<th>5.1</th>
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</thead>
<tbody>
<tr>
<td>Subsidiary Risk</td>
<td>8</td>
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<tr>
<td>Packing group</td>
<td>III</td>
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<tr>
<td>UN number</td>
<td>UN3085</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>OXIDIZING SOLID, CORROSIVE, N.O.S.</td>
</tr>
<tr>
<td>Technical name</td>
<td>diiodine-pentaoxide</td>
</tr>
<tr>
<td>sulphuric acid</td>
<td></td>
</tr>
<tr>
<td>EmS</td>
<td>F-A, S-Q</td>
</tr>
<tr>
<td>Label</td>
<td>5.1+8</td>
</tr>
</tbody>
</table>

14.3 Transport ICAO-TI / IATA

<table>
<thead>
<tr>
<th>Class</th>
<th>5.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subrisk</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>UN number</td>
<td>UN3085</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Oxidizing solid, corrosive, n.o.s.</td>
</tr>
<tr>
<td>Technical name</td>
<td>diiodine-pentaoxide</td>
</tr>
<tr>
<td>sulphuric acid</td>
<td></td>
</tr>
<tr>
<td>Label</td>
<td>5.1+8</td>
</tr>
</tbody>
</table>

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation
According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XVII of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is subject to Part I of Annex I, risk category: P8

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

Further information
Article no. 90270, 100 g

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)
H318 Causes serious eye damage.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

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

Department issuing safety data sheet
UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg
Tel.: +49 40 / 555 546 300 Fax: +49 40 / 555 546 357 e-mail: umco@umco.de

This information is based on our present knowledge and experience. The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

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Prod-ID 616949