SAFETY DATA SHEET

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

1.1. Product identifier
   Trade name
   Oxycon DPD 1b
   Product no.
   A-85.510.200, ... 225, A-85.590.200, ... 300, ... 400
   REACH registration number
   Not applicable
   Other means of identification

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Relevant identified uses of the substance or mixture
   Reagent for water analysis
   Uses advised against
   - The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet
   Company and address
   SWAN Analytische Instrumente AG
   Studbachstrasse 13
   CH-8340 Hinwil
   Phone: +41 44 943 63 00
   Fax: +41 44 943 63 01
   Contact person
   Marco Lendi
   E-mail
   info@swan.ch
   SDS date
   05-11-2014
   SDS Version
   2.3

1.4. Emergency telephone number
   Swiss Toxicological Information Centre
   CH-8032 Zürich / Switzerland
   Tel.: +41 44 251 51 51 (international, english)
   Or use your national or local emergency number. See section 4 "First aid measures"

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   Skin Irrit. 2, Eye Irrit. 2 // H319, H315
   See full text of H/R-phrases in section 2.2.
   DPD/DSD Classification
   Irritant (Xi).
   Irritating to eyes and skin (R36/38).

2.2. Label elements
   Hazard pictogram(s)
According to EC-Regulation 1907/2006 (REACH)

Signal word
Warning!

Hazard statement(s)
Causes skin irritation. (H315)
Causes serious eye irritation. (H319)

General Prevention
- Wash exposed areas thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Safety Response
IF ON SKIN: Wash with plenty of soap and water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) If eye irritation persists: Get medical advice/attention. (P337+P313)

Storage -
Disposal -

Identity of the substances primarily responsible for the major health hazards -

2.3. Other hazards

Additional labelling -
Additional warnings -
VOC -

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances

<table>
<thead>
<tr>
<th>NAME</th>
<th>Sulphuric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDENTIFICATION NOS.:</td>
<td>CAS-no: 7664-93-9 EC-no: 231-639-5 Index-no: 016-020-00-8</td>
</tr>
<tr>
<td>CONTENT</td>
<td>1-5%</td>
</tr>
<tr>
<td>DSD CLASSIFICATION:</td>
<td>C;R35</td>
</tr>
<tr>
<td>CLP CLASSIFICATION:</td>
<td>Skin, Corr. 1A</td>
</tr>
<tr>
<td></td>
<td>H314</td>
</tr>
</tbody>
</table>

(*) See full text of H/R-phrases in chapter 16. Occupational limits are listed in section 8, if these are available.

Other informations

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor, if in doubt about the injured person’s condition or if the symptoms continue. Never give an unconscious person water or similar.

Inhalation
Get the injured person into fresh air. Make sure there is always someone with the injured person. Prevent shock by keeping the injured person warm and calm. If the person stops breathing, give mouth-to-mouth
resuscitation. If unconscious, roll the injured person onto side with the top leg bent at both knee and hip. Call an ambulance.

**Skin contact**
Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

**Eye contact**
Remove contact lenses. Flush eyes with water (20-30°C) for at least 15 minutes. Call a doctor.

**Ingestion**
Give the person plenty to drink and stay with the person. If the person feels unwell, contact a doctor immediately and take this safety data sheet or the label from the product with you. Do not induce vomiting unless recommended by the doctor. Hold head facing down so that no vomit runs back into the mouth and throat.

**Burns**
Rinse with water until the pain stops and continue for 30 minutes.

4.2. **Most important symptoms and effects, both acute and delayed**
Irritation effects: This product contains substances which cause irritation to skin and eyes, or when inhaled. Contact with locally irritative substances can cause the area of contact to be more prone to absorb damaging substances such as allergens.

4.3. **Indication of any immediate medical attention and special treatment needed**
If eye irritation persists: Get medical advice/attention.

**Information to medics**
Bring this safety data sheet.

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**
Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Water jets should not be used, since they can spread the fire.

5.2. **Special hazards arising from the substance or mixture**
If the product is exposed to high temperatures, as in the case of fire, dangerous catabolic substances are produced. These are: Sulphur oxides. Fire will result in thick black smoke. Exposure to catabolic products can damage your health. Fire fighters should use proper protection gear. Closed containers, which are exposed to fire, should be cooled with water. Do not let fire-extinguishing water run into sewers and other water courses.

5.3. **Advice for firefighters**
Wear self-contained breathing apparatus and protective clothing to prevent contact.

**SECTION 6: Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**
No specific requirements.

6.2. **Environmental precautions**
No specific requirements.

6.3. **Methods and material for containment and cleaning up**
Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. Cleaning should be done as far as possible using normal cleaning agents. Solvents should be avoided.

6.4. **Reference to other sections**
See section on "Disposal considerations" with regard to the handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

**SECTION 7: Handling and storage**

7.1. **Precautions for safe handling**
Smoking, consumption of food or liquid, and storage of tobacco, food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection.
7.2. Conditions for safe storage, including any incompatibilities
Always store in containers of the same material as the original. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature
NA

7.3. Specific end use(s)
This product should only be used for applications described in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL

Sulphuric acid (E1940/2005)
Long-term exposure limit (5-hour TWA reference period): - ppm | 0.05 mg/m3
Short-term exposure limit (15-minute reference period): - ppm | - mg/m3

DNEL / PNEC
No data available.

8.2. Exposure controls
Compliance with the stated exposure limits values should be checked on a regular basis.

General recommendations
Observe general occupational hygiene.

Exposure scenarios
If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

Exposure limits
Trade users are covered by the rules of the working environment legislation on maximum concentrations for exposure. See work hygiene threshold values below.

Appropriate technical measures
Airborne gas and dust concentrations must be kept as low as possible and below the current threshold values (see below). Use for example an exhaust system if the normal air flow in the work room is not sufficient. Make sure that eyewash and emergency showers are clearly marked.

Hygiene measures
Whenever you take a break in using this product and when you have finished using it, all exposed areas of the body must be washed. Always wash hands, forearms and face.

Measures to avoid environmental exposure
No specific requirements.

Individual protection measures, such as personal protective equipment

Generally
Only CE-marked personal protection equipment should be used. Use only CE marked protective equipment.

Respiratory Equipment
Recommended: NA, -.

Skin protection
Special work clothing should be used.

Hand protection
Recommended: Natural rubber (latex) . . . NA

Eye protection
Use face shield. Use safety glasses with a side shield as an alternative.

SECTION 9: Physical and chemical properties
According to EC-Regulation 1907/2006 (REACH)

9.1. Information on basic physical and chemical properties

Form | Colour | Odour | pH | Viscosity | Density (g/cm3)
--- | --- | --- | --- | --- | ---
Liquid | Colourless | None | 1 | - | 1.03

Phase changes
Melting point (°C) | Boiling point (°C) | Vapour pressure (mm Hg)
--- | --- | ---
- | 100 | -

Data on fire and explosion hazards
Flashpoint (°C) | Ignition (°C) | Self ignition (°C)
--- | --- | ---
- | - | -

Explosion limits (Vol %) | Oxidizing properties
--- | ---
- | -

Solubility
Solubility in water | n-octanol/water coefficient
--- | ---
Soluble | -

9.2. Other information
Solubility in fat
- Additional information
- N/A

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available

10.2. Chemical stability
The product is stable under the conditions, noted in the section on “Handling and storage”.

10.3. Possibility of hazardous reactions
No special

10.4. Conditions to avoid
Do not expose to heat (e.g. sunlight), because it can lead to excess pressure.

10.5. Incompatible materials
Strong acids, strong bases, strong oxidizing agents, and strong reductants agents.

10.6. Hazardous decomposition products
The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid</td>
<td>Rat</td>
<td>LC50</td>
<td>Inhalation</td>
<td>510 mg/m³</td>
</tr>
<tr>
<td>Sulphuric acid</td>
<td>Rat</td>
<td>LD50</td>
<td>Oral</td>
<td>2140 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
Data on substance: Sulphuric acid

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.
According to EC-Regulation 1907/2006 (REACH)

Aspiration hazard
No data available.

Long term effects
Irritation effects: This product contains substances which cause irritation to skin and eyes, or when inhaled. Contact with locally irritative substances can cause the area of contact to be more prone to absorb damaging substances such as allergens.

SECTION 12: Ecological information

12.1. Toxicity
<table>
<thead>
<tr>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Test duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid</td>
<td>Daphnia</td>
<td>EC50</td>
<td>24 h</td>
<td>29 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
<table>
<thead>
<tr>
<th>Substance</th>
<th>Biodegradability</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential
<table>
<thead>
<tr>
<th>Substance</th>
<th>Potential bioaccumulation</th>
<th>LogPow</th>
<th>BFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 special

SECTION 13: Disposal considerations

13.1. Waste treatment methods
The product is covered by the regulations on dangerous waste.

Waste
EWC code
-

Specific labelling
-

Contaminated packing
Packaging which contains leftovers from the product must be disposed of in the same way as the product.

SECTION 14: Transport information

This product is covered by the conventions on dangerous goods.

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>14.1. UN number</th>
<th>14.2. UN proper shipping name</th>
<th>14.3. Transport hazard class(es)</th>
<th>14.4. Packing group</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼ADR/RID</td>
<td>3264</td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid solution)</td>
<td>8</td>
<td>III</td>
<td>-</td>
</tr>
<tr>
<td>▼IMDG</td>
<td>UN-no.</td>
<td>Proper Shipping Name</td>
<td>Class</td>
<td>PG^</td>
<td>EmS</td>
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<tr>
<td>3264</td>
<td></td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid solution)</td>
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<td>III</td>
<td>-</td>
</tr>
<tr>
<td>▼IATA/ICAO</td>
<td>UN-no.</td>
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<td>Class</td>
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<td>III</td>
<td></td>
</tr>
</tbody>
</table>
According to EC-Regulation 1907/2006 (REACH)

14.5. Environmental hazards
- 
14.6. Special precautions for user
- 
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
No data available
(*) Packing group
(**) Marine pollutant

SECTION 16: Regulatory information

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

Restrictions for application
- 
Demands for specific education
- 
Additional information
- 
Sources
EC regulation 1907/2006 (REACH)
Directive 2000/532/EC
EC Regulation 1272/2008 (CLP)

15.2. Chemical safety assessment
No

SECTION 16: Other information'

Full text of H/R-phrases as mentioned in section 3
R35 - Causes severe burns.
H314 - Causes severe skin burns and eye damage.

The full text of identified uses as mentioned in section 1
- 
Other symbols mentioned in section 2
- 
Other
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.
The safety data sheet is validated by
Admin

Date of last essential change
(First cipher in SDS version)
05-11-2014

Date of last minor change
(Last cipher in SDS version)
05-11-2014