



## Safety Data Sheet

Supersedes: April 11, 2018

**PRODUCT NAME:** PES 202 CERAMIC REPAIR FLUID KIT

**DISTRIBUTOR:** Plant Equipment & Svcs,  
5401 HWY 21 W, Bryan, TX.77803 United States

**TELEPHONE NUMBER:** 979-779-8700

**E: mail** pes1@pes-solutions.com

**EMERGENCY TELEPHONE NUMBER: Chemtrec – 800-424-9300 (24 hrs.)**

THIS PRODUCT IS A KIT AND SUPPLIED AS A MULTI PART PRODUCT WHICH CONSISTS OF A BASE COMPONENT AND ACTIVATOR COMPONENT. THIS DOCUMENT CONTAINS THE MSDS FOR BOTH BASE AND ACTIVATOR COMPONENTS.

*DISCLAIMER: The information supplied in the SDS is correct at the time of writing and date of issue. No warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for particular purpose or course of performance or usage of trade. The user of the material is responsible for ensuring the suitability of this product for application.*

## **SECTION 1: Identification of Substance/ Preparation and Company**

- 1.1 Product identifier**  
**PES 202 CERAMIC REPAIR FLUID KIT**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Aliphatic polyamine hardener blend with inert fillers for repairing metalwork
- 1.3 Details of the supplier of the safety data sheet**  
5401, HWY 21 W, Bryan, TX. 77803  
Tel: 979-779-8700  
Email: [pes1@pes-solutions.com](mailto:pes1@pes-solutions.com)
- 1.4 Emergency telephone number**  
Chemtrec – 800-424-9300

## **SECTION 2: Hazards Identification**

### **2.1 Classification of the substance or mixture**

Classification in accordance with the Dangerous Preparations Directive 1999/45/EC

|               |  |
|---------------|--|
| Xn; R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed                                 |
| C; R34        | Causes burns   |
| R43           | May cause sensitization by skin contact  |
| Muta. 3; R68  | Possible risk of irreversible effects  |
| Repr. 2; R62  | Possible risk of impaired fertility  |
| R52/53        | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

Classification in accordance with the Classification Labeling and Packaging Regulation EC (no) 1272/2008

|                                  |  |
|----------------------------------|--|
| Acute Toxicity Category 4 H302   | Harmful if swallowed                                   |
| Acute Toxicity Category 4 H312   | Harmful in contact with skin                           |
| Acute Toxicity Category 4 H332   | armful if inhaled                                      |
| Skin Corrosive Category 1B       | H314 Causes severe skin burns and eye damage           |
| Eye Damage Category 1            | H318 Causes serious eye damage                         |
| Skin Sensitizer Category 1       | H317 May cause an allergic skin reaction               |
| Mutagen Category 2               | H341 Suspected of causing genetic defects              |
| Reproductive Toxicity Category 2 | H361f Suspected of damaging fertility                  |
| Aquatic Chronic Category 3       | H412 Harmful to aquatic life with long lasting effects |

### **2.2 Label elements**

Labeling in accordance with the Classification Labeling and Packaging Regulation EC (no) 1272/2008

Pictograms:



**Signal Word:** DANGER

**Hazard statements:** H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled.  
 H314: Causes severe skin burns and eye damage.  
 H317: May cause an allergic skin reaction.  
 H341: Suspected of causing genetic defects.  
 H361f: Suspected of damaging fertility.  
 H412 Harmful to aquatic life with long lasting effects

**Precautionary statements:** P202: Do not handle until all safety precautions have been read and understood.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310: Immediately call a doctor  
 P501: Dispose of contents/container as hazardous waste

**2.3 Other hazards**

May cause chemical burns to the eyes and skin, and if ingested, to the gastrointestinal tract. May cause allergic skin reaction. Prolonged or repeated exposure may result in adverse effects on fertility.

If released into watercourses in sufficient quantities may be harmful to aquatic life. None of the components are considered to be Persistent, Bioaccumulative and Toxic (PBT) or very Persistent, very Bioaccumulative (vPvB).

**SECTION 3: Composition/ Information on Ingredients**

**3.1 Substances**

Not applicable, product is a mixture.

**3.2 Mixtures**

Contains the following hazardous components above thresholds of concern

| Hazardous Components                                      | Cas Number | %      | Classification according to Regulation (EC) No 1272/2008   | Classification according to Directive 67/548/EEC       |
|---|------------|--------|--|--|
| Formaldehyde polymer with Phenol and Triethylenetetramine | 32610-77-8 | 10-30% | Acute Tox. 4 H302 Acute Tox.4 H312, Skin Corr. 1B, skin Sens. 1 H317Aquatic Chronic 3 H412               | Xn; R21/22, R43 C; R34 R52/53                          |
| Phenol  | 108-95-2   | <10%   | Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331 Skin Corr. 1B H314, Muta. 2 H341, STOT RE 2 H373 | Muta. Cat. 3; R68 T; R23/24/25 Xn; R48/20/21/22 C; R34 |
| Triethylenetetramine                                      | 112-24-3   | <10%   | Acute Tox. 4 H312, Skin Corr. 1B H314, Skin Sens. 1 H317,  | Xn; R21, R43 C; R34                                    |

|                       |          |      |  |   |
|-----------------------|----------|------|--|---|
|                       |          |      | Aquatic Chronic 3 H412   | R52/53  |
| 2,2 iminodiethylamine | 111-40-0 | <10% | Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 2 H330, Skin Corr. 1B H314, Skin Sens. 1 H317, Eye Dam. 1 H318, STOT SE 3 H335, | T+; R26<br>Xn; R21/22<br>C; R34<br>Xi; R37, R43 |
| Bisphenol A           | 80-05-7  | <10% | Skin Sens. 1 H317, Eye Dam. 1 H318, STOT SE 3 H335, Repr. 2 H361f, Aquatic Chronic 2 H411  | Repr. Cat. 3; R62<br>Xi; R37-41, R43<br>R52     |

See section 16 for full description of R phrases and H statements.

## SECTION 4: First Aid Measures

### 4.1 Description of first aid measures

*Summon immediate medical assistance after contact with skin, eyes, inhalation or ingestion*

- Eye:** Flush eyes with plenty of running water for 15 minutes, whilst gently holding the eyelids open. Seek immediate medical attention.
- Skin:** Remove product and contaminated clothing and wash area with water, seek medical advice. Except in most minor, superficial or localized burns, cover the affected area with a sterile dressing or clean sheeting. DO NOT APPLY GREASES OR OINTMENTS. Wash contaminated clothing before re-use.
- Ingestion:** Drink plenty of water, DO NOT INDUCE VOMITING. Seek medical attention immediately.
- Inhalation:** Remove patient to fresh air. If breathing has stopped give assisted respiration. Prevent aspiration of vomit. Turn victims head to one side. Seek medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

*Eye Contact:* Sign/ Symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

*Skin Contact:* Sign/ Symptoms may include localized redness, swelling, itching, intense pain, and blistering, ulceration and tissue destruction. Maybe absorbed through skin and cause target organ effects. Persons previously sensitized to amines may develop a cross sensitization reaction to certain other amines

*Inhalation:* Sign/ Symptoms may include cough, sneezing, and nasal discharge, tightness of chest, headache, hoarseness and nose and throat pain.

*Ingestion:* Signs/ Symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting and diarrhea, blood in the feces.

### 4.3 Indication of any immediate medical attention and special treatments needed

Symptomatic treatment as required

## SECTION 5: Fire Fighting Measures

### 5.1 Extinguishing media

Ignition will give rise to class B Fire, in case of fire use Water sprays, Dry chemical, CO2 or Alcohol foam

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

May generate toxic, irritating or flammable combustion products, including nitrogen oxides. Combustion in an oxygen starved environment produces toxic products including nitrites and amides. Sudden reaction and fire may result if mixed with an oxidizing agent.

**5.3 Advice for fire fighters**

Wear Self-contained breathing apparatus, rubber boots, gloves and body suit

**SECTION 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Remove all unnecessary personnel from the area. Ventilate the area if possible. Wear suitable protective clothing including chemical resistant gloves and coveralls. If vapor concentrations are high, respiratory protective equipment may be required. See section 8 for more information.

**6.2 Environmental precautions**

Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

**6.3 Methods and materials for containment and clearing up**

Scrape up and transfer into a suitable container. Wash area with water.

**6.4 References to other sections**

Refer to section 5, 8 and 13 for protective Measures and Disposal.

**SECTION 7: Handling and Storage**

**7.1 Precautions for safe handling**

Avoid contact with skin, eyes and clothing. Handle in well ventilated area. Avoid breathing vapors. Wash hands after contact.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a cool, well ventilated area. Keep away from oxidizers, heat or flames.

**7.3 Specific end uses(s)**

No industrial or sector specific guidance available.

**SECTION 8: Exposure Controls/ Personal Protection**

**8.1 Control parameters**

| Substance Name             | 8 hour exposure limit        | 15 min exposure limit       | Notes, Source  |
|----------------------------|------------------------------|-----------------------------|----------------|
| 2,2'-Iminodi(ethylamine)   | 1 ppm, 4.3 mg/m <sup>3</sup> | —                           | Sk, EH40, 2011 |
| Bisphenol A inhalable dust | 10 mg/m <sup>3</sup>         | —                           | EH40, 2011     |
| Phenol                     | 2 ppm, 7.8 mg/m <sup>3</sup> | 4 ppm, 16 mg/m <sup>3</sup> | Sk, EH40, 2011 |

**8.2 Exposure controls**

**Engineering controls** Adequate ventilation should be provided so that exposure limits are not exceeded.

**Respiratory:** Avoid Breathing Vapors, Mists or Sprays; Select and use respiratory protection. Suggested filter type AP2.

**Hand Protection** Wear suitable chemical resistant gloves recommended for use with corrosive amines. Nitrile or neoprene gloves may be suitable, but glove manufacturers' specifications



should always be checked first. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

**Skin Protection:** Avoid Skin Contact; use disposable coveralls

**Eye Protection:** Avoid Eye Contact; use safety goggles meeting the requirements of BS EN166 3, when handling this product

**Environmental Exposure controls** Take suitable measures to prevent entry into drains, sewers and watercourses.

## **SECTION 9: Physical/ Chemical Properties**

### **9.1 Information on basic physical and chemical properties**

|   |                               |
|---|-------------------------------|
| <b>Appearance:</b>                      | Amber Fluid                   |
| <b>Odor:</b>                            | Ammoniacal, Fishy             |
| <b>Odor threshold:</b>                  | No data                       |
| <b>PH:</b>                              | Alkaline                      |
| <b>Melting Point:</b>                   | >356°F                        |
| <b>Boiling Point/ Range:</b>            | >392°F                        |
| <b>Flash Point;</b>                     | >212°F                        |
| <b>Evaporation Rate:</b>                | No data                       |
| <b>Flammability:</b>                    | Not applicable                |
| <b>Upper/lower flammability limits:</b> | No data                       |
| <b>Vapor Pressure:</b>                  | No data                       |
| <b>Vapor density:</b>                   | No data                       |
| <b>Relative density:</b>                | 1.05g/cm <sup>3</sup> at 68°F |
| <b>Solubility in water:</b>             | Insoluble in water            |
| <b>Solubility in other solvents:</b>    | No data                       |
| <b>Partition Coefficient:</b>           | No data                       |
| <b>Autoignition temperature:</b>        | No data                       |
| <b>Decomposition temperature:</b>       | No data                       |
| <b>Viscosity:</b>                       | No data                       |
| <b>Explosive properties:</b>            | Not classified as explosive   |
| <b>Oxidizing properties:</b>            | Not classified as oxidizing   |

### **9.2 Other information**

None.

## **SECTION 10: Stability And Reactivity**

### **10.1 Reactivity**

Not considered to be a reactive product

### **10.2 Chemical stability**

Stable

### **10.3 Possibility of hazardous reactions**

Hazardous Polymerization is not likely to occur.

### **10.4 Conditions to avoid**

Excessive heat.

**10.5 Incompatible materials**

Oxidizing agents – cleaning solutions. Acids - reaction accompanied by large heat release occurs when the product is mixed with acids

**10.6 Hazardous decomposition products**

Ammonia when heated. Nitrogen Oxides in a fire. Combustion in an oxygen starved environment produces toxic products including nitrites and amides

**SECTION 11: Toxicological Information**

**11.1 Information on toxicological effects**

This product has not been tested. Judgments on the expected toxicity of this product have been made based upon consideration of its major components.

|                                    |  |
|------------------------------------|--|
| (a) acute toxicity                 | Based on consideration of the components, the mixture is expected to be harmful by inhalation, ingestion or in contact with skin.  |
| (b) skin corrosion/irritation      | Based on consideration of the components, the mixture is expected to be corrosive to skin.   |
| (c) serious eye damage/irritation  | Based on consideration of the components, the mixture is expected to be corrosive to eyes.   |
| (d) respiratory/skin sensitisation | The product contains the following known sensitizers. Formaldehyde polymer with Phenol and Triethylenetetramine, Triethylenetetramine, 2,2 iminodiethylamine (diethylenetetramine), bisphenol A, Persons previously sensitized to amines may develop a cross sensitization reaction to certain other amines. |
| (e) germ cell mutagenicity         | The product contains phenol, which is classified as a suspected mutagen.   |
| (f) carcinogenicity                | Contains no substances identified as carcinogens.  |
| (g) reproductive toxicity          | The product contains bisphenol A which is suspected of damaging fertility.   |
| (h) STOT-single exposure           | This product is corrosive, and is expected to irritate the respiratory tract if inhaled.   |
| (i) STOT-repeated exposure         | The product contains phenol, which may cause adverse effects to the liver and kidneys if exposed to significant amounts over a prolonged period of time, at a concentration below the classification threshold for this effect.  |
| (j) aspiration hazard              | Not applicable.  |

**SECTION 12: Ecological Information**

This product has not been tested. Judgments on the expected toxicity of this product have been made based upon consideration of its major components.

**12.1 Toxicity**

This product contains components which are considered to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Once cured the toxicity of the product is expected to decrease.

**12.2 Persistence and degradability**

This product is not expected to be readily biodegradable.

**12.3 Bioaccumulative potential**

This product is expected to have a low bioaccumulation potential.

**12.4 Mobility in soil**



Cured product is expected to be immobile.

**12.5 Results of PBT and vPvB assessment**

None of the components are known to be PBT or vPvB.

**12.6 Other adverse effects**

None known.

**SECTION 13: Disposal Considerations**

**13.1 Waste treatment methods**

In uncured state, dispose as chemical waste in accordance with local regulations. Waste from this product may present long term environmental hazards. Thus landfill sites must be considered less acceptable than incineration.

In cured state when mixed correctly with the base component, dispose as solid waste

Empty containers should be disposed of as chemical waste.

**SECTION 14: Transport Information**

**General:** Transport and labeling requirements will alter depending on the size of the packaging. Please refer to local transport regulations.

|   | ADR  | IMDG   | ICAO   |
|---|--|--|--|
| 14.1 UN Number  | 2735   | 2735   | 2735   |
| 14.2 UN Proper shipping name  | Polyamines, liquid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine) | Polyamines, liquid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine) | Polyamines, liquid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine) |
| 14.3 Transport hazard class(es)   | 8  | 8  | 8  |
| 14.4 Packing group  | III  | III  | III  |
| 14.5 Environmental hazards  | Not EHS  | Not EHS  | Not EHS  |
| 14.6 Special precautions for user   | HIN 80<br>Tunnel Code E  | EmS F-A, S-B   | None   |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable   | Not applicable   | Not applicable   |

**SECTION 15: Regulatory Information**

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

All components are listed as existing substances in Europe

All components are listed, or are exempt from listing on the TCSA Inventory

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out for this product.





## **SECTION 16: Other Information**

### **Revision information:**

Reformatted in accordance with Regulation 453/2010 and Regulation 1272/2008.

### **List of Abbreviations used in this SDS:**

|       |   |
|-------|---|
| CAS   | Chemical Abstracts Service  |
| CLP   | Classification, Labeling and Packaging Regulation (EC) no 1272/2008                               |
| DSD   | Dangerous Substances Directive 67/548/EEC   |
| DPD   | Dangerous Preparations Directive 1999/45/EC   |
| EC    | European Community/Commission   |
| PBT   | Persistent, Bioaccumulative and Toxic   |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EC) no 1907/2006 |
| vPvB  | very Persistent, very Bioaccumulative   |

### **References:**

ECHA Classification and Labeling inventory  
ECHA database of disseminated registration dossiers  
Supplier's Safety Data Sheets

### **Method used for classification of mixtures:**

Ingredient based approaches

### **R Phrases and H Statements used in Section 3**

|               |  |
|---------------|--|
| R20/22        | Harmful by inhalation and if swallowed,  |
| R21/22        | Harmful in contact with skin and if swallowed,   |
| R22           | Harmful if swallowed,  |
| R23/24/25;    | Toxic by inhalation, in contact with skin and if swallowed,  |
| R26           | Very toxic if inhaled  |
| R34           | Causes burns   |
| R36           | Irritating to eyes   |
| R36/38        | Irritating to eyes and skin,   |
| R37           | Irritating to respiratory system,  |
| R41           | Risk of serious damage to eyes,  |
| R43           | May cause sensitization by skin contact  |
| R48/20/21/22; | Harmful: Danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. |
| R52           | Harmful to aquatic organisms   |
| R52/53        | Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment,                                |
| R62           | Possible risk of impaired fertility  |
| R68           | Possible risk of irreversible effects  |
| H301          | Toxic if swallowed   |
| H302          | Harmful if swallowed   |
| H311          | Toxic in contact with skin   |



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|       |   |
|-------|---|
| 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   |
| H319  |   |
| H330  | Fatal if inhaled  |
| H331  | Toxic if inhaled  |
| H332  | Harmful if inhaled  |
| H335  | May cause respiratory irritation                                  |
| H341  | Suspected of causing genetic defects                              |
| H361f | Suspected of damaging fertility                                   |
| H373  | May cause damage to organs through prolonged or repeated exposure |
| H411  | Toxic to aquatic life with long lasting effects                   |
| H412  | Harmful to aquatic life with long lasting effects                 |

### **Training requirements for workers**

No special training requirements.

## SECTION 1: Identification of Substance/ Preparation and Company

- 1.1 **Product identifier**  
**PES 202 CERAMIC REPAIR FLUID BASE**
- 1.2 **Relevant identified uses of the substance or mixture and uses advised against**  
Epoxy Resin with inert metallic fillers
- 1.3 **Details of the supplier of the safety data sheet**  
5401 Hwy 21 West Bryan, TX 77803  
Tel :( 979)779-8700  
Email: pes1@pes-solutions.com
- 1.4 **Emergency telephone number**  
Chemtrec – 800-424-9300

## SECTION 2: Hazards Identification

- 2.1 **Classification of the substance or mixture**  
Classification in accordance with the Dangerous Preparations Directive 1999/45/EC
- |            |  |
|------------|--|
| Xi; R36/38 | Irritating to eyes and skin  |
| R43        | May cause sensitization by skin contact  |
| N; R51/53  | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

Classification in accordance with the Classification Labeling and Packaging Regulation EC (no) 1272/2008

|                            |  |
|----------------------------|--|
| Skin Irritant Category 2   | H315 Causes skin irritation                          |
| Eye Irritant Category 2    | H319 Causes serious eye irritation                   |
| Skin Sensitizer Category 1 | H317 May cause an allergic skin reaction             |
| Aquatic Chronic Category 2 | H411 Toxic to aquatic life with long lasting effects |

- 2.2 **Label elements**  
Labeling in accordance with the Classification Labeling and Packaging Regulation EC (no) 1272/2008



Pictograms:

Signal Word: **WARNING**

**Hazard statements:**      H315 Causes skin irritation  
                                   H319 Causes serious eye irritation  
                                   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.  
                                   P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes.  
                                   Remove contact lenses, if present and easy to do. Continue rinsing.  
                                   P337 + P313 If eye irritation persists: Get medical advice/attention.  
                                   P501: Dispose of contents/container as hazardous waste

**2.3 Other hazards**

May cause irritation to the eyes and skin, and if ingested, to the gastrointestinal tract. May cause allergic skin reaction.

If released into watercourses in sufficient quantities may be toxic to aquatic life. None of the components are considered to be Persistent, Bioaccumulative and Toxic (PBT) or very Persistent, very Bioaccumulative (vPvB).

**SECTION 3: Composition/ Information on Ingredients**

**3.1 Substances**

Not applicable, product is a mixture.

**3.2 Mixtures**

Contains the following hazardous components above thresholds of concern:

| Hazardous Components  | Cas Number | %      | Classification according to Regulation (EC) No 1272/2008                         | Classification according to Directive 67/548/EEC |
|---|------------|--------|--|--|
| Reaction product Bisphenol F- (epichlorhydrin)  | 28064-14-4 | 10-30% | Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411                    | Xi; R38-43-51/53                                 |
| Reaction product bisphenol-A- (epichlorhydrin) epoxy resin (number average molecular weight <= 700) | 25068-38-6 | 10-30% | Skin Irrit. 2 H315, Eye Irrit. 2 H319, Skin Sens. 1 H317, Aquatic Chronic 2 H411 | Xi; R36/38-43-51/53                              |

See section 16 for full description of R phrases and H statements.

**SECTION 4: First Aid Measures**

**4.1 Description of first aid measures**

*Summon immediate medical assistance after contact with skin, eyes, inhalation or ingestion*

**Eye:** Flush eyes with plenty of running water for several minutes, whilst gently holding the eyelids open. Seek medical attention if irritation persists.

**Skin:** Remove product and contaminated clothing and wash area with water, seek medical advice. Wash contaminated clothing before re-use.

- Ingestion:** Drink plenty of water, DO NOT INDUCE VOMITING. Seek medical attention immediately.
- Inhalation:** Remove patient to fresh air. If breathing has stopped give assisted respiration. Prevent aspiration of vomit. Turn victims head to one side. Seek medical advice.

**4.2 Most important symptoms and effects, both acute and delayed**

*Eye Contact:* Sign/ Symptoms may include redness, tearing, and pain.

*Skin Contact:* Sign/ Symptoms may include localized redness, swelling, itching

*Inhalation:* Sign/ Symptoms may include cough, sneezing, and nasal discharge, tightness of chest, headache, hoarseness and nose and throat irritation.

*Ingestion:* Signs/ Symptoms may include irritation of the mouth, throat, nausea, vomiting.

**4.3 Indication of any immediate medical attention and special treatments needed**

Symptomatic treatment as required

**SECTION 5: Fire Fighting Measures**

**5.1 Extinguishing media**

Ignition will give rise to class B Fire, in case of fire use Water sprays, Dry chemical, CO2 or Alcohol foam

**5.2 Special hazards arising from the substance or mixture**

Sudden reaction and fire may result if mixed with an oxidizing agent.

**5.3 Advice for fire fighters**

Wear Self-contained breathing apparatus, rubber boots, gloves and body suit

**SECTION 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Remove all unnecessary personnel from the area. Ventilate the area if possible. Wear suitable protective clothing including chemical resistant gloves and coveralls. If vapor concentrations are high, respiratory protective equipment may be required. See section 8 for more information.

**6.2 Environmental precautions**

Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

**6.3 Methods and materials for containment and clearing up**

Scrape up and transfer into a suitable container. Wash area with water.

**6.4 References to other sections**

Refer to section 5, 8 and 13 for Protective Measures and Disposal.

**SECTION 7: Handling and Storage**

**7.1 Precautions for safe handling**

Avoid contact with skin, eyes and clothing. Handle in well ventilated area. Avoid breathing vapors. Wash hands after contact.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a cool, well ventilated area. Keep away from oxidizers, heat or flames.

**7.4 Specific end uses(s)**

No industrial or sector specific guidance available.

## SECTION 8: Exposure Controls/ Personal Protection

### 8.1 Control parameters

| Substance Name                             | 8 hour exposure limit | 15 min exposure limit | Notes, Source |
|--|-----------------------|-----------------------|---------------|
| Talc (magnesium silicate), respirable dust | 1 mg/m <sup>3</sup>   | —                     | EH40, 2011    |

### 8.2 Exposure controls

- Engineering controls** Adequate ventilation should be provided so that exposure limits are not exceeded.
- Respiratory:** Not normally required. If significant aerosols are likely to be generated a suitable respirator may be required. Suggested filter type AP2.
- Hand Protection** Wear suitable chemical resistant gloves. Nitrile or neoprene gloves may be suitable, but glove manufacturers' specifications should always be checked first. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.
- Skin Protection:** Avoid Skin Contact; use disposable coveralls
- Eye Protection:** Avoid Eye Contact; use safety goggles meeting the requirements of BS EN166 3, when handling this product
- Environmental Exposure controls** Take suitable measures to prevent entry into drains, sewers and watercourses.

## SECTION 9: Physical/ Chemical Properties

### 9.1 Information on basic physical and chemical properties

- Appearance:** Grey Paste
- Odor:** Weak
- Odor threshold:** No data
- PH:** Neutral
- Melting Point:** No data
- Boiling Point/ Range:** 338°F
- Flash Point;** >302°F
- Evaporation Rate:** No data
- Flammability:** Not applicable
- Upper/lower flammability limits:** No data
- Vapor Pressure:** No data
- Vapor density:** No data
- Relative density:** 2.7g/cm<sup>3</sup> at 68°F
- Solubility in water:** Insoluble in water
- Solubility in other solvents:** Soluble in organic solvents
- Partition Coefficient:** Log Kow 3-5 (estimated) (Bisphenol A/F epoxy resin)
- Autoignition temperature:** Above boiling point
- Decomposition temperature:** No data
- Viscosity:** Thick paste



**Explosive properties:** Not classified as explosive  
**Oxidizing properties:** Not classified as oxidizing

**9.2 Other information**

None.

**SECTION 10: Stability And Reactivity**

**10.1 Reactivity**

Not considered to be a reactive product

**10.2 Chemical stability**

Stable

**10.3 Possibility of hazardous reactions**

Hazardous Polymerization is not likely to occur.

**10.4 Conditions to avoid**

Excessive heat.

**10.5 Incompatible materials**

Acids - reaction accompanied by large heat release occurs when the product is mixed with acids

**10.6 Hazardous decomposition products**

None identified.

**SECTION 11: Toxicological Information**

**11.1 Information on toxicological effects**

This product has not been tested. Judgments on the expected toxicity of this product have been made based upon consideration of its major components.

|                                    |   |
|------------------------------------|---|
| (a) acute toxicity                 | Based on consideration of the components, the mixture is not expected to be harmful by inhalation, ingestion or in contact with skin. The ATE for the mixture is expected to be >2000 mg/kg |
| (b) skin corrosion/irritation      | Based on consideration of the components, the mixture is expected to be irritating to skin.   |
| (c) serious eye damage/irritation  | Based on consideration of the components, the mixture is expected to be irritating to eyes.   |
| (d) respiratory/skin sensitisation | The product contains the following known sensitizers: Bisphenol A epoxy resin, Persons previously sensitized to amines may develop a cross sensitization reaction to certain other amines.  |
| (e) germ cell mutagenicity         | Contains no substances identified as mutagens.  |
| (f) carcinogenicity                | Contains no substances identified as carcinogens.   |
| (g) reproductive toxicity          | Resins based on Bisphenol A did not cause adverse effects in animal tests.  |
| (h) STOT-single exposure           | Target organ toxicity is not expected with this product.  |
| (i) STOT-repeated exposure         | Target organ toxicity is not expected with this product.  |
| (j) aspiration hazard              | Not applicable.   |

**SECTION 12: Ecological Information**

This product has not been tested. Judgments on the expected toxicity of this product have been made based upon consideration of its major components.



**12.1 Toxicity**

This product contains components which are considered to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Once cured the toxicity of the product is expected to decrease.

*Data for Component: Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)*

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 h: 2 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 1.8 mg/l

Aquatic Plant Toxicity

ErC50, Scenedesmus capricornutum (fresh water algae), static test, Growth rate inhibition, 72 h: 11 mg/l

Toxicity to Micro-organisms

IC50; Bacteria, 18 h: > 42.6 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 0.3 mg/l

**12.2 Persistence and degradability**

This product is not expected to be readily biodegradable.

*Data for Component: Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)*

| Biodegradation | Exposure Time | Method         | 10 Day Window  |
|----------------|---------------|----------------|----------------|
| 12 %           | 28 d          | OECD 302B Test | Not applicable |

**12.3 Bioaccumulative potential**

This product is expected to have a low-moderate bioaccumulation potential.

**12.4 Mobility in soil**

Mobility of the uncured product is expected to be low. Cured product is expected to be immobile.

**12.5 Results of PBT and vPvB assessment**

None of the components are known to be PBT or vPvB.

**12.6 Other adverse effects**

None known.

**SECTION 13: Disposal Considerations**

**13.1 Waste treatment methods**

In uncured state, dispose as chemical waste in accordance with local regulations. Waste from this product may present long term environmental hazards. Thus landfill sites must be considered less acceptable than incineration. In cured state when mixed correctly with the activator component, dispose as solid waste. Empty containers should be disposed of as chemical waste.

**SECTION 14: Transport Information**

**General:** Transport and labeling requirements will alter depending on the size of the packaging. Please refer to local transport regulations.

|                | ADR  | IMDG | ICAO |
|----------------|------|------|------|
| 14.1 UN Number | 3077 | 3077 | 3077 |



|   |  |  |  |
|---|--|--|--|
| 14.2 UN Proper shipping name  | Environmentally hazardous substance, solid, N.O.S. (epoxy resin) | Environmentally hazardous substance, solid, N.O.S. (epoxy resin) | Environmentally hazardous substance, solid, N.O.S. (epoxy resin) |
| 14.3 Transport hazard class(es)   | 9  | 9  | 9  |
| 14.4 Packing group  | III  | III  | III  |
| 14.5 Environmental hazards  | Environmentally hazardous  | Marine Pollutant   | Environmentally hazardous  |
| 14.6 Special precautions for user   | HIN 90   | EmS F-A, S-F   | None   |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable   | Not applicable   | Not applicable   |

### **SECTION 15: Regulatory Information**

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

All components are listed as existing substances in Europe

All components are listed, or are exempt from listing on the TCSA Inventory

#### **15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out for this product.

### **SECTION 16: Other Information**

#### **Revision information:**

Reformatted in accordance with Regulation 453/2010 and Regulation 1272/2008.

#### **List of Abbreviations used in this SDS:**

|       |   |
|-------|---|
| CAS   | Chemical Abstracts Service  |
| CLP   | Classification, Labeling and Packaging Regulation (EC) no 1272/2008                               |
| DSD   | Dangerous Substances Directive 67/548/EEC   |
| DPD   | Dangerous Preparations Directive 1999/45/EC   |
| EC    | European Community/Commission   |
| PBT   | Persistent, Bioaccumulative and Toxic   |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EC) no 1907/2006 |
| vPvB  | very Persistent, very Bioaccumulative   |

#### **References:**

ECHA Classification and Labeling inventory

ECHA database of disseminated registration dossiers

Supplier's Safety Data Sheets

#### **Method used for classification of mixtures:**

Ingredient based approaches



## Safety Data Sheet

### **R Phrases and H Statements used in Section 3**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.
- R36/38 Irritating to eyes and skin.
- R38 May be irritating to skin
- R43 May cause sensitization by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### **Training requirements for workers**

No special training requirements.