SAFETY DATA SHEET
IRABOND BC 50 HARDENER

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

1.1. Product identifier
Product name
IRABOND BC 50 HARDENER

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

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 239670

SECTION 2: Hazards identification

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

Health hazards
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317

Environmental hazards
Aquatic Chronic 2 - H411

2.2. Label elements

Pictogram

Signal word
Danger

Hazard statements
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
**IRABOND BC 50 HARDENER**

**Precautionary statements**
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- 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**
POLYETHYLENEPOLYAMINES, PENTAETHYLENEHEXAMINE

**Supplementary precautionary statements**
- P260 Do not breathe vapour/ spray.
- P261 Avoid breathing vapour/ spray.
- P264 Wash contaminated skin thoroughly after handling.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P310 Immediately call a POISON CENTER/ doctor.
- P321 Specific treatment (see medical advice on this label).
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.
- 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>POLYETHYLENEPOLYAMINES</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: —</td>
<td>—</td>
</tr>
<tr>
<td>M factor (Acute) = 1</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

**Classification**
- Acute Tox. 4 - H302
- Acute Tox. 4 - H312
- Skin Corr. 1B - H314
- Eye Dam. 1 - H318
- Skin Sens. 1 - H317
- Aquatic Acute 1 - H400
- Aquatic Chronic 1 - H410
**IRABOND BC 50 HARDENER**

<table>
<thead>
<tr>
<th>PENTAETHYLENEHEXAMINE</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 4067-16-7</td>
<td>EC number: 223-775-9</td>
</tr>
<tr>
<td>M factor (Acute) = 1</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

**Classification**
- Skin Corr. 1B - H314
- Eye Dam. 1 - H318
- Skin Sens. 1 - H317
- Aquatic Acute 1 - H400
- Aquatic Chronic 1 - H410

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 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**
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 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. Continue to rinse for at least 15 minutes. 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**
Toxic gases or vapours.

5.3. **Advice for firefighters**

**Protective actions during firefighting**
Avoid breathing fire gases or vapours. 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**

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Personal precautions
Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Use suitable respiratory protection if ventilation is inadequate.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Use only in well-ventilated areas. Keep away from heat, sparks and open flame. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Do not eat, drink or smoke when using the product. 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
Ingredient comments
No exposure limits known for ingredient(s).

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. 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). Nitrile rubber. The selected gloves should have a breakthrough time of at least 8 hours. To protect hands from chemicals, gloves should comply with European Standard EN374.
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Other skin and body protection
Wear apron or protective clothing in case of contact.

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. Change work clothing daily before leaving workplace.

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. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance
Liquid.

Colour
Amber.

Odour
Ammonia.

pH
pH (concentrated solution): alkaline @ 20 ºC

Initial boiling point and range
100°C @

Flash point
>100°C

Vapour pressure
15mmHg @ ºC

Relative density
1.03 @ 20 ºC

Solubility(ies)
Miscible with water.

Auto-ignition temperature
>150°C

Viscosity
51-100 mPa s @ 20°C

9.2. Other information
Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
Acids. Strong oxidising agents.

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
Keep above the chemical's freezing point.

10.5. Incompatible materials
IRABOND BC 50 HARDENER

Materials to avoid
Avoid contact with the following materials: Acids. Oxidising agents.

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 - oral
ATE oral (mg/kg) 3,333.33

Acute toxicity - dermal
ATE dermal (mg/kg) 7,333.33

General information
Corrosive. Prolonged contact causes serious eye and tissue damage.

Skin contact
Causes burns. Corrosive. Prolonged contact causes serious tissue damage. May cause sensitisation by skin contact. May cause sensitisation or allergic reactions in sensitive individuals.

Eye contact
This product is strongly corrosive. Causes severe burns. Immediate first aid is imperative.

Route of entry
Inhalation Ingestion. Skin absorption

SECTION 12: Ecological Information

Ecotoxicity
Avoid release to the environment.

12.1. Toxicity
Toxicity
Very toxic to aquatic organisms.

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.
IRABOND BC 50 HARDENER

Waste class  08  04 99

SECTION 14: Transport information

General  No other information known.

14.1. UN number
UN No. (ADR/RID)  1760
UN No. (IMDG)  1760
UN No. (ICAO)  1760

14.2. UN proper shipping name
Proper shipping name (ADR/RID)  CORROSIVE LIQUID, N.O.S. (POLYETHYLENEPOLYAMINES (NOS), PENTAETHYLENEHEXAMINE)
Proper shipping name (IMDG)  CORROSIVE LIQUID, N.O.S. (POLYETHYLENEPOLYAMINES (NOS), PENTAETHYLENEHEXAMINE)
Proper shipping name (ICAO)  CORROSIVE LIQUID, N.O.S. (POLYETHYLENEPOLYAMINES (NOS), PENTAETHYLENEHEXAMINE)

14.3. Transport hazard class(es)
ADR/RID class  8
ADR/RID label  8
IMDG class  8
ICAO class/division  8

Transport labels

14.4. Packing group
ADR/RID packing group  III
IMDG packing group  III
ICAO packing group  III

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
EmS  F-A, S-B
Emergency Action Code  2X
Hazard Identification Number (ADR/RID)  80
IRABOND BC 50 HARDENER

Tunnel restriction code (E)

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 5
Supersedes date 29/04/2016
SDS number 20662

Hazard statements in full

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic 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.