SAFETY DATA SHEET
IRATHANE 2855A

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

1.1. Product identifier
Product name         IRATHANE 2855A
Product number       2855A

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 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards  Aquatic Chronic 3 - H412

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
IRATHANE 2855A

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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P261 Avoid breathing vapour/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
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.
P312 Call a POISON CENTER/ doctor if you feel unwell.

Supplemental label information
EUH204 Contains isocyanates. May produce an allergic reaction.

Contains
DIPHENYLMETHANE-4,4’-DI-ISOCYANATE, 4,4’-Methylenediphenyl disocyanate, oligomers

Supplementary precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P284 [In case of inadequate ventilation] wear respiratory protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P314 Get medical advice/ attention if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash 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
## IRATHANE 2855A

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
<th>CAS number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIPHENYL METHANE-4,4'-DI-ISOCYANATE</strong></td>
<td>60-100%</td>
<td>101-68-8</td>
<td>202-966-0</td>
</tr>
<tr>
<td><strong>ALPHA-HYDRO-Omega-HYDROXYPOLY(OXY-1,4-BUTANEDIYL)</strong></td>
<td>10-30%</td>
<td>25190-06-1</td>
<td></td>
</tr>
<tr>
<td><strong>2,6-DITERTIARYBUTYL-PARA-CRESOL</strong></td>
<td>1-5%</td>
<td>128-37-0</td>
<td></td>
</tr>
<tr>
<td><strong>4,4'-Methylenediphenyl diisocyanate, oligomers</strong></td>
<td>&lt;1%</td>
<td>—</td>
<td>500-040-3</td>
</tr>
</tbody>
</table>

### Classification

- **Acute Tox. 4 - H332**
- **Skin Irrit. 2 - H315**
- **Eye Irrit. 2 - H319**
- **Resp. Sens. 1 - H334**
- **Skin Sens. 1 - H317**
- **Carc. 2 - H351**
- **STOT SE 3 - H335**
- **STOT RE 2 - H373**

### 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.
IRATHANE 2855A

Ingestion
Give plenty of water to drink. Try to induce vomiting. Get medical attention. Show this Safety Data Sheet to the medical personnel.

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.

5.3. Advice for firefighters
Protective actions during firefighting
Keep up-wind to avoid fumes. Do not use water jet as an extinguisher, as this will spread the fire.

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
Warn everybody of potential hazards and evacuate if necessary. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Do not breathe vapour. Avoid contact with skin and eyes. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

6.2. Environmental precautions
Environmental precautions
Avoid the spillage or runoff entering drains, sewers or watercourses. 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. Transfer to a dry metal container, keeping it open for 48 hours. 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
IRATHANE 2855A

Usage precautions
Use only in well-ventilated areas. Provide adequate ventilation. Open drum carefully as content may be under pressure. Avoid inhalation of vapours/spray and contact with skin and eyes. Do not eat, drink or smoke when using the product. Do not use in confined spaces without adequate ventilation and/or respirator. 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.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³ (Sen)
Short-term exposure limit (15-minute): WEL 0.07 mg/m³ (Sen)
WEL = Workplace Exposure Limit

Ingredient comments
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8)
DNEL
Workers - Inhalation; Long term local effects: 0.05 mg/m³
Workers - Inhalation; Short term local effects: 0.1 mg/m³

8.2. Exposure controls
Protective equipment
Appropriate engineering controls
Provide adequate general and local exhaust ventilation.

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

Hand protection
Wear protective gloves made of the following material: Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). 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.
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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>Viscous liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight</td>
</tr>
<tr>
<td>Melting point</td>
<td>5°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200°C</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.14 @ 20 ºC</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Viscosity</td>
<td>700-1100 mPa s @ 20°C</td>
</tr>
</tbody>
</table>

9.2. Other information

Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

There are no known reactivity hazards associated with this product.

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.

10.5. Incompatible materials

Materials to avoid

Water, moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products

Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - inhalation

ATE Inhalation (gases ppm) 6,386.53
ATE inhalation (vapours mg/l) 15.61
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ATE inhalation (dusts/mists mg/l) 2.13

Inhalation
Harmful by inhalation. May cause sensitisation by inhalation. Irritating to respiratory system.

Skin contact
Irritating to skin. May cause sensitisation by skin contact. May cause sensitisation or allergic reactions in sensitive individuals.

Eye contact
Irritating to eyes.

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.

Route of entry
Inhalation Ingestion. Skin absorption

SECTION 12: Ecological Information

Ecotoxicity
Avoid release to the environment.

12.1. Toxicity
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
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
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No information required.

14.2. UN proper shipping name
No information required.

14.3. Transport hazard class(es)

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 7
Supersedes date 29/04/2016

Hazard statements in full
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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
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.