



**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.

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<b>Precautionary statements</b>	<p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p>
<b>Contains</b>	<p>Butadiene acrylonitrile copolymer, 2-PIPERAZIN-1-YLETHYLAMINE, DIETHYLENETRIAMINE, PIPERAZINE</p>
<b>Supplementary precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>

### 2.3. Other hazards

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

##### 3.2. Mixtures

<b>Phenol, styrenated</b> CAS number: 61788-44-1	<b>10-30%</b>
<b>Classification</b> Aquatic Chronic 2 - H411	
<b>Butadiene acrylonitrile copolymer</b> CAS number: 68683-29-4	<b>5-10%</b>
<b>Classification</b> Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Aquatic Chronic 4 - H413	

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<b>2-PIPERAZIN-1-YLETHYLAMINE</b>		<b>1-5%</b>
CAS number: 140-31-8	EC number: 205-411-0	REACH registration number: 01-2119471486-30-0003
<b>Classification</b>		
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
Aquatic Chronic 3 - H412		
<b>DIETHYLENETRIAMINE</b>		<b>1-5%</b>
CAS number: 111-40-0	EC number: 203-865-4	REACH registration number: 01-2119473793-27-0000
<b>Classification</b>		
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
<b>PIPERAZINE</b>		<b>&lt;1%</b>
CAS number: 110-85-0	EC number: 203-808-3	
<b>Classification</b>		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Repr. 2 - H361fd		
<b>TITANIUM DIOXIDE</b>		<b>&lt;1%</b>
CAS number: 13463-67-7	EC number: 236-675-5	REACH registration number: 01-2119489379-17-0000
<b>Classification</b>		
Not Classified		

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration.
<b>Ingestion</b>	DO NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

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**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

**Suitable extinguishing media** Extinguish with carbon dioxide or dry powder.

**Unsuitable extinguishing media** Foam. Water.

### 5.2. Special hazards arising from the substance or mixture

### 5.3. Advice for firefighters

**Protective actions during firefighting** 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

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

### 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

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Long-term exposure limit (8-hour TWA): WEL 1 ppm(Sk) 4.3 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL

### PIPERAZINE

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.3 mg/m<sup>3</sup>

Sen

### TITANIUM DIOXIDE

Long-term exposure limit (8-hour TWA): 10 mg/m<sup>3</sup> total dust

WEL = Workplace Exposure Limit

Sen = Capable of causing occupational asthma.

### 2-PIPERAZIN-1-YLETHYLAMINE (CAS: 140-31-8)

#### DNEL

Workers - Inhalation; Long term systemic effects: 3.6 mg/m<sup>3</sup>

Workers - Inhalation; Short term systemic effects: 21.4 mg/m<sup>3</sup>

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/cm<sup>2</sup>

## 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

Appearance	solid
Colour	Amber.
Odour	Fishy. Ammonia.
pH	pH (concentrated solution): alkaline
Melting point	Not determined.
Initial boiling point and range	100°C @

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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

Volatility	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.
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### 10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.
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### 10.4. Conditions to avoid

Conditions to avoid	Avoid contact with strong oxidising agents. Avoid heat.
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### 10.5. Incompatible materials

Materials to avoid	Acids - oxidising. Chemically-active metals. Nitrous acid and other nitrosating agents. Organic peroxides/hydroperoxides.
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### 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
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#### Acute toxicity - dermal

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

ATE inhalation (gases ppm)	45,000.0
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ATE inhalation (vapours mg/l)	1,100.0
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## 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.
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### 12.3. Bioaccumulative potential

### 12.4. Mobility in soil

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### 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

<b>IMDG Code segregation group</b>	18. Alkalis
<b>EmS</b>	F-A, S-B
<b>Emergency Action Code</b>	2X
<b>Hazard Identification Number (ADR/RID)</b>	80
<b>Tunnel restriction code</b>	(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

<b>EU legislation</b>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
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##### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### **SECTION 16: Other information**

<b>Revision comments</b>	Revised classification.
<b>Revision date</b>	03/04/2018
<b>Revision</b>	6
<b>Supersedes date</b>	28/04/2016
<b>Hazard statements in full</b>	<p>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.</p>

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.