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

1.1. Product identifier

SiliXan M 620

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

BINDING AGENT

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: NANO-X GMBH

Street: Theodor-Heuss-Str. 11a

Place: D-66130 Saarbrücken

Telephone: +49 (0)68195940 0

e-mail: sdb@nano-x.de

Contact person: Cathrin Anne Lang

e-mail: lang@nano-x.de

Internet: www.nano-x.de

Responsible Department: NANO-X GmbH

e-mail: 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: Xn - Harmful, Xi - Irritant, N - Dangerous for the environment

R phrases:

Harmful if swallowed.

Irritating to skin.

Risk of serious damage to eyes.

May cause sensitisation by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Harmful if swallowed.

Causes serious eye damage.

Causes skin irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazardous components which must be listed on the label
mixture of polyole acrylate

Signal word: Danger
Pictograms: GHS05-GHS07-GHS09

Hazard statements
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P391 Collect spillage.

Special labelling of certain mixtures
For use in industrial installations or professional treatment only.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization
Acrylate.

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>629-850-6</td>
<td>2-Propenoic acid, reaction products with pentaerythritol</td>
<td>45 - &lt; 50 %</td>
</tr>
<tr>
<td>1245638-61-2</td>
<td>Xn - Harmful, Xi - Irritant, N - Dangerous for the environment</td>
<td>R22-38-41-43-51-53</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H315 H318 H317 H411</td>
<td></td>
</tr>
<tr>
<td>01-2119490003-49</td>
<td>30 - &lt; 35 %</td>
<td></td>
</tr>
<tr>
<td>302-434-9</td>
<td>Di(trimethylolpropan)tetraacrylat</td>
<td>30 - &lt; 35 %</td>
</tr>
<tr>
<td>94108-97-1</td>
<td>N - Dangerous for the environment</td>
<td>R51-53</td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2, Aquatic Chronic 2; H319 H411</td>
<td></td>
</tr>
<tr>
<td>01-2119977121-41</td>
<td>&lt; 1 %</td>
<td></td>
</tr>
<tr>
<td>239-701-3</td>
<td>2,2-bis(acryloyloxy)methyl)butyl acrylate, trimethylolpropane triacrylate</td>
<td>&lt; 1 %</td>
</tr>
<tr>
<td>15625-89-5</td>
<td>Xi - Irritant</td>
<td>R36/38-43</td>
</tr>
<tr>
<td>607-111-00-9</td>
<td>Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1; H319 H315 H317</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. Move victim to fresh air. Instruct person to keep calm and warm. If unconscious place in recovery position and seek medical advice.

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
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
Consult physician. Induce vomiting when the affected person is not unconscious.

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
Symptoms: Headache, Dizziness, Nausea, Unconsciousness
Other hazards: Do not give fatty oils and milk. Observe risk of aspiration if vomiting occurs.
Gastric lavage after giving liquid paraffin with added animal charcoal.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2), alcohol resistant foam, Dry extinguishing powder, 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
   In case of fire may be liberated: Carbon monoxide. The thermal decomposition may lead to the formation of irritating vapour or gases and/or fire.

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. 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
   Use personal protective equipment as required. 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: 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: Inhalation, Skin contact, Eye contact

   Advice on protection against fire and explosion
   The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration. Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.

   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 container tightly closed in a cool, well-ventilated place. Provide earthing of containers, equipment, pumps and ventilation facilities. Protect against: Heat, Frost, flame, Humidity

   Advice on storage compatibility
   The storage class according to TRGS 510 should be indicated.

   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: Inhalation, Skin contact, Eye contact. Wash hands before breaks and after work.

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. The required protective gloves have to be specified by the glove material and the penetration time of the glove material depending on strength and duration of dermal exposition. Draw up and observe skin protection programme. Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber) Butyl caoutchouc (butyl 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

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>slightly yellow</td>
</tr>
<tr>
<td>Odour:</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

Test method
~ 4,5 DIN 19261

Changes in the physical state

<table>
<thead>
<tr>
<th>Melting point:</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 100 °C DIN ISO 3679</td>
</tr>
<tr>
<td>Lower explosion limits:</td>
<td>not determined</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
<td>not determined</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>not determined</td>
</tr>
<tr>
<td>Density:</td>
<td>1,15 g/cm³ DIN 12791 ISO 649</td>
</tr>
</tbody>
</table>
Water solubility: not miscible
Viscosity / dynamic: ~ 3045 mPa·s  ISO 2555
Flow time: > 400 s (3 mm)  3 DIN 53211

9.2. Other information
Solid content: > 98%

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available

10.2. Chemical stability
Spontaneous exothermic polymerisation by storage over 60 °C or direct exposure to sun light.

10.3. Possibility of hazardous reactions
No data available

10.4. Conditions to avoid
Keep only in the original container at a temperature not exceeding 30 °C (to be specified by the manufacturer). Avoid contact with heat sources. Keep away from heat.

10.5. Incompatible materials
Keep away from strong acids, leachates, heavy metal salts and reducing materials.

10.6. Hazardous decomposition products
No data available

Further information
Even after use and until complete evaporation of the flammable components, there is still a danger of an explosive steam-air mixture forming.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution
No data available

Acute toxicity
No data available
### 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**

### Further information

- Protective measures vgl. 7, 8

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#### SECTION 12: Ecological information

### 12.1. Toxicity

- **No data available**
### Aquatic toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1245638-61-2</td>
<td>2-Propenoic acid, reaction products with pentaerythritol</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>3,2 mg/l</td>
<td>Cyprinus carpio</td>
</tr>
<tr>
<td>94108-97-1</td>
<td>Di(trimethylolpropan)tetraacrylat</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>1,2 mg/l</td>
<td>Cyprinus carpio</td>
</tr>
<tr>
<td>15625-89-5</td>
<td>2,2-bis(acryloyloxyethyl)butyl acrylate, trimethylolpropan triacrylate</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>&gt; 100 mg/l</td>
<td>fish</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### 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**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>080111</td>
<td>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 dangerous substances Classified as hazardous waste.</td>
</tr>
</tbody>
</table>

**Waste disposal number of used product**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>080111</td>
<td>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 dangerous substances Classified as hazardous waste.</td>
</tr>
</tbody>
</table>

**Waste disposal number of contaminated packaging**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>150110</td>
<td>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 dangerous substances Classified as hazardous waste.</td>
</tr>
</tbody>
</table>
SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLATES)
14.3. Transport hazard class(es): 9
14.4. Packing group: III

Hazard label: 9

Classification code: M6
Special Provisions: 274 335 375 601
Limited quantity: 5 L
Transport category: 3
Hazard No: 90
Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLATES)
14.3. Transport hazard class(es): 9
14.4. Packing group: III

Hazard label: 9

Classification code: M6
Special Provisions: 274 335 375 601
Limited quantity: 5 L

Marine transport (IMDG)

14.1. UN number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLATES)
14.3. Transport hazard class(es): 9
14.4. Packing group: III

Hazard label: 9

Marine pollutant: YES
Special Provisions: 274, 333, 969
Limited quantity: 5 L
### Air transport (ICAO)

14.1. **UN number:** 3082

14.2. **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLATES)

14.3. **Transport hazard class(es):** III

14.4. **Packing group:** 9

**Hazard label:**

- A97
- A158
- A197

**Special Provisions:** A97 A158 A197

**Limited quantity Passenger:** 30 kg G

**IATA-packing instructions - Passenger:** 964

**IATA-max. quantity - Passenger:** 450 L

**IATA-packing instructions - Cargo:** 964

**IATA-max. quantity - Cargo:** 450 L

14.5. **Environmental hazards**

- ENVIRONMENTALLY HAZARDOUS: yes

### SECTION 15: Regulatory information

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

**EU regulatory information**

- 1999/13/EC (VOC): 50,5 % (581 g/l)

**National regulatory information**

- Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

- Water contaminating class (D): 2 - water contaminating

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

**Changes**

21.08.2015 - Umstellung auf CLP-VO

**Abbreviations and acronyms**

www.wikipedia.com

**Relevant R-phrases (Number and full text)**

- 22 Harmful if swallowed.
- 36/38 Irritating to eyes and skin.
- 38 Irritating to skin.
- 41 Risk of serious damage to eyes.
- 43 May cause sensitisation by skin contact.
- 51 Toxic to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.
Relevant H- and EUH-phrases (Number and full text)

H302  Harmful if swallowed.
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H318  Causes serious eye damage.
H319  Causes serious eye irritation.
H411  Toxic to aquatic life with long lasting effects.

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.

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