SAFETY DATA SHEET
Chockfast Orange Hardener

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

1.1. Product identifier
Product name: Chockfast Orange Hardener
Product number: 1560D, 1010U Hardener, 1020U Hardener
REACH registration number: 01-2119487919-13-XXXX

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
customerservice.shannon@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 - H312 Skin Corr. 1B - H314 Skin Sens. 1 - H317
Environmental hazards: Aquatic Chronic 3 - H412

Human health: Corrosive. Prolonged contact causes serious eye and tissue damage.

2.2. Label elements
Pictogram
Signal word: Danger
Hazard statements: H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
Chockfast Orange Hardener

Precautionary statements
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.

Contains
TRIETHYLENETETRAMINE

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.
P273 Avoid release to the environment.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/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.
P363 Wash contaminated clothing before reuse.
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>TRIETHYLENETETRAMINE</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 112-24-3</td>
<td></td>
</tr>
<tr>
<td>EC number: 203-950-6</td>
<td></td>
</tr>
<tr>
<td>REACH registration number: 01-2119487919-13-0000</td>
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</tr>
</tbody>
</table>

Classification
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
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
Do not breathe vapour. Avoid contact with skin and eyes. Chemical burns must be treated by a physician.

Inhalation
Move affected person to fresh air at once. Consult a physician for specific advice.

Ingestion
Do not induce vomiting. Give plenty of water to drink. Get medical attention immediately.

Skin contact
Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Chockfast Orange Hardener

Eye contact
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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 the following media: Foam, carbon dioxide or dry powder. Water spray, fog or mist.

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. Control run-off water by containing and keeping it out of sewers and watercourses.

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
Avoid 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 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. 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
Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)
Chockfast Orange Hardener

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).

**TRIETHYLENETETRAMINE (CAS: 112-24-3)**

<table>
<thead>
<tr>
<th>DNEL</th>
<th>Workers - Inhalation; Long term systemic effects: 1 mg/m³</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Workers - Inhalation; Short term systemic effects: 5380 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers - Dermal; Long term systemic effects: 0.57 mg/kg/day</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate 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. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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. 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. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Butyl rubber. Chloroprene rubber.

Other skin and body protection
Wear apron or protective clothing in case of contact.

Hygiene measures
Provide eyewash station and safety shower. Eating, smoking and water fountains prohibited in immediate work area. No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

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>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless to pale yellow.</td>
</tr>
<tr>
<td>Odour</td>
<td>Ammonia.</td>
</tr>
<tr>
<td>pH</td>
<td>pH (diluted solution): 12 100g/l water @ 20oC</td>
</tr>
</tbody>
</table>
Chockfast Orange Hardener

Initial boiling point and range 277°C @ 760 mm Hg
Flash point 122°C Closed cup.
Upper/lower flammability or explosive limits Upper flammable/explosive limit: N/D Lower flammable/explosive limit: N/D
Vapour pressure <0.001 kPa @ °C
Vapour density 5.0
Relative density 0.98 @ 20°C
Solubility(ies) Miscible with water.
Partition coefficient : LOG Pow:<0
Auto-ignition temperature 335°C
Viscosity 30 mPa s @ 20°C

SECTION 10: Stability and reactivity

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

10.5. Incompatible materials
Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products
Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Nitrous gases (NOx). Oxides of the following substances: Carbon dioxide (CO2). Carbon monoxide (CO). Vapours/gases/fumes of: Ammonia or amines.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - dermal
ATE dermal (mg/kg) 1,375.0

Inhalation Vapours irritate the respiratory system. May cause coughing and difficulties in breathing.
Ingestion Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.
Chockfast Orange Hardener

Skin contact
Corrosive. Prolonged contact causes serious tissue damage. May cause skin sensitisation or allergic reactions in sensitive individuals. Overexposure may cause the following adverse effects: Blistering may occur. Redness. Mild dermatitis, allergic skin rash.

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

Acute and chronic health hazards
This product is corrosive. This product may cause skin and eye irritation. Prolonged contact may cause burns.

Route of exposure
Inhalation Skin absorption Ingestion.

Target organs
Central nervous system Respiratory system, lungs Liver Kidneys

SECTION 12: Ecological Information

Ecotoxicity
The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity
Acute aquatic toxicity
Acute toxicity - fish
LC₅₀, 96 hours: 570 mg/l, Fish
Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 31 mg/l, Daphnia magna
Acute toxicity - aquatic plants
IC₅₀, 72 hours: 20 mg/l, Algae

12.2. Persistence and degradability
Persistence and degradability
The product is not readily biodegradable.

12.3. Bioaccumulative potential
Partition coefficient
: LOG Pow:<0

12.4. Mobility In soil
Mobility
Not considered mobile.

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
Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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
No other information known.

14.1. UN number
Chockfast Orange Hardener

UN No. (ADR/RID) 2259
UN No. (IMDG) 2259
UN No. (ICAO) 2259

14.2. UN proper shipping name
Proper shipping name (ADR/RID) TRIETHYLENETETRAMINE
Proper shipping name (IMDG) TRIETHYLENETETRAMINE
Proper shipping name (ICAO) TRIETHYLENETETRAMINE
Proper shipping name (ADN) TRIETHYLENETETRAMINE

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 II
IMDG packing group II
ICAO packing group II

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

14.6. Special precautions for user
EmS F-A, S-B
Emergency Action Code 2X
Hazard Identification Number (ADR/RID) 80
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
Chockfast Orange Hardener

EU legislation

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

<table>
<thead>
<tr>
<th>SECTION 16: Other information</th>
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</thead>
<tbody>
<tr>
<td>Revision date</td>
</tr>
<tr>
<td>Revision</td>
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<tr>
<td>Supersedes date</td>
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</table>
| Hazard statements in full | 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.  
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.