SAFETY DATA SHEET
STYROTHANE 5321B-FR

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

1.1. Product identifier
Product name STYROTHANE 5321B-FR
Product number 5321B02

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

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
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Irrit. 2 - H319
Environmental hazards Not Classified

2.2. Label elements
Pictogram

Signal word Warning
Hazard statements H302+H332 Harmful if swallowed or if inhaled. H319 Causes serious eye irritation.
styrothane 5321b-fr

precautionary statements

P261 Avoid breathing vapour/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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.
P337+P313 If eye irritation persists: Get medical advice/ attention.

supplementary precautionary statements

P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/ container in accordance with national regulations.

section 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>Ingredient</th>
<th>Percentage</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE</td>
<td>10-30%</td>
<td>Eye Irrit. 2 - H319</td>
</tr>
<tr>
<td>CAS number: 102-60-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIS(2-CHLORO-1-METHYLETHYL) PHOSPHATE</td>
<td>10-30%</td>
<td></td>
</tr>
<tr>
<td>CAS number: 13674-84-5</td>
<td>EC number: 237-158-7</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLYETHER DIOL</td>
<td>5-10%</td>
<td></td>
</tr>
<tr>
<td>CAS number: 9003-11-6</td>
<td></td>
<td>Aquatic Chronic 3 - H412</td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUTANE-1,4-DIOL</td>
<td>1-5%</td>
<td></td>
</tr>
<tr>
<td>CAS number: 110-63-4</td>
<td>EC number: 203-786-5</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td>STOT SE 3 - H336</td>
<td></td>
</tr>
</tbody>
</table>

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

section 4: First aid measures

4.1. Description of first aid measures
STYROTHANE 5321B-FR

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. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.

Ingestion
Do not induce vomiting. Give plenty of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention. Show this Safety Data Sheet to the medical personnel.

Skin contact
Remove affected person from source of contamination. Wash skin thoroughly 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 Irritating gases or vapours.

5.3. Advice for firefighters
Protective actions during firefighting Avoid breathing fire gases or vapours.
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
Personal precautions Provide adequate ventilation. Avoid inhalation of vapours and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.

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.
STYROTHANE 5321B-FR

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions
Provide adequate ventilation. Avoid contact with skin and eyes. Keep away from sources of ignition - No smoking. Handle and open container with care. Do not use in confined spaces without adequate ventilation and/or respirator. Do not eat, drink or smoke when using the product.

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.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits
BUTANE-1,4-DIOL

Short-term exposure limit (15-minute): AGW 200 mg/m³
AGW = Arbeitsplatzgrenzwert.

Ingredient comments
WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate general and local exhaust ventilation.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber). 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. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke.
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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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Coloured liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>&gt;148.8°C @</td>
</tr>
<tr>
<td>Flash point</td>
<td>135°C</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.13 - 1.18 @ 25 °C°C</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>NDA°C</td>
</tr>
</tbody>
</table>

9.2. Other information

Other information: Not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity


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 oxidising agents. Strong acids. Isocyanates.

10.6. Hazardous decomposition products

Hazardous decomposition products: Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0
STYROTHANE 5321B-FR

Skin contact  Irritating to skin. Prolonged contact may cause dryness of the skin.

Eye contact  Irritating to eyes.

**TRIS(2-CHLORO-1-METHYLETHYL) PHOSPHATE**

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th>ATE oral (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>500.0</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological Information**

Ecotoxicity  The product is not expected to be toxic to aquatic organisms.

12.1. Toxicity  Not considered toxic to fish.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential  No data available on bioaccumulation.

12.4. Mobility in soil  Do not release into the environment. Do not discharge into drains or watercourses or onto the ground.

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

12.6. 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)
STYROTHANE 5321B-FR

Transport labels
No transport warning sign 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 04/04/2018
Revision 12
Supersedes date 29/04/2016
Hazard statements in full
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
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.