SAFETY DATA SHEET
WEARGUARD HIGH LOAD HARDENER

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

1.1. Product identifier
Product name WEARGUARD HIGH LOAD HARDENER

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 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317
Environmental hazards Aquatic Chronic 2 - H411

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. H411 Toxic to aquatic life with long lasting effects.

Precautionary statements P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse.
WEARGUARD HIGH LOAD HARDENER

Contains
Crystalline Silica (Quartz), 2,2,4-TRIMETHYLHEXANE-1,6 DIAMINE, 4-TERT.BUTYL PHENOL, m-XYLYLENEDIAMINE

Supplementary precautionary statements
P261 Avoid breathing vapour/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P321 Specific treatment (see medical advice on this label).
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

<table>
<thead>
<tr>
<th>3.2. Mixtures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)</td>
<td>10-30%</td>
</tr>
<tr>
<td>CAS number: 14808-60-7</td>
<td>EC number: 231-545-4</td>
</tr>
<tr>
<td>Classification</td>
<td>Carc. 1A - H350</td>
</tr>
</tbody>
</table>

| 2,2,4-TRIMETHYLHEXANE-1,6 DIAMINE | 10-30% |
| CAS number: 3236-53-1 | |
| Classification | Acute Tox. 4 - H302 |
| | Skin Corr. 1B - H314 |
| | Skin Sens. 1 - H317 |
| | Aquatic Chronic 3 - H412 |

| 4-TERT.BUTYL PHENOL | 1-5% |
| CAS number: 98-54-4 | EC number: 202-679-0 |
| M factor (Chronic) = 1 | |
| Classification | Skin Irrit. 2 - H315 |
| | Eye Dam. 1 - H318 |
| | Repr. 2 - H361f |
| | Aquatic Chronic 1 - H410 |

| m-XYLYLENEDIAMINE | 1-5% |
| CAS number: 1477-55-0 | EC number: 216-032-5 |
| REACH registration number: 01-2119480150-50-0000 | |
| Classification | Acute Tox. 4 - H302 |
| | Acute Tox. 4 - H332 |
| | Skin Corr. 1A - H314 |
| | Eye Dam. 1 - H318 |
| | Skin Sens. 1 - H317 |
| | Aquatic Chronic 3 - H412 |
WEARGUARD HIGH LOAD HARDENER

TITANIUM DIOXIDE
CAS number: 13463-67-7  EC number: 236-675-5  REACH registration number: 01-2119489379-17-0000

Classification
Not Classified

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

Composition comments  EPOXY CURING AGENT

SECTION 4: First aid measures

4.1. Description of first aid measures
General information  Do not breathe vapour/spray. Avoid contact with skin and eyes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation  Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.

Ingestion  Do not induce vomiting. Drink a few glasses of water or milk. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention immediately.

Skin contact  Remove affected person from source of contamination. Wash skin thoroughly 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 if irritation persists after washing.

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.

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  Avoid breathing fire gases or vapours.

5.3. Advice for firefighters
Protective actions during firefighting  Keep up-wind to avoid fumes. 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  Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Eliminate all sources of ignition.
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6.2. Environmental precautions
Environmental precautions  Avoid the spillage or runoff entering drains, sewers or watercourses. 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 non-combustible, absorbent material. 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.

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  Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Avoid contact with skin and eyes. Contaminated clothing and shoes must be discarded. Do not eat, drink or smoke when using the product. Good personal hygiene procedures should be implemented.

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
Occupational exposure limits
TITANIUM DIOXIDE
Long-term exposure limit (8-hour TWA):  10 mg/m³ total dust

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.

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.
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Hand protection
Use protective gloves. It is recommended that gloves are made of the following material: Rubber (natural, latex). It is recommended that gloves are made of the following material: Butyl rubber. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). It is recommended that gloves are made of the following material: Neoprene. 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. Change work clothing daily before leaving workplace.

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>Paste</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Ammonia</td>
</tr>
<tr>
<td>pH</td>
<td>pH (diluted solution): 9.5 5%</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/D°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>&gt;176°C @</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;121°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt;1 (butyl acetate =1)</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper flammable/explosive limit: N/D Lower flammable/explosive limit: N/D</td>
</tr>
<tr>
<td>Vapour density</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.25 @ 20 ºC°C</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Slightly soluble in water.</td>
</tr>
</tbody>
</table>

9.2. Other information
Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity Acids. Strong oxidising agents.

10.2. Chemical stability
Stability Stable at normal ambient temperatures and when used as recommended.
WEARGUARD HIGH LOAD HARDENER

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions: Not available.

10.4. Conditions to avoid
Conditions to avoid: Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials
Materials to avoid: Avoid contact with the following materials: Acids. Oxidising 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
Acute toxicity - oral
ATE oral (mg/kg) 381,679.0

Acute toxicity - inhalation
ATE inhalation (gases ppm) 1,500,000.0
ATE inhalation (vapours mg/l) 36,667.0
ATE inhalation (dusts/mists mg/l) 500.0

Inhalation: High concentrations may cause severe lung damage.
Ingestion: Harmful if swallowed.
Skin contact: Causes burns. Corrosive. Prolonged contact causes serious tissue damage. May cause sensitisation by skin contact.
Eye contact: Risk of serious damage to eyes. Causes burns.
Acute and chronic health hazards: This product is corrosive. This product is corrosive. This product may cause skin and eye irritation. Prolonged contact may cause burns.

2,2,4-TRIMETHYLHEXANE-1,6 DIAMINE

Acute toxicity - oral
ATE oral (mg/kg) 500.0

SECTION 12: Ecological Information

Ecotoxicity: Avoid releasing into the environment.

12.1. Toxicity
Toxicity: Very toxic to aquatic organisms.

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
Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil
Mobility Do not discharge into drains or watercourses or onto the ground.

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 99

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 3082
UN No. (IMDG) 3082
UN No. (ICAO) 3082

14.2. UN proper shipping name
Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NONYL PHENOL)
Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NONYL PHENOL)
Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NONYL PHENOL)

14.3. Transport hazard class(es)
ADR/RID class 9
ADR/RID label 9
IMDG class 9
ICAO class/division 9
Transport labels

14.4. Packing group
ADR/RID packing group III
WEARGUARD HIGH LOAD HARDENER

IMDG packing group III
ICAO packing group III

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
EmS F-A, S-F
Emergency Action Code •3Z
Hazard Identification Number (ADR/RID) 90

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information required.

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 date 04/04/2018
Revision 10
Supersedes date 28/04/2016
SDS number 20680

Hazard statements in full
H302 Harmful if swallowed.
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.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
WEARGUARD HIGH LOAD HARDENER

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.