SAFETY DATA SHEET
Dfense Block SWA (Surface Wetting Agent) Hardener

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

1.1. Product identifier
Product name
Dfense Block SWA (Surface Wetting Agent) 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 - H302 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 2 - H361fd STOT SE 1 - H370
Environmental hazards
Aquatic Chronic 2 - H411

2.2. Label elements
Pictogram

Signal word
Danger

Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H370 Causes damage to organs .
H411 Toxic to aquatic life with long lasting effects.
Defense Block SWA (Surface Wetting Agent) Hardener

Precautionary statements
P270 Do not eat, drink or smoke when using this product.
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.
P308+P313 IF exposed or concerned: Get medical advice/ attention.

Contains
Butadiene acrylonitrile copolymer, m-XYLYLENEDIAMINE, 4-TERT.BUTYL PHENOL, DIETHYLENETRIAMINE, 2,2,4-TRIMETHYLHEXANE-1,6 DIAMINE, 2-PIPERAZIN-1-YLETHYLAMINE

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.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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.
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>Butadiene acrylonitrile copolymer</th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 68683-29-4</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Aquatic Chronic 4 - H413

<table>
<thead>
<tr>
<th>4-TERT.BUTYL PHENOL</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 98-54-4</td>
<td></td>
</tr>
<tr>
<td>EC number: 202-679-0</td>
<td></td>
</tr>
<tr>
<td>M factor (Chronic) = 1</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Repr. 2 - H361f
Aquatic Chronic 1 - H410
# Defense Block SWA (Surface Wetting Agent) Hardener

<table>
<thead>
<tr>
<th>Compound</th>
<th>Amount</th>
<th>CAS number</th>
<th>EC number</th>
<th>REACH registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-XYLENYLEDIAMINE</td>
<td>10-30%</td>
<td>1477-55-0</td>
<td>216-032-5</td>
<td>01-2119480150-50-0000</td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H332</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin Corr. 1A - H314</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Dam. 1 - H318</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin Sens. 1 - H317</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Chronic 3 - H412</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2-Piperazin-1-ylethylamine | 5-10% | 140-31-8 | 205-411-0 | 01-2119471486-30-0003 |
| Classification | | | | |
| Acute Tox. 4 - H302 | | | | |
| Acute Tox. 4 - H312 | | | | |
| Skin Corr. 1B - H314 | | | | |
| Eye Dam. 1 - H318 | | | | |
| Skin Sens. 1 - H317 | | | | |
| Aquatic Chronic 3 - H412 | | | | |

| 2,2,4-Trimethylhexane-1,6 diamine | 5-10% | 3236-53-1 | | |
| Classification | | | | |
| Acute Tox. 4 - H302 | | | | |
| Skin Corr. 1B - H314 | | | | |
| Skin Sens. 1 - H317 | | | | |
| Aquatic Chronic 3 - H412 | | | | |

| DIETHYLENETRIAMINE | 5-10% | 111-40-0 | 203-865-4 | 01-2119473793-27-0000 |
| Classification | | | | |
| Acute Tox. 4 - H302 | | | | |
| Acute Tox. 4 - H312 | | | | |
| Skin Corr. 1B - H314 | | | | |
| Eye Dam. 1 - H318 | | | | |
| Skin Sens. 1 - H317 | | | | |
**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. Avoid vomiting and stomach flushing because of the risk of aspiration. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

**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. Cool containers exposed to flames with water until well after the fire is out. 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**
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**

4/9
Methods for cleaning up
Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Flush contaminated area with plenty of water.

6.4. Reference to other sections
For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Provide adequate ventilation. Avoid contact with skin and eyes. Do not reuse empty containers. Avoid breathing vapours.

Advice on general occupational hygiene
Do not eat, drink or smoke when using this product. Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

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

TITANIUM DIOXIDE
Long-term exposure limit (8-hour TWA): 10 mg/m³ total dust
WEL = Workplace Exposure Limit

2-Piperazin-1-yylethylamine (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
Protective equipment
Appropriate engineering controls
Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Defense Block SWA (Surface Wetting Agent) Hardener

**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.

**Other skin and body protection**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear suitable coveralls to prevent exposure to the skin. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

**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. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Organic vapour filter. 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 @
- **Flash point**: >93.3°C
- **Evaporation rate**: <1
- **Vapour pressure**: <21 mm Hg @ °C
- **Vapour density**: >1
- **Relative density**: 0.99g/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**

There are no known reactivity hazards associated with this product.

**10.2. Chemical stability**

Stable at normal ambient temperatures and when used as recommended.

**10.3. Possibility of hazardous reactions**

No potentially hazardous reactions known.
Dfense Block SWA (Surface Wetting Agent) Hardener

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) 166,667.0

Acute toxicity - dermal
ATE dermal (mg/kg) 110,000.0

Acute toxicity - inhalation
ATE inhalation (vapours mg/l) 1,100.0

2,2,4-TRIMETHYLHEXANE-1,6 DIAMINE
Acute toxicity - oral
ATE oral (mg/kg) 500.0

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) 3267
UN No. (IMDG) 3267
UN No. (ICAO) 3267

14.2. UN proper shipping name
Proper shipping name (ADR/RID) CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAZIN-1-YLETHYLAMINE)
Defense Block SWA (Surface Wetting Agent) Hardener

Proper shipping name (IMDG) CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAIZIN-1-YLETHYLAMINE)

Proper shipping name (ICAO) CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAIZIN-1-YLETHYLAMINE)

Proper shipping name (ADN) CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 2-PIPERAIZIN-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 II
IMDG packing group II
ICAO packing group II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
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.
### Defense Block SWA (Surface Wetting Agent) Hardener

#### SECTION 16: Other information

<table>
<thead>
<tr>
<th><strong>Revision comments</strong></th>
<th>Revised classification.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revision date</strong></td>
<td>03/04/2018</td>
</tr>
<tr>
<td><strong>Revision</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>Supersedes date</strong></td>
<td>24/11/2015</td>
</tr>
<tr>
<td><strong>Hazard statements in full</strong></td>
<td></td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H361f</td>
<td>Suspected of damaging fertility.</td>
</tr>
<tr>
<td>H361fd</td>
<td>Suspected of damaging fertility. Suspected of damaging the unborn child.</td>
</tr>
<tr>
<td>H370</td>
<td>Causes damage to organs .</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H413</td>
<td>May cause long lasting harmful effects to aquatic life.</td>
</tr>
</tbody>
</table>

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.