SAFETY DATA SHEET
DFense Blok Fast Cure Hardener

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

1.1. Product identifier
Product name
DFense Blok Fast Cure Hardener

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses
Two-component, epoxy-based adhesive.

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 Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317
Environmental hazards
Aquatic Chronic 3 - H412

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.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.
**DFense Blok Fast Cure Hardener**

**Precautionary statements**
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.
P308+P313 IF exposed or concerned: Get medical advice/ attention.

**Contains**
Butadiene acrylonitrile copolymer, 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE, PIPERAZINE

**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.
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.
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).
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.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

### 2.3. Other hazards

**SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Phenol, styrenated</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 61788-44-1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Butadiene acrylonitrile copolymer</th>
<th>5-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 68683-29-4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 2 - H411</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irrit. 2 - H315</td>
</tr>
<tr>
<td>Skin Sens. 1 - H317</td>
</tr>
<tr>
<td>Aquatic Chronic 4 - H413</td>
</tr>
</tbody>
</table>
**SECTION 4: First aid measures**

### 4.1. Description of first aid measures

**Inhalation**
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration.

**Ingestion**
DO NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
**DFense Blok Fast Cure Hardener**

| **Skin contact** | Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues. |
| **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 irritation persists after washing. Show this Safety Data Sheet to the medical personnel. |

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

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

**SECTION 5: Firefighting measures**

| **5.1. Extinguishing media** | Extinguish with carbon dioxide or dry powder. |
| **Suitable extinguishing media** | |
| **Unsuitable extinguishing media** | Foam. Water. |

| **5.2. Special hazards arising from the substance or mixture** | |
| **5.3. Advice for firefighters** | Evacuate area of unprotected personnel. |

**SECTION 6: Accidental release measures**

| **6.1. Personal precautions, protective equipment and emergency procedures** | |
| **Personal precautions** | Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Ensure suitable respiratory protection is worn during removal of spillages in confined areas. |

| **6.2. Environmental precautions** | Do not discharge into drains or watercourses or onto the ground. |
| **Environmental precautions** | |

| **6.3. Methods and material for containment and cleaning up** | |
| **Methods for cleaning up** | Absorb spillage with sand or other inert absorbent. |

| **6.4. Reference to other sections** | |

**SECTION 7: Handling and storage**

| **7.1. Precautions for safe handling** | |
| **Usage precautions** | Provide adequate ventilation. Avoid contact with skin and eyes. |

| **7.2. Conditions for safe storage, including any incompatibilities** | |
| **Storage precautions** | Store in a cool and well-ventilated place. Keep container tightly closed. Store away from the following materials: Acids. Oxidising materials. 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** | |
| **DIETHYLENETRIAMINE** | |
DFense Blok Fast Cure Hardener

Long-term exposure limit (8-hour TWA): WEL 1 ppm(Sk) 4.3 mg/m³(Sk)
Short-term exposure limit (15-minute): WEL

PIPERAZINE
Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m³
Short-term exposure limit (15-minute): WEL 0.3 mg/m³
Sen

TITANIUM DIOXIDE
Long-term exposure limit (8-hour TWA): 10 mg/m³ total dust
WEL = Workplace Exposure Limit
Sen = Capable of causing occupational asthma.

2-Piperazin-1-yethylamine (CAS: 140-31-8)

DNEL
Workers - Inhalation; Long term systemic effects: 3.6 mg/m³
Workers - Inhalation; Short term systemic effects: 21.4 mg/m³
Workers - Dermal; Long term systemic effects: 3.3 mg/kg/day
Workers - Dermal; Long term systemic effects: 20 mg/kg/day
Workers - Dermal; Long term local effects: 0.006 mg/cm²

8.2. Exposure controls

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

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. 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.

Hygiene measures
Promptly remove any clothing that becomes wet or contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

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>solid</td>
</tr>
<tr>
<td>Colour</td>
<td>Amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Fishy. Ammonia.</td>
</tr>
<tr>
<td>pH</td>
<td>pH (concentrated solution): alkaline</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>100°C @</td>
</tr>
</tbody>
</table>
DFense Blok Fast Cure Hardener

Flash point: >93.3°C
Evaporation rate: <1
Vapour pressure: <21 mm Hg @ °C
Vapour density: >1
Relative density: 1.90g/mL
Solubility(ies): >30% @ °C

9.2. Other information
Volatile: Not determined.
Volatile organic compound: Not determined.

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: No potentially hazardous reactions known.

10.4. Conditions to avoid
Conditions to avoid: Avoid contact with strong oxidising agents. Avoid heat.

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - oral
ATE oral (mg/kg): 833,333.0

Acute toxicity - dermal
ATE dermal (mg/kg): 1,833,333.0

Acute toxicity - inhalation
ATE inhalation (gases ppm): 45,000.0
ATE inhalation (vapours mg/l): 1,100.0

SECTION 12: Ecological information

12.1. Toxicity
12.2. Persistence and degradability
Persistence and degradability: There are no data on the degradability of this product.

12.3. Bioaccumulative potential
12.4. Mobility in soil
12.5. Results of PBT and vPVb assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods

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

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3263
UN No. (IMDG) 3263
UN No. (ICAO) 3263

14.2. UN proper shipping name

Proper shipping name (ADR/RID) CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAZIN-1-YLETHYLAMINE)
Proper shipping name (IMDG) CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAZIN-1-YLETHYLAMINE)
Proper shipping name (ICAO) CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAZIN-1-YLETHYLAMINE)
Proper shipping name (ADN) CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAZIN-1-YLETHYLAMINE)

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
DFense Blok Fast Cure Hardener

IMDG Code segregation group 18. Alkalis

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

SECTION 15: Regulatory information

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


15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments Revised classification.

Revision date 03/04/2018

Revision 6

Supersedes date 28/04/2016

Hazard statements in full H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
EUH208 Contains PIPERAZINE. May produce an allergic reaction.

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.