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

1.1. Product identifier

SiliXan Cat 250

Product group: delivery product
Abbreviation: -
REACH Registration Number: -
CAS No: 12645-31-7
Index No: -
EC No: -

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

Use of the substance/mixture
ADDITIVE, CATALYST

1.3. Details of the supplier of the safety data sheet

Manufacturer
Company name: SiliXan GmbH
Street: Theodor-Heuss-Str. 11a
Place: D-66130 Saarbrücken
Telephone: 0049 681 876105 23
Fax: 0049 681 876105 31
E-mail: info@silixan.de

Contact person: Dr. Frank Groß
E-mail: frank.gross@silixan.de
Internet: www.silixan.de

Company name: NANO-X GMBH
Street: Theodor-Heuss-Str. 11a
Place: D-66130 Saarbrücken
Telephone: +49 (0)68195940 0
Fax: +49 (0)68195940 45
E-mail: sdb@nano-x.de

Contact person: Cathrin Anne Lang
E-mail: lang@nano-x.de
Internet: www.nano-x.de

1.4. Emergency telephone number:
bei Vergiftung: Giftinformationszentrum Mainz +49 (0)6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: C - Corrosive
R phrases:
Causes burns.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hazard categories:
Skin corrosion/irritation: Skin Corr. 1B
Hazard Statements:
Causes severe skin burns and eye damage.

2.2. Label elements

Hazard components for labelling
phosphoric mono- und bis ethylhexylacid ester

Signal word: Danger
Pictograms: GHS05

Hazard statements
H314 Causes severe skin burns and eye damage.

Precautionary statements
P280 Wear protective gloves/protective clothing/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/shower.
P310 Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.

Special labelling of certain mixtures
Caution - substance not yet tested completely.
For use in industrial installations or professional treatment only.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: -
Molecular weight: -

Hazardous components

<table>
<thead>
<tr>
<th>EC No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No</td>
<td>Classification according to Directive 67/548/EEC</td>
<td></td>
</tr>
<tr>
<td>Index No</td>
<td>Classification according to Regulation (EC) No. 1272/2008 [CLP]</td>
<td></td>
</tr>
<tr>
<td>REACH No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>235-741-0</td>
<td>phosphoric mono- und bis ethylhexylacid ester</td>
<td>90 - &lt; 95 %</td>
</tr>
<tr>
<td>12645-31-7</td>
<td>C - Corrosive R34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin Corr. 1B; H314</td>
<td></td>
</tr>
<tr>
<td>203-234-3</td>
<td>2-Ethylhexanol</td>
<td>5 - &lt; 10 %</td>
</tr>
<tr>
<td>104-76-7</td>
<td>Xn - Harmful, Xi - Irritant R20-36/37/38</td>
<td></td>
</tr>
<tr>
<td>01-2119487289-20</td>
<td>Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H332 H315 H319 H335</td>
<td></td>
</tr>
</tbody>
</table>

Full text of R, H and EUH phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures
General information
Remove contaminated, saturated clothing immediately.

After inhalation
Provide fresh air. Consult physician if problems persist.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After contact with eyes
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion
Do NOT induce vomiting.
Consult physician.
Rinse mouth immediately and drink plenty of water.
Do not give anything to unconscious over the mouth.

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
Foam, Water spray jet, Carbon dioxide (CO2), Dry extinguishing powder

Extinguishing media which must not be used for safety reasons
none

5.2. Special hazards arising from the substance or mixture
The thermal decomposition may lead to the formation of irritating vapour or gases and/or fire. In case of fire may be liberated:
Carbon monoxide Carbon dioxide (CO2) Silicon dioxide (SiO2)

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus. Full protective suit.

Additional information
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.2. Environmental precautions
Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Ventilate affected area.

6.3. Methods and material for containment and cleaning up
Clean contaminated articles and floor according to the environmental legislation. Suitable material for taking up: Sand, Earth, Sawdust, Universal binder. Ventilate affected area.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
### Advice on safe handling

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Handle and open container with care. It is recommended to design all work processes always so that the following is excluded: Eye contact, Skin contact, Inhalation. Keep container tightly closed. Not inhale aerosole.

### Advice on protection against fire and explosion

The product itself does not burn.

### Further information on handling

- Keep in a cool, well-ventilated place.

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

#### Requirements for storage rooms and vessels
- Keep only in the original container. Keep container tightly closed in a cool, well-ventilated place.
- Provide earthing of containers, equipment, pumps and ventilation facilities.
- Ensure that pipes and containers are free of: Metal Iron.
- Suitable container/equipment material: PE (polyethylene)

#### Advice on storage compatibility
- Keep away from: Acid, alkali, Oxidizing agents.

### Further information on storage conditions
- Storage temperature 5 - 25 °C

### 7.3. Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

- Additional advice on limit values
  - No data available

#### 8.2. Exposure controls

**Occupational exposure controls**

- If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. In the immediate working surroundings there must be: Emergency shower installed, Provide eye shower and label its location conspicuously.

**Protective and hygiene measures**

- It is recommended to design all work processes always so that the following is excluded: Eye contact, Skin contact, Inhalation.
  - Wash hands and face before breaks and after work and take a shower if necessary.

**Respiratory protection**

- Wear breathing apparatus if exposed to vapours/dusts/aerosols. Filtering device (full mask or mouthpiece) with filter: Manufacturer 3M Art. Nr. 6800S (special filter for organic and inorganic gases and aerosols, 3M Art. Nr. ABEK1, particle filter for fine dust or dangerous aerosols 3M P3 Art.Nr. 5935)

**Hand protection**

- Use protective skin cream before handling the product. Draw up and observe skin protection programme.
  - Suitable material: NBR (Nitrile rubber) Butyl caoutchouc (butyl rubber) FKM (fluoro rubber)
Wear eye/face protection.

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

refer to Chap. 5 and 6

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour:</td>
<td>ester</td>
</tr>
<tr>
<td>pH-Value (at 20 °C):</td>
<td>1,6 (10 g/l) DIN 19261</td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>&gt; 180 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 100 °C DIN ISO 3679</td>
</tr>
<tr>
<td>Lower explosion limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>250 °C</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>1,0 g/cm³ DIN 12791 ISO 649</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>virtually insoluble</td>
</tr>
<tr>
<td>Viscosity / dynamic:</td>
<td>310 mPa·s ISO 2555</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

Exothermic reaction with: Alkali (lye)

10.4. Conditions to avoid

Protect against: Frost Heat

10.5. Incompatible materials

Alkali (lye)

10.6. Hazardous decomposition products

Flammable gases

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available
Acute toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>12645-31-7</td>
<td>phosphoric mono- und bis ethylhexylacid ester</td>
<td>oral</td>
<td>LD50</td>
<td>&gt; 2000</td>
<td>Ratte</td>
</tr>
<tr>
<td>104-76-7</td>
<td>2-Ethylhexanol</td>
<td>oral</td>
<td>LD50</td>
<td>&gt; 2000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 2000</td>
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<tr>
<td></td>
<td></td>
<td>inhalative vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
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<tr>
<td></td>
<td></td>
<td>inhalative aerosol</td>
<td>ATE</td>
<td>1,5 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative gas</td>
<td>LC50</td>
<td>&gt; 4000 ppm</td>
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</tr>
</tbody>
</table>

Specific effects in experiment on an animal

Irritation and corrosivity

Sensitising effects

Severe effects after repeated or prolonged exposure

Carcinogenic/mutagenic/toxic effects for reproduction

Further information

Precautions for safe handling vgl. 5, 6, 7, 8

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Method</th>
<th>Dose</th>
<th>h</th>
<th>Species</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>12645-31-7</td>
<td>phosphoric mono- und bis ethylhexylacid ester</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>&gt; 100 mg/l</td>
<td>96</td>
<td>Oncorhynchus mykiss</td>
<td>OECD 203</td>
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</tbody>
</table>

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
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</thead>
<tbody>
<tr>
<td>12645-31-7</td>
<td>phosphoric mono- und bis ethylhexylacid ester</td>
<td>0,7</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No data available
12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Advice on disposal
Dispose of waste according to applicable legislation.

Contaminated packaging
Completely emptied packings can be re-cycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PHOSPHORIC ACID ESTER)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Classification code: C3
Special Provisions: 274
Limited quantity: 5 L
Transport category: 3
Hazard No: 80
Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PHOSPHORIC ACID ESTER)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Classification code: C3
Special Provisions: 274
Limited quantity: 5 L

Marine transport (IMDG)

14.1. UN number: 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PHOSPHORIC ACID ESTER)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Special Provisions: 223, 274
Limited quantity: 5 L
EmS: F-A, S-B

Air transport (ICAO)

14.1. UN number: 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PHOSPHORIC ACID ESTER)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Special Provisions: A3 A803
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

SECTION 15: Regulatory information

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

National regulatory information
Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment
For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms
www.wikipedia.com

Relevant R phrases (number and full text)
20 Harmful by inhalation.
34 Causes burns.
36/37/38 Irritating to eyes, respiratory system and skin.

Relevant H and EUH statements (number and full text)
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Further Information
The information contained herein is based on the present state of our knowledge. It characterizes the
product/composition with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. Any liability for damages, which occur in case of improper use or contact with the product/composition is excluded.