SAFETY DATA SHEET  
Polyurethane Resin UR5634, Part A  

1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Polyurethane Resin UR5634, Part A</th>
</tr>
</thead>
</table>

Recommended use of the chemical and restrictions on use

<table>
<thead>
<tr>
<th>Application</th>
<th>Resin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses advised against</td>
<td>No specific uses advised against are identified.</td>
</tr>
</tbody>
</table>

Details of the supplier of the safety data sheet

| Supplier | ELECTROLUBE. A division of HK WENTWORTH LTD  
HK WENTWORTH-AMERICA  
PO Box 126257  
Benbrook, Texas 76126  
USA  
info@hkw.us.com  
+1 888-501-9203 |
|-----------|------------------------------------------------|

Emergency telephone number

| Emergency telephone | +1 202 464 2554 (USA only)  
+44 1235 239670 |
|---------------------|---------------------|

2. Hazard(s) identification

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Not Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Skin Sens. 1 - H317</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Aquatic Acute 3 - H402 Aquatic Chronic 3 - H412</td>
</tr>
</tbody>
</table>

Label elements

Pictogram

![Pictogram](image)

Signal word Warning

Hazard statements

H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.
# Polyurethane Resin UR5634, Part A

**Precautionary statements**

- **P261** Avoid breathing vapor/ spray.
- **P272** Contaminated work clothing must not be allowed out of the workplace.
- **P273** Avoid release to the environment.
- **P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.
- **P302+P352** If on skin: Wash with plenty of water.
- **P333+P313** If skin irritation or rash occurs: Get medical advice/ attention.
- **P362+P364** Take off contaminated clothing and wash it before reuse.
- **P501** Dispose of contents/ container in accordance with national regulations.

**Contains**

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

**Other hazards**

This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/Information on ingredients

#### Mixtures

<table>
<thead>
<tr>
<th><strong>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</strong></th>
<th>&lt;1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAS number:</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>M factor (Acute):</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>M factor (Chronic):</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Classification</strong>&lt;br&gt;Skin Sens. 1A - H317&lt;br&gt;Aquatic Acute 1 - H400&lt;br&gt;Aquatic Chronic 1 - H410</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>1-Methoxy-2-propanol</strong></th>
<th>&lt;1%</th>
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<tbody>
<tr>
<td><strong>CAS number:</strong></td>
<td>107-98-2</td>
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<tr>
<td><strong>Classification</strong>&lt;br&gt;Flam. Liq. 3 - H226&lt;br&gt;STOT SE 3 - H336</td>
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<table>
<thead>
<tr>
<th><strong>ethyl formate</strong></th>
<th>&lt;1%</th>
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<tbody>
<tr>
<td><strong>CAS number:</strong></td>
<td>109-94-4</td>
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<tr>
<td><strong>Classification</strong>&lt;br&gt;Flam. Liq. 2 - H225&lt;br&gt;Acute Tox. 4 - H302&lt;br&gt;Acute Tox. 4 - H332&lt;br&gt;Eye Irrit. 2A - H319&lt;br&gt;STOT SE 3 - H335</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Ethanol</strong></th>
<th>&lt;1%</th>
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<tbody>
<tr>
<td><strong>CAS number:</strong></td>
<td>64-17-5</td>
</tr>
<tr>
<td><strong>Classification</strong>&lt;br&gt;Flam. Liq. 2 - H225</td>
<td></td>
</tr>
</tbody>
</table>
4. First-aid measures

**Description of first aid measures**

**General information**
Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

**Inhalation**
Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

**Ingestion**
Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

**Skin Contact**
It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.

**Eye contact**
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

**Protection of first aiders**
First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

5. Fire-fighting measures

**Extinguishing media**
The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Polyurethane Resin UR5634, Part A

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances:
Harmful gases or vapors.

Advice for firefighters
Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

Environmental precautions
Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage
Polyurethane Resin UR5634, Part A

Precautions for safe handling

Usage precautions

Read and follow manufacturer’s recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions

Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class

Miscellaneous hazardous material storage.

Specific end use(s)

The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

1-Methoxy-2-propanol

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 184 mg/m³
Short-term exposure limit (15-minute): ACGIH 100 ppm 369 mg/m³
A4

ethyl formate

Short-term exposure limit (15-minute): ACGIH 100 ppm 303 mg/m³
A4
Long-term exposure limit (8-hour TWA): OSHA 100 ppm 300 mg/m³

Ethanol

Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m³
A3
Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m³
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
OSHA = Occupational Safety and Health Administration.

Ethanol (CAS: 64-17-5)

Immediate danger to life and health 3300 ppm

ethyl formate (CAS: 109-94-4)

Immediate danger to life and health 1500 ppm
Polyurethane Resin UR5634, Part A

Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection
Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures
Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls
Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance
Liquid.

Color
Clear.
Polyurethane Resin UR5634, Part A

Odor
Characteristic.

pH
Not available.

Melting point
Not available.

Initial boiling point and range
Not available.

Flash point
Not available.

Evaporation rate
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Bulk density
1.06 kg/l

Solubility(ies)
Not available.

Partition coefficient
Not available.

Auto-ignition temperature
Not available.

Decomposition Temperature
Not available.

Viscosity
900 mPa s @ 23°C/73.4°F

Explosive properties
Not considered to be explosive.

Oxidizing properties
Does not meet the criteria for classification as oxidizing.

10. Stability and reactivity

Reactivity
See the other subsections of this section for further details.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
No potentially hazardous reactions known.

Conditions to avoid
There are no known conditions that are likely to result in a hazardous situation.

Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.
Polyurethane Resin UR5634, Part A

### Acute toxicity - inhalation
**Notes (Inhalation LC₅₀)**
Based on available data the classification criteria are not met.

### Skin corrosion/irritation
**Animal data**
Based on available data the classification criteria are not met.

### Serious eye damage/irritation
**Animal data**
Based on available data the classification criteria are not met.

### Skin sensitization
**Skin sensitization**
May cause skin sensitization or allergic reactions in sensitive individuals.

### Germ cell mutagenicity
**Genotoxicity - in vitro**
Based on available data the classification criteria are not met.

### Carcinogenicity
**Carcinogenicity**
Based on available data the classification criteria are not met.

### Reproductive toxicity
**Reproductive toxicity - fertility**
Based on available data the classification criteria are not met.

**Reproductive toxicity - development**
Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure
**STOT - single exposure**
Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure
**STOT - repeated exposure**
Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard
**Aspiration hazard**
Based on available data the classification criteria are not met.

### General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

### Inhalation
Prolonged inhalation of high concentrations may damage respiratory system.

### Ingestion
May cause sensitization or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

### Skin Contact
May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.

### Eye contact
May cause temporary eye irritation.

### Route of entry
Ingestion Inhalation Skin and/or eye contact

### Target Organs
No specific target organs known.

### Medical considerations
Skin disorders and allergies.
Polyurethane Resin UR5634, Part A

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 3,230.0

Species Rat

ATE oral (mg/kg) 3,230.0

**1-Methoxy-2-propanol**

Acute toxicity oral (LD₅₀ mg/kg) 3,739.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 3739 mg/kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 3,739.0

**Acute toxicity - dermal**

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat REACH dossier information. Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

Animal data Dose: 0.5 mL, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

**Skin sensitization**

Skin sensitization Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing. REACH dossier information. Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Genotoxicity - In vitro Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - In vivo Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

**Carcinogenicity**

Carcinogenicity NOEL 3000 ppm, Inhalation, Mouse REACH dossier information. Based on available data the classification criteria are not met.

**Reproductive toxicity**

Reproductive toxicity - fertility Two-generation study - NOAEL 1000 ppm, Inhalation, Rat F1 REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development - NOAEL: 1500 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness. REACH dossier information.
### Polyurethane Resin UR5634, Part A

**Target organs**
Central nervous system Brain

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure**
NOAEL 919 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

#### Ethyl formate

**Acute toxicity - oral**

| ATE oral (mg/kg) | 500.0 |

**Acute toxicity - inhalation**

| ATE inhalation (gases ppm) | 4,500.0 |
| ATE inhalation (vapours mg/l) | 11.0 |
| ATE inhalation (dusts/mists mg/l) | 1.5 |

#### Ethanol

**Toxicological effects**
Not regarded as a health hazard under current legislation.

**Acute toxicity - oral**

Notes (oral LD₅₀)
LD₅₀ 10470 mg/kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

**Acute toxicity - inhalation**

Notes (inhalation LC₅₀)
LD₅₀ 124.7 mg/l, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

Animal data
Dose: 0.2 mL, 24 hours, Rabbit Primary dermal irritation index: 0 REACH dossier information. Based on available data the classification criteria are not met.

**Skin sensitization**

Local Lymph Node Assay (LLNA) - Mouse: Not sensitizing. REACH dossier information. Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Genotoxicity - in vitro
Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo
Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

**Carcinogenicity**

IARC carcinogenicity
IARC Group 1 Carcinogenic to humans.

**Reproductive toxicity**

Reproductive toxicity - fertility
Two-generation study - NOAEL 15%, Oral, Mouse REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development
Maternal toxicity: - NOAEL: 16000 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
Polyurethane Resin UR5634, Part A

Specific target organ toxicity - repeated exposure
STOT - repeated exposure  LOAEL ~4000 mg/kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

12. Ecological Information

Toxicity  Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Acute aquatic toxicity
LE(C)₅₀  0.1 < L(E)C50 ≤ 1

M factor (Acute)  1

Chronic aquatic toxicity
M factor (Chronic)  1

1-Methoxy-2-propanol

Acute toxicity - fish
LC₅₀, 96 hours: 20800 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates
LC₅₀, 48 hours: 21100 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants
EC₅₀, 7 days: >1000 mg/l, Selenastrum capricornutum REACH dossier information.

Ethanol

Toxicity  Based on available data the classification criteria are not met.

Acute toxicity - fish
LC₅₀, 96 hours: 14200 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates
LC₅₀, 48 hours: 5012 mg/l, Ceriodaphnia dubia

Acute toxicity - aquatic plants
EC₅₀, 72 hours: 11.5 mg/l, Chlorella vulgaris

Chronic toxicity - aquatic invertebrates
NOEC, 9 days: 9.6 mg/l, Daphnia magna

Persistence and degradability

The degradability of the product is not known.

1-Methoxy-2-propanol

Persistence and degradability  The substance is readily biodegradable.

Phototransformation  Water - DT₅₀ : 3.1 hours
REACH dossier information.
Polyurethane Resin UR5634, Part A

Biodegradation

Water - Degradation 96%: 28 days
REACH dossier information.

**Ethanol**

Persistence and degradability
The substance is readily biodegradable.

Biodegradation
Water - Degradation 74%: 10 days

Chemical oxygen demand 1.99 g O₂/g substance

**Bioaccumulative potential**

Bio-Accumulative Potential No data available on bioaccumulation.
Partition coefficient Not available.

**1-Methoxy-2-propanol**

Bio-Accumulative Potential No data available on bioaccumulation.
Partition coefficient log Pow: <1 REACH dossier information.

**Ethanol**

Bio-Accumulative Potential Bioaccumulation is unlikely.
Partition coefficient log Pow: -0.35

**Mobile in soil**

Mobility No data available.

**1-Methoxy-2-propanol**

Mobility Mobile.
Surface tension 70.7 mN/m @ 20°C

**Ethanol**

Mobility The product is soluble in water.
Surface tension 24.5 mN/m @ 20°C/68°F

**Other adverse effects**

Other adverse effects None known.

**13. Disposal considerations**

**Waste treatment methods**

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Polyurethane Resin UR5634, Part A

Disposal methods
Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number
Not applicable.

UN proper shipping name
Not applicable.

Transport hazard class(es)
No transport warning sign required.

Transport labels
No transport warning sign required.

DOT transport labels
No transport warning sign required.

Packing group
Not applicable.

Environmental hazards
Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.

DOT TIH Zone
Not applicable.

Transport in bulk according to
Annex II of MARPOL 73/78
and the IBC Code
Not applicable.

15. Regulatory information

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.
Polyurethane Resin UR5634, Part A

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:
1-Methoxy-2-propanol

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol
Triethyl orthoformate

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol

Minnesota "Right To Know" List
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol
Polyurethane Resin UR5634, Part A

New Jersey "Right To Know" List
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol
Triethyl orthoformate

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:
1-Methoxy-2-propanol
ethyl formate
Ethanol
Triethyl orthoformate

Inventories
US - TSCA
The following ingredients are listed or exempt:
ε-Caprolactone, oligomeric reaction products with propyldiytrimethanol
Thiodiethylene bis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]
isoocyl mercaptoacetate
diisooctyl 2,2'-(dioctylstannylene)bis(thio)diacetate
[(dodecyloxy)methyl]oxirane
1-Methoxy-2-propanol
Hexan-6-olide
Butane-1,4-diol
2-Oxepanone, polymer with 1,4-butanediol
ethyl formate
Ethanol
Triethyl orthoformate

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

<table>
<thead>
<tr>
<th>Classification abbreviations and acronyms</th>
<th>Skin Sens. = Skin sensitisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua Chronic = Hazardous to the aquatic environment (chronic)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training advice</th>
<th>Read and follow manufacturer's recommendations. Only trained personnel should use this material.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Issued by</th>
<th>Bethan Massey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>2/28/2017</td>
</tr>
<tr>
<td>Revision</td>
<td>0</td>
</tr>
<tr>
<td>SDS No.</td>
<td>1148</td>
</tr>
</tbody>
</table>
Polyurethane Resin UR5634, Part A

Hazard statements in full:

H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H402 Harmful to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.
SAFETY DATA SHEET
Polyurethane Resin UR5634, Part B

1. Identification

Product identifier
Product name Polyurethane Resin UR5634, Part B

Recommended use of the chemical and restrictions on use
Application Resin.
Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet
Supplier ELECTROLUBE. A division of HK WENTWORTH LTD
HK WENTWORTH-AMERICA
PO Box 126257
Benbrook, Texas 76126
USA
info@hkw.us.com
+1 888-501-9203

Emergency telephone number
Emergency telephone +1 202 464 2554 (USA only)
+44 1235 239670

2. Hazard(s) identification

Classification of the substance or mixture
Physical hazards Not Classified
Health hazards Acute Tox. 4 - H332 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards Not Classified

Label elements
Pictogram

Signal word Warning
Hazard statements H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
Polyurethane Resin UR5634, Part B

Precautionary statements

P261 Avoid breathing vapor/spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Contains

Hexamethylene diisocyanate, oligomers

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/Information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Hexamethylene diisocyanate, oligomers</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 28182-81-2</td>
<td></td>
</tr>
</tbody>
</table>

Classification

Acute Tox. 4 - H332
Skin Sens. 1 - H317
STOT SE 3 - H335

hexamethylene-di-isocyanate

<table>
<thead>
<tr>
<th>hexamethylene-di-isocyanate</th>
<th>&lt;1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 822-06-0</td>
<td></td>
</tr>
</tbody>
</table>

Classification

Acute Tox. 3 - H331
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Polyurethane Resin UR5634, Part B

Ingestion
Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact
It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.

Eye contact
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information
See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.

Ingestion
May cause sensitization or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

Skin contact
May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.

Eye contact
May cause temporary eye irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Toxic gases or vapors.

Advice for firefighters
Polyurethane Resin UR5634, Part B

**Protective actions during firefighting**

Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters**

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

### 6. Accidental release measures

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

**Personal precautions**

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of dust and vapors. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

**Environmental precautions**

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

**Methods and material for containment and cleaning up**

**Methods for cleaning up**

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Reference to other sections**

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions**

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
Polyurethane Resin UR5634, Part B

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class
Toxic storage.

Specific end use(s)
The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits
hexamethylene-di-isocyanate

Long-term exposure limit (8-hour TWA): ACGIH 0.005 ppm  0.034 mg/m³
ACGIH = American Conference of Governmental Industrial Hygienists.

Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection
Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Polyurethane Resin UR5634, Part B

Hygiene measures
Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls
Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to pale yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>No characteristic odor</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>&lt;-20°C/&lt;-4°F</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>&gt;220°C/&gt;428°F @ 1.33 hPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>137°C/278.6°F Method: PMCC (Pensky-Martens closed cup).</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/lower flammability or</td>
<td>Not available</td>
</tr>
<tr>
<td>explosive limits</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>1.16 kg/l</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Soluble in the following materials: Ketones. Esters. Aromatic solvents.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>460°C/860°F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1200 mPa s @ 25°C/77°F</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not considered to be explosive.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Does not meet the criteria for classification as oxidizing.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity
Polyurethane Resin UR5634, Part B

Reactivity
There are no known reactivity hazards associated with this product.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
No potentially hazardous reactions known.

Conditions to avoid
There are no known conditions that are likely to result in a hazardous situation.

Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
Acute Tox. 4 - H332 Harmful if inhaled.

ATE inhalation (gases ppm)
4,504.05

ATE inhalation (vapours mg/l)
11.01

ATE inhalation (dusts/mists mg/l)
1.5

Skin corrosion/irritation
Animal data
Based on available data the classification criteria are not met.

Serious eye damage/irritation
Serious eye damage/irritation
Based on available data the classification criteria are not met.

Respiratory sensitization
Respiratory sensitization
Based on available data the classification criteria are not met.

Skin sensitization
Skin sensitization
May cause skin sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity
Genotoxicity - in vitro
Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity
Based on available data the classification criteria are not met.

IARC carcinogenicity
None of the ingredients are listed or exempt.

Reproductive toxicity
Reproductive toxicity - fertility
Based on available data the classification criteria are not met.
Polyurethane Resin UR5634, Part B

Reproductive toxicity - development

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

STOT SE 3 - H335 May cause respiratory irritation.

Target organs

Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard

Based on available data the classification criteria are not met.

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.

Ingestion

May cause sensitization or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

Skin Contact

May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.

Eye contact

May cause temporary eye irritation.

Route of entry

Ingestion Inhalation Skin and/or eye contact

Target Organs

Respiratory system, lungs

Medical considerations

Skin disorders and allergies.

Hexamethylene diisocyanate, oligomers

<table>
<thead>
<tr>
<th>Acute toxicity - inhalation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE Inhalation (gases ppm)</td>
<td>4,500.0</td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>11.0</td>
</tr>
<tr>
<td>ATE inhalation (dusts/mists mg/l)</td>
<td>1.5</td>
</tr>
</tbody>
</table>

hexamethylene-di-isocyanate

<table>
<thead>
<tr>
<th>Acute toxicity - inhalation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE inhalation (gases ppm)</td>
<td>700.0</td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>3.0</td>
</tr>
<tr>
<td>ATE inhalation (dusts/mists mg/l)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

12. Ecological Information
Polyurethane Resin UR5634, Part B

13. Disposal considerations

Waste treatment methods

General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN proper shipping name

Not applicable.

Transport hazard class(es)

No transport warning sign required.

DOT transport labels

No transport warning sign required.

Packing group

Not applicable.

Environmental hazards

9/11
Polyurethane Resin UR5634, Part B

Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.

DOT TIH Zone
Not applicable.

Transport in bulk according to
Annex II of MARPOL 73/78
and the IBC Code
Not applicable.

15. Regulatory information

**US Federal Regulations**

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
The following ingredients are listed or exempt:

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

**US State Regulations**

California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:
Polyurethane Resin UR5634, Part B

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

New Jersey "Right To Know" List
The following ingredients are listed or exempt:

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

Inventories

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Training advice
Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Issued by
Bethan Massey

Revision date
9/26/2016

Revision
0

SDS No.
1100

Hazard statements in full
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.