Revision Date 05/03/2012
Revision 3
Supersedes date 13/12/2011

SAFETY DATA SHEET
DFense Blok Hardener

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name DFense Blok 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 DEVCON
BAY 150
SHANNON INDUSTRIAL ESTATE
SHANNON
CO CLARE
IRELAND
T: +353 (0)61471299
F: 353(0)61471285
info@itwppe.eu

1.4. Emergency telephone number

+44(0) 1235 239670

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Repr. Cat. 3;R62, R63. C;R34. R43. N;R51/53.

2.2. Label elements

Contains
2-PIPERAZIN-1-YLETHYLAMINE
4,4'-ISOPROPYLIDENEDIPHENOL
DIETHYLENETRIAMINE
NONYLPHENOL

Labelling


Corrosive


Harmful


Dangerous for the environment

Risk Phrases

R34	Causes burns.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R63	Possible risk of harm to the unborn child.

Safety Phrases

S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S57	Use appropriate containment to avoid environmental contamination.

S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

2-PIPERAZIN-1-YLETHYLAMINE		1-10%
CAS-No.: 140-31-8	EC No.: 205-411-0	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	C;R34
Acute Tox. 4 - H312	Xn;R21/22
Skin Corr. 1B - H314	R43
Skin Sens. 1 - H317	R52/53
Aquatic Chronic 3 - H412	

4,4'-ISOPROPYLIDENEDIPHENOL		1-5%
CAS-No.: 80-05-7	EC No.: 201-245-8	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Eye Dam. 1 - H318	Repr. Cat. 3;R62
Skin Sens. 1 - H317	Xi;R37,R41
Repr. 2 - H361f	R43 R52
STOT Single 3 - H335	

DIETHYLENETRIAMINE		1-5%
CAS-No.: 111-40-0	EC No.: 203-865-4	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	C;R34
Acute Tox. 4 - H312	Xn;R21/22
Skin Corr. 1B - H314	R43
Skin Sens. 1 - H317	

NONYLPHENOL		1-10%
CAS-No.: 25154-52-3	EC No.: 246-672-0	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Repr. Cat. 3;R62,R63
Skin Corr. 1B - H314	C;R34
Repr. 2 - H361fd	Xn;R22
Aquatic Acute 1 - H400	N;R50/53
Aquatic Chronic 1 - H410	

TITANIUM DIOXIDE		< 1%
CAS-No.: 13463-67-7	EC No.: 236-675-5	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Not classified.	Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

General first aid, rest, warmth and fresh air. Perform artificial respiration if breathing has stopped.

Ingestion

DO NOT induce vomiting. Get medical attention immediately. Never give liquid to an unconscious person.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

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

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

Special Fire Fighting Procedures

Evacuate area of unprotected personnel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use protective gloves, goggles and suitable protective clothing. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

6.2. Environmental precautions

Do not discharge onto the ground or into water courses.

6.3. Methods and material for containment and cleaning up

Absorb with sand or other inert absorbent.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide good ventilation. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool and well-ventilated place. Keep containers tightly closed. Store away from: Acids. Oxidising material.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
DIETHYLENETRIAMINE	WEL	1 ppm(Sk)	4.3 mg/m3(Sk)			
TITANIUM DIOXIDE			10 mg/m3 total dust			

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection

Chemical resistant gloves required for prolonged or repeated contact.

Eye protection

Wear approved safety goggles.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	solid
Colour	Amber.
Odour	Fishy. Ammonia.
Initial boiling point and boiling range	100
Melting point (°C)	
Not determined.	
Relative density	0.99
Vapour density (air=1)	>1
Vapour pressure	<21 mm Hg
Evaporation rate	<1
pH-Value, Conc. Solution	alkaline
Solubility Value (G/100G H2O@20° C)	>30%
Flash point (°C)	>93.3

9.2. Other information

Volatile By Vol. (%)

Not determined.

Volatile Organic Compound (VOC)

Not determined.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Unknown.

10.4. Conditions to avoid

Avoid contact with strong oxidisers. Avoid heat.

10.5. Incompatible materials

Materials To Avoid

Acids, oxidising. Chemically active metals. Nitrous acid and other nitrosating agents. Organic peroxides/hydroperoxides.

10.6. Hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Name	**DIETHYLENETRIAMINE**
Name	**4,4'-ISOPROPYLIDENEDIPHENOL**
Name	**2-PIPERAZIN-1-YLETHYLAMINE**
Toxic Dose 1 - LD 50	1470-2140 mg/kg (oral rat)
Name	**NONYLPHENOL**
Name	**TITANIUM DIOXIDE**
Toxic Dose 1 - LD 50	>10,000 mg/kg (oral rat)
Toxic Conc. - LC 50	>6.8 mg/l/4h (inh-rat)
Name	**ACRYLONITRILE-BUTADIENE COPOLYMER**
Name	**ALUMINIUM OXIDE**

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.2. Persistence and degradability

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

Name	**DIETHYLENETRIAMINE**
	4,4'-ISOPROPYLIDENEDIPHENOL
	2-PIPERAZIN-1-YLETHYLAMINE
	NONYLPHENOL
	TITANIUM DIOXIDE

Bioaccumulative potential

Will not bio-accumulate.

Degradability

The product is not biodegradable.

Name	**ACRYLONITRILE-BUTADIENE COPOLYMER**
	ALUMINIUM OXIDE

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

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

14.2. UN proper shipping name

Proper Shipping Name	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

14.3. Transport hazard class(es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

EU Legislation

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date	05/03/2012
Revision	3
Supersedes date	13/12/2011
Risk Phrases In Full	
R34	Causes burns.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52	Harmful to aquatic organisms.
R37	Irritating to respiratory system.
R43	May cause sensitisation by skin contact.
NC	Not classified.
R63	Possible risk of harm to the unborn child.
R62	Possible risk of impaired fertility.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.