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

1.1. Product identifier

SiliXan M 140

Product group: delivery product

Abbreviation: -

REACH Registration Number: -

CAS No: -

Index No: -

EC No: -

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

Use of the substance/mixture

BINDEMITTEL

1.3. Details of the supplier of the safety data sheet

tradeperson

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
Telephone: 0151 42551255
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
Telephone: 0049 (0)68195940 45
e-mail: lang@nano-x.de
Internet: www.nano-x.de

Responsible Department: NANO-X GmbH
Fax: sdb@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: Xi - Irritant
R phrases:
Flammable.
Irritating to eyes and skin.
May cause sensitisation by skin contact.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hazard categories:
Flammable liquid: Flam. Liq. 3  
Acute toxicity: Acute Tox. 4  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Dam. 1  

Hazard Statements:  
Flammable liquid and vapour.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  

2.2. Label elements  
Signal word: Danger  
Pictograms: GHS02-GHS05-GHS07  

Hazard statements  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  

Precautionary statements  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P264 Wash face thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.  
P330 Rinse mouth.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P352 Wash with plenty of water.  
P364 And wash it before reuse.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P501 Dispose of contents/container to Appropriate disposal / Product.  

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  

3.2. Mixtures
Chemical characterization
Methacrylfunctional organic-inorganic polymer, made of silanes with EINECS registration, as well as the hydrolysates and condensates thereof

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>200-751-6</td>
<td>butan-1-ol; n-butanol</td>
<td>10 - &lt; 15 %</td>
</tr>
<tr>
<td>71-36-3</td>
<td>Flam. Liq. 3, Acute Tox. 4, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H226 H302 H335 H315 H318 H336</td>
<td></td>
</tr>
<tr>
<td>200-659-6</td>
<td>methanol</td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td>603-004-00-6</td>
<td>Flam. Liq. 3, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370 **</td>
<td></td>
</tr>
<tr>
<td>67-56-1</td>
<td>Flam. Liq. 3, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370 **</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. Consult physician if problems persist. Do not give anything to unconscious over the mouth.

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

After contact with skin
Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap.

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.

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

Extinguishing media which must not be used for safety reasons
Full water jet
### 5.2. Special hazards arising from the substance or mixture

Product may polymerize at high temperature. The polymerisation is a highly exothermic reaction and may produce sufficient heat to cause thermal decomposition and/or a damage/rupture of the containers. Exposure to decomposition products may cause health hazard. 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, SiO2. In case of fire cool the containers with water spraying jet.

### 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. Vapours are heavier than air, spread along floors and form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Keep away from unprotected people. Keep upwind. Provide adequate ventilation. Remove all sources of ignition. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour/spray.

#### 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, Universal binder, Earth. 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: Inhalation, Eye contact, Skin contact. Keep container tightly closed. Not inhale aerosole.

**Advice on protection against fire and explosion**

Keep away from: Heat, spark, flame. Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. When using do not eat, drink or smoke.

**Further information on handling**

Do not breathe gas/fumes/vapour/spray. 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.

**Advice on storage compatibility**

The storage class according to TRGS 510 should be indicated.

**Further information on storage conditions**

Storage temperature: 5 - 25 °C

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters
Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-36-3</td>
<td>Butan-1-ol</td>
<td>-</td>
<td>-</td>
<td>WEL</td>
<td>TWA (8 h)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>154</td>
<td>WEL</td>
<td>STEL (15 min)</td>
<td></td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>200</td>
<td>266</td>
<td>WEL</td>
<td>TWA (8 h)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>250</td>
<td>333</td>
<td>WEL</td>
<td>STEL (15 min)</td>
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</table>

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: Inhalation, Eye contact, Skin contact. 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
Draw up and observe skin protection programme. Tested protective gloves must be worn. Suitable material: NBR (Nitrile rubber) NBR (Nitrile rubber) Butyl caoutchouc (butyl rubber) FKM (fluoro rubber)

Eye protection
Wear eye/face protection.

Skin protection
lab coat

Environmental exposure controls
refer to Chap. 5 and 6

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: milky
Odour: characteristic

pH-Value: ~ 4 DIN 19261

Changes in the physical state

Melting point: not determined
Initial boiling point and boiling range: not determined
Flash point: 43 °C DIN ISO 3679
Lower explosion limits: not determined
Upper explosion limits: not determined
Ignition temperature: not determined
Vapour pressure: No data available
Density: 1.2 g/cm³ DIN 12791 ISO 649
Water solubility: Not ascertainable due to hydrolysis.
Viscosity / dynamic: ~ 1760 mPa·s ISO 2555
Flow time: ~ 260 s (4mm) 4 DIN 53211

9.2. Other information
Solid content: 75 - 80%

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available

10.2. Chemical stability
stable at room temperature

10.3. Possibility of hazardous reactions
Spontaneous exothermic polymerisation by storage over 60 °C or direct exposure to sun light.

10.4. Conditions to avoid
Avoid temperatures over 60°C. Avoid direct sun exposure. Avoid contact with heat sources.

10.5. Incompatible materials
Avoid Initiators which are producing free radicals. Avoid the exposition with alkali and acids.

10.6. Hazardous decomposition products
In case of warming: Polymerisation

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution
No data available

Acute toxicity
No data available

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure routes</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>71-36-3</td>
<td>butan-1-ol; n-butanol</td>
<td>oral</td>
<td>LD50</td>
<td>700 - 4400 mg/kg</td>
<td>Ratte</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>4200 mg/kg</td>
<td>Kaninchen</td>
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<tr>
<td></td>
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<td>inhalative (4 h)</td>
<td>LC50</td>
<td>24 mg/l</td>
<td>Ratte</td>
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<td>67-56-1</td>
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<td>5628 mg/kg</td>
<td>Ratte</td>
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<td>LC50</td>
<td>85,26 mg/l</td>
<td>Ratte</td>
<td>IUCLID</td>
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<tr>
<td></td>
<td></td>
<td>inhalative aerosol</td>
<td>ATE</td>
<td>0,5 mg/l</td>
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</tr>
</tbody>
</table>
Specific effects in experiment on an animal
No data available

Irritation and corrosivity
No data available

Sensitising effects
No data available

Severe effects after repeated or prolonged exposure
No data available

Carcinogenic/mutagenic/toxic effects for reproduction
No data available

Empirical data on effects on humans
No data available

Further information
@0601.B060004

SECTION 12: Ecological information

12.1. Toxicity
No data available

<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>
</tr>
</thead>
<tbody>
<tr>
<td>71-36-3</td>
<td>butan-1-ol; n-butanol</td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>&gt; 500 mg/l</td>
<td>96</td>
<td>Alge</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>1983 mg/l</td>
<td>48</td>
<td>Wasserfloh</td>
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<tr>
<td>67-56-1</td>
<td>methanol</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>15400 mg/l</td>
<td>96</td>
<td>Lepomis macrochirus</td>
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<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>22000 mg/l</td>
<td>96</td>
<td>Pseudokirchneriella subcapitata</td>
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<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>&gt; 10000 mg/l</td>
<td>48</td>
<td>Daphnia magna</td>
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</tbody>
</table>

12.2. Persistence and degradability
No data available

12.3. Bioaccumulative potential
No data available

Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
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<tbody>
<tr>
<td>71-36-3</td>
<td>butan-1-ol; n-butanol</td>
<td>0,88</td>
</tr>
<tr>
<td>67-56-1</td>
<td>methanol</td>
<td>-0,77</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
Waste disposal number of waste from residues/unused products
080111  WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances
Classified as hazardous waste.

Waste disposal number of used product
080111  WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging
150110  WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Contaminated packaging
Completely emptied packings can be re-cycled.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: 1263
14.2. UN proper shipping name: Paint
14.3. Transport hazard class(es): III
14.4. Packing group: 3
Hazard label: 3

- Classification code: F1
- Special Provisions: 163 367 640E 650
- Limited quantity: 5 L
- Transport category: 3
- Hazard No: 30
- Tunnel restriction code: D/E

Inland waterways transport (ADN)
14.1. UN number: 1263
14.2. UN proper shipping name: Paint
14.3. Transport hazard class(es): III
14.4. Packing group: 3
Hazard label: 3

- Classification code: F1
- Special Provisions: 163 367 640E 650
Limited quantity: 5 L

Other applicable information (inland waterways transport)
: 163 640E 650

Marine transport (IMDG)

14.1. UN number: 1263
14.2. UN proper shipping name: Paint
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3

Special Provisions: 163, 223, 367, 955
Limited quantity: 5 L
EmS: F-E, S-E

Other applicable information (marine transport)
: 163, 223, 944, 955

Air transport (ICAO)

14.1. UN number: 1263
14.2. UN proper shipping name: Paint
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3

Special Provisions: A3 A72 A192
Limited quantity Passenger: 10 L
IATA-packing instructions - Passenger: 355
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 366
IATA-max. quantity - Cargo: 220 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
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes
14.10.2015 - Umstellung uaf CLP-VO

Abbreviations and acronyms
www.wikipedia.de
Relevant R phrases (number and full text)
10 Flammable.
11 Highly flammable.
22 Harmful if swallowed.
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
36/38 Irritating to eyes and skin.
37/38 Irritating to respiratory system and skin.
39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.
67 Vapours may cause drowsiness and dizziness.

Relevant H and EUH statements (number and full text)
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H370 Causes damage to organs.

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.

(These data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)