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

1.1. Product identifier

Product name
PHILLYCLAD 1775/620TS HARDENER

Product number
Y0046

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
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 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H317

Environmental hazards
Aquatic Chronic 2 - H411

2.2. Label elements

Pictogram

Signal word
Danger

Hazard statements
H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
PHILLYCLAD 1775/620TS HARDENER

Precautionary statements

P261 Avoid breathing vapour/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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.

Contains

TETRAETHYLENEPENTAMINE, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

Supplementary precautionary statements

P260 Do not breathe vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
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.
P312 Call a POISON CENTER/ 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.
P391 Collect spillage.
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>TETRAETHYLENEPENTAMINE</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 112-57-2</td>
<td></td>
</tr>
<tr>
<td>EC number: 203-986-2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 - H302</td>
</tr>
<tr>
<td>Acute Tox. 4 - H312</td>
</tr>
<tr>
<td>Skin Corr. 1B - H314</td>
</tr>
<tr>
<td>Eye Dam. 1 - H318</td>
</tr>
<tr>
<td>Skin Sens. 1 - H317</td>
</tr>
<tr>
<td>Aquatic Chronic 2 - H411</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 90-72-2</td>
<td></td>
</tr>
<tr>
<td>EC number: 202-013-9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1B - H314</td>
</tr>
<tr>
<td>Eye Dam. 1 - H318</td>
</tr>
<tr>
<td>Skin Sens. 1 - H317</td>
</tr>
<tr>
<td>Aquatic Chronic 3 - H412</td>
</tr>
</tbody>
</table>

The full text for all hazard statements is displayed in Section 16.
PHILLYCLAD 1775/620TS HARDENER

SECTION 4: First aid measures

4.1. Description of first aid measures

**General information**
Avoid contact with eyes. Show this safety data sheet to the doctor in attendance.

**Inhalation**
Move affected person to fresh air at once. Get medical attention if any discomfort continues.

**Ingestion**
Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Give plenty of water to drink. Get medical attention.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.

**Eye contact**
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention immediately.

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.

**Ingestion**
This product is strongly corrosive. May cause chemical burns in mouth, oesophagus and stomach. May cause severe internal injury.

**Skin contact**
Burning pain and severe corrosive skin damage.

**Eye contact**
Severe irritation, burning, tearing and blurred vision. Dust or splashes from the mixture may cause permanent eye damage.

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 foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

**Specific hazards**
Irritating gases or vapours.

5.3. Advice for firefighters

**Protective actions during firefighting**
Containers close to fire should be removed or cooled with water.

**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.

6.2. Environmental precautions

**Environmental precautions**
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 sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.
PHILLYCLAD 1775/620TS HARDENER

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: Use only in well-ventilated areas. Keep away from heat, sparks and open flame. Open drum carefully as content may be under pressure. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. 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

Ingredient comments: No exposure limits known for ingredient(s).

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 or face shield. 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.

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

Hygiene measures: Provide eyewash station and safety shower. Keep away from food, drink and animal feeding stuffs. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using the product.

Respiratory protection: Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. 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

4/8
**PHILLYCLAD 1775/620TS HARDENER**

### 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>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Ammonia. Amine.</td>
</tr>
<tr>
<td>pH</td>
<td>pH (concentrated solution): Alkaline @ 20 ºC</td>
</tr>
<tr>
<td>Melting point</td>
<td>n/d°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>&gt;232°C @</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;93°C TCC (Tag closed cup).</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.95 - 1.07 @ 20 ºC</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### 9.2. Other information

Other information: Not available.

### 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: Will not polymerise.

#### 10.4. Conditions to avoid

Conditions to avoid: Keep away from heat, sparks and open flame.

#### 10.5. Incompatible materials

Materials to avoid: Avoid contact with oxidising agents. Nitrous acid and other nitrosating agents.

#### 10.6. Hazardous decomposition products

Hazardous decomposition products: Fire or high temperatures create: Nitrous gases (NOx). Oxides of the following substances: Carbon monoxide (CO). Carbon dioxide (CO2). Vapours/gases/fumes of: Ammonia or amines.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - oral</td>
<td></td>
<td>ATE oral (mg/kg) 500.0</td>
</tr>
<tr>
<td>Acute toxicity - dermal</td>
<td></td>
<td>ATE dermal (mg/kg) 1,100.0</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td>May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Nausea, vomiting.</td>
</tr>
</tbody>
</table>

5/8
PHILLYCLAD 1775/620TS HARDENER

Ingestion
Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact
Severe skin irritation.

Eye contact
May cause severe eye irritation. Risk of serious damage to eyes.

Route of entry
Skin and/or eye contact Skin absorption Inhalation

TETRAETHYLENEPENTAMINE

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 3,990.0
Species Rat
ATE oral (mg/kg) 500.0

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 2,169.0
Species Rat

SECTION 12: Ecological Information

Ecotoxicity
The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity
Toxicity
Not considered toxic to fish.

TETRAETHYLENEPENTAMINE

Acute toxicity - fish
LC₅₀, 96 hour: 420 mg/l, Poecilia reticulata (Guppy)

Acute toxicity - aquatic invertebrates
LC₅₀, 48 hour: 24 mg/l, Daphnia magna

Acute toxicity - aquatic plants
LC₅₀, 72 hour: 2 mg/l, Pseudokirchneriella subcapitata

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

Acute toxicity - fish
LC₅₀, 96 hour: 175 mg/l, Cyprinus carpio (Common carp)

Acute toxicity - aquatic plants
LC₅₀, 72 hour: 84 mg/l, Desmodesmus subspicatus

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

12.3. Bioaccumulative potential
Bioaccumulative potential
No data available on bioaccumulation.

12.4. Mobility in soil
PHILLYCLAD 1775/620TS HARDENER

Mobility
Avoid the spillage or runoff entering drains, sewers or watercourses.

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
When handling waste, the safety precautions applying to handling of the product should be considered.

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 09

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 1760
UN No. (IMDG) 1760
UN No. (ICAO) 1760
UN No. (ADN) 1760

14.2. UN proper shipping name
Proper shipping name (ADR/RID) CORROSIVE LIQUID, N.O.S.(AMIDOAMINE)
Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S.(AMIDOAMINE)
Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S.(AMIDOAMINE)
Proper shipping name (ADN) CORROSIVE LIQUID, N.O.S.(AMIDOAMINE)

14.3. Transport hazard class(es)
ADR/RID class 8
ADR/RID classification code C9
ADR/RID label 8
IMDG class 8
ICAO class/division 8
ADN class 8

Transport labels

14.4. Packing group
PHILLYCLAD 1775/620TS HARDENER

<table>
<thead>
<tr>
<th>ADR/RID packing group</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG packing group</td>
<td>III</td>
</tr>
<tr>
<td>ADN packing group</td>
<td>III</td>
</tr>
<tr>
<td>ICAO packing group</td>
<td>III</td>
</tr>
</tbody>
</table>

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

<table>
<thead>
<tr>
<th>EmS</th>
<th>F-A, S-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR transport category</td>
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</tr>
<tr>
<td>Emergency Action Code</td>
<td>2X</td>
</tr>
<tr>
<td>Hazard Identification Number (ADR/RID)</td>
<td>80</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>(E)</td>
</tr>
</tbody>
</table>

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

EU legislation

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Revision comments</th>
<th>Revised formulation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>06/04/2018</td>
</tr>
<tr>
<td>Revision</td>
<td>8</td>
</tr>
<tr>
<td>Supersedes date</td>
<td>27/09/2017</td>
</tr>
</tbody>
</table>

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.
H411 Toxic to aquatic life with long lasting effects.
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.