Safety Data Sheet

POLYMERIC ENGINEERED SOLUTIONS

REPAIR * PROTECT * ENHANCE

AUGUST 4, 2026 **Supersedes: Sept 1 2025**

PRODUCT NAME:	**PES 101 POWER METAL PASTE KIT**
DISTRIBUTOR:	**Plant Equipment & Svcs, PO Box 126, Kurten, TX 77862**
TELEPHONE NUMBER:	**979-587-2622**
E: mail	**pes1@pes-solutions.com**

EMERGENCY TELEPHONE NUMBER: Chemtrec (800)-424-9300

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 SDS 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.

POLYMERIC ENGINEERED SOLUTIONS, PO BOX 126, KURTEN, TX 77862
979-587-2622 pes1@pes-solutions.com

SECTION 1: Identification of Substance/ Preparation and Company

1.1 Product identifier

PES 101 POWER METAL PASTE ACTIVATOR

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

PES, PO BOX 126, KURTEN, TX 77862

Tel: 979-587-2622

Email: pes1@pes-solutions.com

1.4 Emergency telephone number

Chemtrec – 800-424-9300 (24 hrs.)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

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

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

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 4 H312 Harmful in contact with skin Acute Toxicity Category 4 H332 Harmful 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	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, Triethylenetetramine	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, Aquatic Chronic 3	Xn; R21, R43 C; R34 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 Xn; R21/22 C; R34 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 Xi; R37-41, R43 R52

See section 16 for full description of R phrases and Hstatement

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, 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, nasal discharge, tightness of chest, headache, hoarseness and nose and throat pain. *Ingestion:* Signs/ Symptoms may include severe mouth, throat and abdominal

4.3 pain, nausea, vomiting and diarrhea, blood in the feces.

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 nitrides 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

6.2 information. **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^3	—	Sk, EH40, 2011
Bisphenol A inhalable dust	10 mg/m^3	—	EH40, 2011
Phenol	2 ppm, 7.8 mg/m^3	4 ppm, 16 mg/m^3	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: Eye Avoid Skin Contact; use disposable coveralls

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:	White Paste
Odor:	Ammoniacal, Fishy
Odor threshold:	No data
PH:	Alkaline
Melting Point:	>356F
Boiling Point/	>392F
Range: Flash Point;	>212F
Evaporation Rate:	No data
Flammability:	Not applicable
Upper/lower flammability limits:	No data
Vapor Pressure:	No data
Vapor density:	No data
Relative density:	1.7g/cm3 at 68F
Solubility in water:	Insoluble in water
Solubility in other solvents:	No data
Partition Coefficient:	No data
Auto ignition temperature:	No data
Decomposition temperature:	No data
Viscosity:	No data
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
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 sensitization	The product contains the following known sensitizers. Formaldehyde polymer with Phenol and Triethylenetetramine, Triethylentetramine, 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 bio accumulation 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	1759	1759	1759
14.2 UN Proper shipping name	Polyamines, solid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine)	Polyamines, solid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine)	Polyamines, solid, 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 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; R26	Toxic by inhalation, in contact with skin and if swallowed, 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
R62	environment, 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
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 damageH319
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

1.2 Product identifier

PES 101 POWER METAL PASTE 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

PES, PO BOX 126, KURTEN, TX 77862

Tel: 979-779-8700

Email: pes1@pes-solutions.com

1.4 Emergency telephone number

Chemtrec – 800-424-9300 (24 hrs.)

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. Continuerinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention. P501: Dispose of contents/container as hazardouswaste

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 Hstatements.

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 victim's 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, pain.

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

Inhalation: Sign/ Symptoms may include cough, sneezing, 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, CO_2 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

6.4 water. **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^3	—	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, butglove manufacturers' specifications should always be checked first. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, removeimmediately 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/	338F
Range: Flash Point;	>302F
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/cm3 at 68F
Solubility in water: Solubility	Insoluble in water
in other solvents: Partition	Soluble in organic solvents
Coefficient:	Log Kow 3-5 (estimated) (Bisphenol A/F epoxy
Auto ignition temperature:	resin) Above boiling point
Decomposition	No data
temperature: 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

10.6 acids **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 sensitization	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 1272/200

List of Abbreviations used in this SDS:

CAS	Chemical Abstracts Service
CLP	Classification, Labeling and Packaging Regulation (EC) no
DSD	1272/2008 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

H315 Causes skin irritation.
H317 May cause an allergic skin reaction. Causes
H319 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.

