SAFETY DATA SHEET


Silirub 2

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

1.1 Product identifier:
   - **Product name:** Silirub 2
   - **Registration number REACH:** Not applicable (mixture)
   - **Product type REACH:** Mixture

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

1.2.1 Relevant identified uses
   - Sealing compound

1.2.2 Uses advised against
   - No uses advised against known

1.3 Details of the supplier of the safety data sheet:

   **Supplier of the safety data sheet**
   - SOUDAL N.V.
   - Everdongenlaan 18-20
   - B-2300 Turnhout
   - +32 14 42 42 31
   - +32 14 42 65 14
   - msds@soudal.com

   **Manufacturer of the product**
   - SOUDAL N.V.
   - Everdongenlaan 18-20
   - B-2300 Turnhout
   - +32 14 42 42 31
   - +32 14 42 65 14
   - msds@soudal.com

1.4 Emergency telephone number:
   - 24h/24h (Telephone advice: English, French, German, Dutch):
     +32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008
   - Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC
   - Not classified as dangerous according to the criteria of Directive(s) 67/548/EEC and/or 1999/45/EC

2.2 Label elements:

   **Labelling according to Regulation EC No 1272/2008 (CLP)**
   - Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

   **Supplemental information**
   - EUH208
     - Contains: 2-butanone oxime. May produce an allergic reaction.

   - Contains: 2-butanone oxime. May produce an allergic reaction.

2.3 Other hazards:

   **CLP**
   - No other hazards known

   **DSD/DPD**
   - May produce an allergic reaction

SECTION 3: Composition/information on ingredients

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)
Technische Schoolstraat 43 A, B-2440 Geel
http://www.big.be
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Reason for revision: ATP4
Revision number: 0500
Publication date: 2006-03-13
Date of revision: 2015-02-17
Product number: 43197
3.1 Substances:
Not applicable

3.2 Mixtures:

<table>
<thead>
<tr>
<th>Name</th>
<th>REACH Registration No</th>
<th>CAS No</th>
<th>EC No</th>
<th>Conc. (C)</th>
<th>Classification according to DSD/DPD</th>
<th>Classification according to CLP</th>
<th>Note</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butanone oxime</td>
<td>96-29-7</td>
<td>202-496-6</td>
<td>0.1%&lt;C&lt;1%</td>
<td>Carc. Cat. 3; R40 Xn; R21 Xi; R41 R43</td>
<td>Carc. 2; H351 Acute Tox. 4; H312 Eye Dam. 1; H318 Skin Sens. 3; H317</td>
<td><a href="10">1</a></td>
<td>Constituent</td>
<td></td>
</tr>
</tbody>
</table>

(1) For R-phrases and H-statements in full: see heading 16
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1 Description of first aid measures:

General:
If you feel unwell, seek medical advice.

After inhalation:
Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:
Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:
Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:
Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1 Acute symptoms

After inhalation:
No effects known.

After skin contact:
No effects known.

After eye contact:
No effects known.

After ingestion:
No effects known.

4.2.2 Delayed symptoms
No effects known.

4.3 Indication of any immediate medical attention and special treatment needed:
If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:
Polyvalent foam. ABC powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:
No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:
Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours.

5.3 Advice for firefighters:

5.3.1 Instructions:
No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
No naked flames.

6.1.1 Protective equipment for non-emergency personnel
See heading 8.2

6.1.2 Protective equipment for emergency responders

Reason for revision: ATP4  Publication date: 2006-03-13
Date of revision: 2015-02-17

Revision number: 0500  Product number: 43197
6.2 Environmental precautions:
Contain leaking substance. Use appropriate containment to avoid environmental contamination.

6.3 Methods and material for containment and cleaning up:
Scoop solid spill into closing containers. Clean contaminated surfaces with a soap solution. Wash clothing and equipment after handling.

6.4 Reference to other sections:
See heading 13.

SECTION 7: Handling and storage
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:
Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities:
7.2.1 Safe storage requirements:
Store in a dry area. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:
Heat sources.

7.2.3 Suitable packaging material:
Synthetic material.

7.2.4 Non suitable packaging material:
No data available

7.3 Specific end use(s):
If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection
8.1 Control parameters:
8.1.1 Occupational exposure
a) Occupational exposure limit values
If limit values are applicable and available these will be listed below.

<table>
<thead>
<tr>
<th>Germany</th>
<th>Butanonoxim</th>
<th>Time-weighted average exposure limit 8 h (TRGS 900)</th>
<th>0.3 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Time-weighted average exposure limit 8 h (TRGS 900)</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

b) National biological limit values
If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods
If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended
If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values
**DNEL - Workers**
2-butanone oxime

<table>
<thead>
<tr>
<th>Effect level (DNEL/DMEL)</th>
<th>Type</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL</td>
<td>Acute systemic effects dermal</td>
<td>2.5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects dermal</td>
<td>1.3 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects inhalation</td>
<td>0 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term local effects inhalation</td>
<td>0.33 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**DNEL - General population**
2-butanone oxime

<table>
<thead>
<tr>
<th>Effect level (DNEL/DMEL)</th>
<th>Type</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL</td>
<td>Acute systemic effects dermal</td>
<td>1.5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects dermal</td>
<td>0.78 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects inhalation</td>
<td>2.7 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term local effects inhalation</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect level (DNEL/DMEL)</th>
<th>Type</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC</td>
<td>Acute systemic effects dermal</td>
<td>2.5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects dermal</td>
<td>0.78 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term systemic effects inhalation</td>
<td>2.7 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term local effects inhalation</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
Silirub 2

2-butanone oxime

<table>
<thead>
<tr>
<th>Compartments</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water</td>
<td>0.256 mg/l</td>
<td></td>
</tr>
<tr>
<td>Aqua (intermittent releases)</td>
<td>0.118 mg/l</td>
<td></td>
</tr>
<tr>
<td>STP</td>
<td>177 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

8.1.5 Control banding
If applicable and available it will be listed below.

8.2 Exposure controls:
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls
Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment
Observe strict hygiene. Keep container tightly closed. Do not eat, drink or smoke during work.
- Respiratory protection:
  - Respiratory protection not required in normal conditions.
- Hand protection:
  - Gloves.
- Eye protection:
  - Safety glasses.
- Skin protection:
  - Protective clothing.

8.2.3 Environmental exposure controls:
See headings 6.2, 6.3 and 13

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>Physical form</td>
<td>Paste</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic odour</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Colour</td>
<td>Variable in colour, depending on the composition</td>
</tr>
<tr>
<td>Particle size</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not easily combustible</td>
</tr>
<tr>
<td>Log Kow</td>
<td>Not applicable (mixture)</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water; insoluble</td>
</tr>
<tr>
<td>Relative density</td>
<td>&gt; 1.0</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No chemical group associated with explosive properties</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No chemical group associated with oxidising properties</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other information:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>No data available</td>
</tr>
<tr>
<td>Absolute density</td>
<td>&gt; 1000 kg/m³</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1 Reactivity:
 Temperature above flashpoint: higher fire/explosion hazard.

10.2 Chemical stability:
Stable under normal conditions.

10.3 Possibility of hazardous reactions:
No data available.

10.4 Conditions to avoid:
Keep away from naked flames/heat.
10.5 Incompatible materials:  
No data available.

10.6 Hazardous decomposition products:  
Upon combustion: formation of CO, CO2 and small quantities of nitrous vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

Acute toxicity

Silirub 2  
No (test)data on the mixture available

2-butanone oxime

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Exposure time</th>
<th>Species</th>
<th>Value determination</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>Equivalent to OECD 401</td>
<td>2326mg/kg bw</td>
<td>Rat (male)</td>
<td>Experimental value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>&gt; 2000mg/kg</td>
<td></td>
<td>Rat</td>
<td>Literature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>Equivalent to OECD 402</td>
<td>&gt; 1000mg/kg bw</td>
<td>24 h</td>
<td>Rabbit (male/female)</td>
<td>Experimental value</td>
<td></td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>LC50</td>
<td>Equivalent to OECD 403</td>
<td>&gt; 4.83mg/l air</td>
<td>4 h</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
<td></td>
</tr>
</tbody>
</table>

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Silirub 2  
No (test)data on the mixture available

2-butanone oxime

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Result</th>
<th>Method</th>
<th>Exposure time</th>
<th>Time point</th>
<th>Species</th>
<th>Value determination</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Corrosive</td>
<td>Equivalent to OECD 405</td>
<td>24; 72 hours</td>
<td>Rabbit</td>
<td>Experimental value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Irritating</td>
<td>Other</td>
<td>3 minutes</td>
<td>Rabbit</td>
<td>Experimental value</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Judgement is based on the relevant ingredients

Conclusion

Not classified as irritating to the skin
Not classified as irritating to the eyes
Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Silirub 2  
No (test)data on the mixture available

2-butanone oxime

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Result</th>
<th>Method</th>
<th>Exposure time</th>
<th>Observation time point</th>
<th>Species</th>
<th>Value determination</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Sensitizing</td>
<td>Equivalent to OECD 406</td>
<td>24 h</td>
<td>24; 48 hours</td>
<td>Guinea pig (female)</td>
<td>Experimental value</td>
<td></td>
</tr>
</tbody>
</table>

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for inhalation
Not classified as sensitizing for skin

Specific target organ toxicity

Silirub 2  
No (test)data on the mixture available
### 2-butanone oxime

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Organ</th>
<th>Effect</th>
<th>Exposure time</th>
<th>Species</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LOAEL</td>
<td>US EPA</td>
<td>40mg/kg bw/day</td>
<td>General</td>
<td>Clinical signs; mortality; body weight; food consumption</td>
<td>13 weeks (5 days/week)</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Oral</td>
<td>NOAEL</td>
<td>US EPA</td>
<td>&lt; 40mg/kg bw/day</td>
<td>Blood</td>
<td>Change in the haemogramme/blood composition</td>
<td>13 weeks (5 days/week)</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Oral</td>
<td>NOEL</td>
<td>US EPA</td>
<td>125mg/kg bw/day</td>
<td>Central nervous system</td>
<td>Behavioural disturbances</td>
<td>13 weeks (5 days/week)</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Oral</td>
<td>NOAEL</td>
<td>US EPA</td>
<td>312ppm</td>
<td>Blood</td>
<td>Change in the haemogramme/blood composition</td>
<td>13 weeks (5 days/week)</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>NOAEC</td>
<td>Equivalent to OECD 412</td>
<td>900mg/m³ air</td>
<td>Blood</td>
<td>Change in the haemogramme/blood composition</td>
<td>4 weeks (6h/day, 5 days/week)</td>
<td>Rat (male/female)</td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

**Judgement is based on the relevant ingredients**

### Conclusion

Not classified for subchronic toxicity

### Mutagenicity (in vitro)

**Silirub 2**

- No (test)data on the mixture available

#### 2-butanone oxime

<table>
<thead>
<tr>
<th>Result</th>
<th>Method</th>
<th>Test substrate</th>
<th>Effect</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous</td>
<td>Equivalent to OECD 476</td>
<td>Mouse (lymphoma L5178Y cells)</td>
<td></td>
<td>Experimental value</td>
</tr>
<tr>
<td>Negative</td>
<td>Equivalent to OECD 471</td>
<td>Bacteria [S. typhimurium]</td>
<td></td>
<td>Experimental value</td>
</tr>
<tr>
<td>Negative</td>
<td>Equivalent to OECD 482</td>
<td>Rat liver cells</td>
<td></td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

### Mutagenicity (in vivo)

**Silirub 2**

- No (test)data on the mixture available

#### 2-butanone oxime

<table>
<thead>
<tr>
<th>Result</th>
<th>Method</th>
<th>Exposure time</th>
<th>Test substrate</th>
<th>Organ</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>Other</td>
<td>3 day(s)</td>
<td>Drosophila melanogaster (male)</td>
<td>Male reproductive organ</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Negative</td>
<td>Other</td>
<td></td>
<td>Rat (male/female)</td>
<td></td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

### Carcinogenicity

**Silirub 2**

- No (test)data on the mixture available

#### 2-butanone oxime

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Exposure time</th>
<th>Species</th>
<th>Value determination</th>
<th>Organ</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (vapours)</td>
<td>NOAEC</td>
<td>Other</td>
<td>270ppm</td>
<td>13, 52 &amp; 78 weeks (6h/day, 5 days/week)</td>
<td>Mouse (male)</td>
<td>Experimental value</td>
<td>Liver</td>
<td>Histopathological changes</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>NOAEC</td>
<td>Other</td>
<td>1350ppm</td>
<td>13, 52 &amp; 78 weeks (6h/day, 5 days/week)</td>
<td>Mouse (female)</td>
<td>Experimental value</td>
<td>Liver</td>
<td>Histopathological changes</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>NOAEC</td>
<td>Other</td>
<td>270ppm</td>
<td>13, 52, 78 &amp; 113 weeks (6h/day, 5 days/week)</td>
<td>Rat (male)</td>
<td>Experimental value</td>
<td>Liver</td>
<td>Histopathological changes</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>NOAEC</td>
<td>Other</td>
<td>1350ppm</td>
<td>13, 52, 78 &amp; 113 weeks (6h/day, 5 days/week)</td>
<td>Rat (male)</td>
<td>Experimental value</td>
<td>Liver</td>
<td>Histopathological changes</td>
</tr>
</tbody>
</table>

### Reproductive toxicity

**Silirub 2**

Reason for revision: ATP4

Publication date: 2006-03-13
Date of revision: 2015-02-17

Revision number: 0500
Product number: 43197
Silirub 2

No (test)data on the mixture available

2-butanone oxime

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Exposure time</th>
<th>Species</th>
<th>Effect</th>
<th>Organ</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental toxicity</td>
<td>NOAEL (F1)</td>
<td>OECD 414</td>
<td>600mg/kg bw/day</td>
<td>10 day(s)</td>
<td>Rat</td>
<td>No effect</td>
<td>Experimental value</td>
</tr>
<tr>
<td></td>
<td>LOAEL (P)</td>
<td>OECD 414</td>
<td>60mg/kg bw/day</td>
<td>10 day(s)</td>
<td>Rat</td>
<td>Spleen enlargement/affection</td>
<td>Experimental value</td>
</tr>
<tr>
<td>Effects on fertility</td>
<td>NOAEL</td>
<td>US EPA</td>
<td>≥ 200mg/kg/d</td>
<td>Rat (male/female)</td>
<td>No effect</td>
<td>Spleen</td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

Judgement is based on the relevant ingredients

**Conclusion CMR**
- Not classified for reprotoxic or developmental toxicity
- Not classified for mutagenic or genotoxic toxicity
- Not classified for carcinogenicity

**Toxicity other effects**
- Silirub 2
  - No (test)data on the mixture available

**Chronic effects from short and long-term exposure**
- Silirub 2
  - ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

**SECTION 12: Ecological information**

**12.1 Toxicity:**
- Silirub 2
  - No (test)data on the mixture available
  - 2-butanone oxime

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Duration</th>
<th>Species</th>
<th>Test design</th>
<th>Fresh/salt water</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity fishes</td>
<td>LC50</td>
<td>OECD 203</td>
<td>&gt; 100mg/l</td>
<td>96 h</td>
<td>Semi-static system</td>
<td>Fresh water</td>
<td>Experimental value; GLP</td>
</tr>
<tr>
<td>Acute toxicity invertebrates</td>
<td>EC50</td>
<td>OECD 202</td>
<td>201mg/l</td>
<td>48 h</td>
<td>Static system</td>
<td>Fresh water</td>
<td>Experimental value; GLP</td>
</tr>
<tr>
<td>Toxicity algae and other aquatic plants</td>
<td>EC50</td>
<td>OECD 201</td>
<td>11.8mg/l</td>
<td>72 h</td>
<td>Scenedesmus sp.</td>
<td>Static system</td>
<td>Fresh water</td>
</tr>
<tr>
<td>NOEC</td>
<td>OECD 201</td>
<td>2.56mg/l</td>
<td>72 h</td>
<td>Scenedesmus sp.</td>
<td>Static system</td>
<td>Fresh water</td>
<td>Experimental value; GLP</td>
</tr>
</tbody>
</table>

Judgement is based on the relevant ingredients of the mixture

**Conclusion**
- Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

**12.2 Persistence and degradability:**
- No straightforward conclusion can be drawn based upon the available numerical values

**12.3 Bioaccumulative potential:**
- Silirub 2

<table>
<thead>
<tr>
<th>Method</th>
<th>Remark</th>
<th>Value</th>
<th>Temperature</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Kow</td>
<td>Not applicable (mixture)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BCF fishes**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Method</th>
<th>Value</th>
<th>Duration</th>
<th>Species</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF</td>
<td>OECD 305</td>
<td>0.5 - 5.8</td>
<td>42 day(s)</td>
<td>Cyprinus carpio</td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

**Log Kow**

<table>
<thead>
<tr>
<th>Method</th>
<th>Remark</th>
<th>Value</th>
<th>Temperature</th>
<th>Value determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD 117</td>
<td></td>
<td>0.63</td>
<td></td>
<td>Experimental value</td>
</tr>
</tbody>
</table>

**Conclusion**
- Does not contain bioaccumulative component(s)

**12.4 Mobility in soil:**

Reason for revision: ATP4

Publication date: 2006-03-13
Date of revision: 2015-02-17

Revision number: 0500
Product number: 43197

Silirub 2
No (test)data on mobility of the components available

12.5 Results of PBT and vPvB assessment:
Due to insufficient data no statement can be made whether the component(s) fulfill(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other adverse effects:
Silirub 2
Global warming potential (GWP)
None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)
Ozone-depleting potential (ODP)
Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

2-butanone oxime
Ground water
Ground water pollutant

SECTION 13: Disposal considerations
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:
13.1.1 Provisions relating to waste
08 04 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). Depending on branch of industry and production process, also other waste codes may be applicable. Can be considered as non hazardous waste according to Directive 2008/98/EC.

13.1.2 Disposal methods
Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container
15 01 02 (plastic packaging).

SECTION 14: Transport information

Road (ADR)
14.1 UN number:
Transport Not subject
14.2 UN proper shipping name:
14.3 Transport hazard class(es):
Hazard identification number
Class
Classification code
14.4 Packing group:
Packing group
Labels
14.5 Environmental hazards:
Environmentally hazardous substance mark No
14.6 Special precautions for user:
Special provisions
Limited quantities

Rail (RID)
14.1 UN number:
Transport Not subject
14.2 UN proper shipping name:
14.3 Transport hazard class(es):
Hazard identification number
Class
Classification code
14.4 Packing group:
Packing group
Labels
14.5 Environmental hazards:
Environmentally hazardous substance mark No
14.6 Special precautions for user:
Special provisions
### Inland waterways (ADN)

<table>
<thead>
<tr>
<th>14.1 UN number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>Not subject</td>
</tr>
<tr>
<td>14.2 UN proper shipping name:</td>
<td></td>
</tr>
<tr>
<td>14.3 Transport hazard class(es):</td>
<td>Class</td>
</tr>
<tr>
<td>Classification code</td>
<td></td>
</tr>
<tr>
<td>14.4 Packing group:</td>
<td>Packing group</td>
</tr>
<tr>
<td>Labels</td>
<td></td>
</tr>
<tr>
<td>14.5 Environmental hazards:</td>
<td>Environmentally hazardous substance mark</td>
</tr>
<tr>
<td>14.6 Special precautions for user:</td>
<td>Special provisions</td>
</tr>
<tr>
<td>Limited quantities</td>
<td></td>
</tr>
</tbody>
</table>

### Sea (IMDG/IMSBC)

<table>
<thead>
<tr>
<th>14.1 UN number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>Not subject</td>
</tr>
<tr>
<td>14.2 UN proper shipping name:</td>
<td></td>
</tr>
<tr>
<td>14.3 Transport hazard class(es):</td>
<td>Class</td>
</tr>
<tr>
<td>14.4 Packing group:</td>
<td>Packing group</td>
</tr>
<tr>
<td>Labels</td>
<td></td>
</tr>
<tr>
<td>14.5 Environmental hazards:</td>
<td>Marine pollutant</td>
</tr>
<tr>
<td>Environmentally hazardous substance mark</td>
<td>No</td>
</tr>
<tr>
<td>14.6 Special precautions for user:</td>
<td>Special provisions</td>
</tr>
<tr>
<td>Limited quantities</td>
<td></td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</td>
<td>Annex II of MARPOL 73/78</td>
</tr>
</tbody>
</table>

### Air (ICAO-TI/IATA-DGR)

<table>
<thead>
<tr>
<th>14.1 UN number:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>Not subject</td>
</tr>
<tr>
<td>14.2 UN proper shipping name:</td>
<td></td>
</tr>
<tr>
<td>14.3 Transport hazard class(es):</td>
<td>Class</td>
</tr>
<tr>
<td>14.4 Packing group:</td>
<td>Packing group</td>
</tr>
<tr>
<td>Labels</td>
<td></td>
</tr>
<tr>
<td>14.5 Environmental hazards:</td>
<td>Environmentally hazardous substance mark</td>
</tr>
<tr>
<td>14.6 Special precautions for user:</td>
<td>Special provisions</td>
</tr>
<tr>
<td>Passenger and cargo transport: limited quantities: maximum net quantity per packaging</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 15: Regulatory information

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

**European legislation:**

- VOC content Directive 2010/75/EU

<table>
<thead>
<tr>
<th>VOC content</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

**REACH Annex XVII - Restriction**

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

- 2-butanone oxime
  - Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8
  - 1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects.2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent.

Reason for revision: ATP4

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Date of revision: 2015-02-17

Revision number: 0500

Product number: 43197
<table>
<thead>
<tr>
<th>Silirub 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Types and Categories</strong></td>
</tr>
<tr>
<td>(a) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</td>
</tr>
<tr>
<td>(b) hazard class 4.1;</td>
</tr>
<tr>
<td>(d) hazard class 5.1.</td>
</tr>
<tr>
<td><strong>unless required for fiscal reasons, or perfume, or both, if they:</strong></td>
</tr>
<tr>
<td>— can be used as fuel in decorative oil lamps for supply to the general public, and,</td>
</tr>
<tr>
<td>— present an aspiration hazard and are labelled with R65 or H304;</td>
</tr>
<tr>
<td>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</td>
</tr>
<tr>
<td>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:</td>
</tr>
<tr>
<td>a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage”;</td>
</tr>
<tr>
<td>b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life-threatening lung damage”;</td>
</tr>
<tr>
<td>c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</td>
</tr>
</tbody>
</table>

### National legislation The Netherlands

**Silirub 2**

- **Waste identification (the Netherlands):** LWCA (the Netherlands): KGA category 05
- **Waterbezwaarlijkheid:** 11

### National legislation Germany

**Silirub 2**

- **WGK:** 1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
- **2-butanone oxime:** MAK - Krebserzeugend Kategorie 2
- **TA-Luft:** 5.2.5; 1

### National legislation France

**Silirub 2**

No data available

### Other relevant data

**Silirub 2**

No data available

### 15.2 Chemical safety assessment:

No chemical safety assessment is required.

### SECTION 16: Other information

Full text of any R-phrases referred to under headings 2 and 3:

- R21 Harmful in contact with skin
- R40 Limited evidence of a carcinogenic effect
- R41 Risk of serious damage to eyes
- R43 May cause sensitisation by skin contact

Full text of any H-statements referred to under headings 2 and 3:

- H312 Harmful in contact with skin.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H351 Suspected of causing cancer.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances
DSD Dangerous Substance Directive
DPD Dangerous Preparation Directive
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and

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**Product number:** 43197

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Silirub 2

according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.