SAFETY DATA SHEET
FLEXANE 60L RESIN

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

1.1. Product identifier
Product name: FLEXANE 60L RESIN
Product number: X0021

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

1.3. Details of the supplier of the safety data sheet
Supplier: ITW Performance Polymers
Bay 150
Shannon Industrial Estate
Co. Clare
Ireland
V14 DF82
353(61)771500
353(61)471285
mail@itwpp.com

1.4. Emergency telephone number
Emergency telephone: +44(0)1235 239 670 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards: Not Classified
Environmental hazards: Not Classified

Human health: Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Persons susceptible to allergic reactions should not handle this product. Persons with impaired lung function should not handle this product.

2.2. Label elements
Pictogram
Signal word: Danger
FLEXANE 60L RESIN

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

Precautionary statements
P261 Avoid breathing vapour/spray.
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.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Contains
4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

Supplementary precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P284 [In case of inadequate ventilation] wear respiratory protection.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)</th>
<th>1-2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 5124-30-1</td>
<td></td>
</tr>
<tr>
<td>EC number: 225-863-2</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Acute Tox. 3 - H331
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
STOT SE 3 - H335
FLEXANE 60L RESIN

tin bis(2-ethylhexanoate) <1%
CAS number: 301-10-0 EC number: 206-108-6

Classification
Eye Dam. 1 - H318
Skin Sens. 1B - H317
Repr. 2 - H361
Aquatic Chronic 3 - H412

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Avoid inhalation of vapours and contact with skin and eyes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation
Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion
Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if irritation persists after washing.

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

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

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor
No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards
Avoid breathing fire gases or vapours. Cool containers exposed to flames with water until well after the fire is out.

5.3. Advice for firefighters

Protective actions during firefighting
Keep up-wind to avoid fumes. Do not use water, if avoidable.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
FLEXANE 60L RESIN

**Personal precautions**
Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

**6.2. Environmental precautions**

Environmental precautions
Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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

Methods for cleaning up
Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

**6.4. Reference to other sections**

Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet.

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Usage precautions
Open drum carefully as content may be under pressure. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Do not eat, drink or smoke when using the product. Do not use in confined spaces without adequate ventilation and/or respirator. Do not breathe vapour. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented.

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

Storage precautions
Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10).

**7.3. Specific end use(s)**

Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

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**SECTION 8: Exposure Controls/personal protection**

**8.1. Control parameters**

Occupational exposure limits

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)</td>
<td>0.02 mg/m³ (Sen)</td>
<td>0.07 mg/m³ (Sen)</td>
</tr>
<tr>
<td>tin bis(2-ethylhexanoate)</td>
<td>0.1 mg/m³ (Sk)</td>
<td>0.2 mg/m³ (Sk)</td>
</tr>
</tbody>
</table>

WEL = Workplace Exposure Limit

**Ingredient comments**

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE) (CAS: 5124-30-1)

<table>
<thead>
<tr>
<th>Compound</th>
<th>DNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Workers - Inhalation; Short term local effects: 0.6 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers - Inhalation; Long term local effects: 0.3 mg/m³</td>
</tr>
</tbody>
</table>

**8.2. Exposure controls**
FLEXANE 60L RESIN

Protective equipment

Appropriate engineering controls
Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves made of the following material: Butyl rubber. Neoprene. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours.

Other skin and body protection
Wear chemical protective suit.

Hygiene measures
Provide eyewash station and safety shower. Keep away from food, drink and animal feeding stuffs. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using the product. Promptly remove any clothing that becomes wet or contaminated.

Respiratory protection
If ventilation is inadequate, suitable respiratory protection must be worn. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance
Liquid.

Colour
Clear liquid.

Odour
Slight.

pH
pH (concentrated solution): 7 @ 25 °C

Melting point
n/d°C

Initial boiling point and range
>149.°C @

Flash point
>234.°C

Vapour pressure
<10mmHg @ °C

Relative density
1.04 @ 25 °C°C

Viscosity
3500 @ 25°C

9.2. Other information
Other information
Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
FLEXANE 60L RESIN

10.2. Chemical stability
Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions Not available.

10.4. Conditions to avoid
Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials
Materials to avoid Avoid contact with the following materials: Water, moisture. Alcohols, glycols. Amines. Alkalis.

10.6. Hazardous decomposition products
Hazardous decomposition products Fire or high temperatures create: Nitrous gases (NOx). Oxides of the following substances: Carbon monoxide (CO). Carbon dioxide (CO2). Vapours/gases/fumes of: Ammonia or amines.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - inhalation
ATE inhalation (gases ppm) 35,175.88
ATE inhalation (vapours mg/l) 150.75
ATE inhalation (dusts/mists mg/l) 25.13

Inhalation Harmful by inhalation. May cause sensitisation by inhalation.

Skin contact Irritating to skin. May cause sensitisation by skin contact.

Acute and chronic health hazards Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Persons susceptible to allergic reactions should not handle this product. Persons with impaired lung function should not handle this product.

4,4’-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 18,200.0

Species Rat

ATE oral (mg/kg) 18,200.0

Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg) 7,000.0

Species Rat

ATE dermal (mg/kg) 7,000.0

Acute toxicity - inhalation
**FLEXANE 60L RESIN**

<table>
<thead>
<tr>
<th>ATE inhalation (gases ppm)</th>
<th>700.0</th>
</tr>
</thead>
<tbody>
<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>

**SECTION 12: Ecological Information**

**Ecotoxicity**
Avoid release to the environment.

**12.1. Toxicity**

**Acute toxicity - fish**
LC₅₀, 96 hours: 1200 mg/l, Algae

**Acute toxicity - aquatic invertebrates**
EC₅₀, 48 hours: >500 mg/l, Daphnia magna

**12.2. Persistence and degradability**

**Persistence and degradability**
There are no data on the degradability of this product.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential**
No data available on bioaccumulation.

**12.4. Mobility in soil**

**Mobility**
Do not discharge into drains or watercourses or onto the ground.

**12.5. Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment**
This product does not contain any substances classified as PBT or vPvB.

**12.6. Other adverse effects**

**Other adverse effects**
Not available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**General information**
When handling waste, the safety precautions applying to handling of the product should be considered.

**Disposal methods**
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Waste class**
08 04 99

**SECTION 14: Transport information**

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

**14.1. UN number**
No information required.

**14.2. UN proper shipping name**
No information required.

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

7/8
FLEXANE 60L RESIN

No information required.

14.4. Packing group
No information required.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
No information required.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information required.

SECTION 15: Regulatory information

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

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date 03/04/2018
Revision 17
Supersedes date 28/04/2016
Hazard statements in full
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
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.
H361 Suspected of damaging fertility or the unborn child.
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.