

PSX 20 Part A Safety Data Sheet

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

1.1 Product identifier

- PSX 20 Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Epoxy adhesive for joining fiberglass reinforced plastic products.
- This product is intended to be mixed only with its specific catalyst; PSX Part B Hardener

1.3 Details of the supplier of the safety data sheet

- NOV Fiber Glass Systems
17115 San Pedro Avenue, Suite 200
San Antonio, Texas 78232 USA
Tel: 1-210-477-7500
Fax: 1-210-231-5915
E-mail: Mike.Thayer@nov.com

1.4 Emergency telephone number(s)

- 3E Company, 24-Hour Support (Access Code/Contract Number: 333386)
 - USA, Canada 1-888-298-2344
 - Asia, Pacific 1-760-476-3960
 - Europe, Middle East, Africa 1-760-476-3961
 - Americas 1-760-476-3962

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Physical

- Not classified

Health

- Acute toxicity, Category 4 (oral)
- Skin irritation, Category 2
- Skin sensitizer, Category 1
- Eye irritation – Category 2A
- Carcinogen – Category 1A (inhalation; quartz)
- Specific target organ systemic toxicity – single exposure, Category 3 (respiratory tract irritation; quartz)
- Specific target organ systemic toxicity – repeated exposure, Category 1 (respiratory system; quartz)

Environmental

- Chronic aquatic toxicity, Category 2

2.2 Label elements

Signal Word(s)

- DANGER

Pictogram(s)



Hazard Statements

- Physical
 - Not classified
- Health
 - H302: Harmful if swallowed.
 - H315: Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319: Causes serious eye irritation.
 - H332: Harmful if inhaled.
 - H335: May cause respiratory irritation.
 - H350: May cause cancer (inhalation; quartz).
 - H372: Causes damage to the respiratory system through prolonged or repeated exposure (inhalation; quartz).
- Environmental
 - H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

- Prevention
 - P201: Obtain special instructions before use.
 - P202: Do not handle until all safety precautions have been read and understood.
 - P233: Keep container tightly closed.
 - P261: Avoid breathing dust/fume/gas/mist/vapor/spray.
 - P264: Wash skin thoroughly after handling.
 - P270: Do not eat, drink or smoke when using this product.
 - P271: Use only outdoors or in well-ventilated area.
 - P272: Contaminated work clothing should not be allowed out of the workplace.
 - P273: Avoid release to the environment.
 - P280: Wear protective gloves/protective clothing/eye protection/face protection.
- Response
 - P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 - P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P308+P311: If exposed or concerned: Call a POISON CENTER or doctor/physician.
 - P308+P313: IF exposed or concerned: Get medical advice/attention.
 - P331: Do NOT induce vomiting.
 - P332+P313: If skin irritation occurs: Get medical advice/attention.
 - P337+P313: If eye irritation persists: Get medical advice/attention.
 - P362+P364: Take off all contaminated clothing and wash it before reuse.
 - P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
 - P391: Collect spillage.
- Storage
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 - P403+P235: Store in a well-ventilated place. Keep cool.
- Disposal
- P501: Dispose of contents/container in accordance with regulatory requirements.

2.3 Other Hazards

- PBT and vPvB assessment
 - None of the ingredients are considered to be either PBT or vPvB.
- Warning: The cured adhesive product may form combustible dust concentrations in air when sanded, grinded, or cut.

SECTION 3: Composition/information on Ingredients

3.1 Substances

- Not applicable

3.2 Mixtures

Chemical Identity	CAS No.	EC No.	Concentration Range (weight %)
Epoxy phenol novolac resin	028064-14-4	Polymer	40 – 70
Crystalline silica (quartz)	014808-60-7	238-878-4	10 – 20
Dibutyltin diacetate	001067-33-0	213-928-8	< 2
Aliphatic solvents	064742-47-8	265-149-8	< 2
Red iron oxide	001309-37-1	215-168-2	< 2
Substances that do not meet the classification and labeling criteria established under the GHS	Not applicable	Not applicable	Balance

SECTION 4. First-aid measures

4.1 Description of first-aid measures

Inhalation

- Move to fresh air.
- If difficulty in breathing or respiratory irritation; seek immediate medical attention.
- If breathing has stopped; seek immediate medical attention, perform artificial respiration.

Skin contact

- Wash affected area thoroughly with soap and water for at least 20 minutes.
- If irritation develops or persists; seek medical attention.

Eye contact

- Immediately flush with water for at least 20 minutes.
- Remove contact lenses, if present.
- If irritation develops or persists, seek medical attention.

Ingestion

- Do not induce vomiting unless directed to do so by medical personnel.
- Never give anything by mouth to an unconscious person.
- If conscious, rinse out mouth with water.
- If symptoms persist, seek immediate medical attention.

4.2 Most Important symptoms and effects, both acute and delayed

Acute

- Irritation.

Delayed

- Pre-existing skin problems may be aggravated by prolonged or repeated contact.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Water spray, ABC dry chemical, foam or carbon dioxide.

5.2 Specific hazards arising from the substance or mixture

- Product is not considered a fire hazard, but may burn if ignited.
- Closed containers may rupture when exposed to extreme heat.
- Toxic or irritating substances may be emitted upon burning, combustion or decomposition.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus and protective clothing, as necessary.
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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Due to the high viscosity of this adhesive product and the relatively small end-use container size, significant spills are unlikely to occur.
- If a spilled in an enclosed area, ventilate and remove all sources of ignition.
- Use only non-sparking tools during cleanup and place discarded material into a suitable container.

6.2 Environmental precautions

- Do not allow spilled materials to enter storm sewers, sanitary sewers, or impact groundwater.
- Do not allow spilled materials to remain on the ground.

6.3 Methods and materials for containment and cleaning up

- Use only non-sparking tools during cleanup and place discarded material into a suitable container for disposal.
- Avoid dispersal of dust in the air (i.e., cleaning dusty surfaces with compressed air) as this can contribute to a combustible dust hazard.

6.4 Reference to other sections

- See also, *SECTION 8: Control parameters* and *SECTION 13: Disposal considerations*.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Avoid contact with skin and eyes and inhalation of vapors.
- Avoid sources of ignition, including smoking while using this product.
- Thoroughly wash exposed skin after working with this product.
- Only use this product in a well-ventilated area.
- Use spark-free tools.
- Empty containers may contain product residue and may be hazardous.
- Minimize generation of dust when sanding, grinding, and cutting the cured product.
- Routine housekeeping should be instituted to ensure that product dusts do not accumulate on surfaces.

7.2 Conditions for safe storage, including any incompatibilities

- Store in cool location away from ignition sources or open flames.
- Avoid prolonged exposure to temperatures in excess of 38°C (100°F).
- Store in original containers or in containers of the same construction material as original containers.

7.3 Specific end use(s)

- No additional data available.
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Epoxy phenol novolac resin
CAS No. 0028064-14-4

Country	Occupational Exposure Limit (OEL) Values		Legal Basis
	Eight Hour TWA	Fifteen Minute STEL	
No OELs were found for this ingredient.			

Crystalline silica (quartz) ^[1]
CAS No. 0014808-60-7

Country	Occupational Exposure Limit (OEL) Values		Legal Basis
	Eight Hour TWA	Fifteen Minute STEL	
Australia	0.1 mg/m ³	None established	Workplace Exposure Standards for Airborne Contaminants
Austria	0.15 mg/m ³ (respirable aerosol)	None established	Maximum Workplace Concentrations (MAK) Technical Guidance Concentrations (TRK)
Belgium	0.1 mg/m ³	None established	limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Canada – Alberta	0.025 mg/m ³ (respirable particulate)	None established	Occupational Safety and Health Code
Canada – British Columbia	0.025 mg/m ³	None established	Occupational Health and Safety Regulation, Table of Exposure Limits for Chemical and Biological Substances
Canada - Ontario	0.1 mg/m ³ (respirable fraction)	None established	Regulation 883, Control of Exposure to Biological or Chemical Agents
Canada - Quebec	0.1 mg/m ³	None established	Regulation respecting occupational safety and health
Canada - Saskatchewan	0.05 mg/m ³ (respirable fraction)	None established	The Occupational Safety and Health Regulations
China	1 mg/m ³ (10-50% free SiO ₂) 0.7 mg/m ³ (50-80% free SiO ₂) 0.5 mg/m ³ (> 80% free SiO ₂)	None established	GBZ 2.1-2007, Occupational exposure limits for hazardous agents in the workplace
Denmark	0.3 mg/m ³ (inhalable aerosol) 0.1 mg/m ³ (respirable aerosol)	0.6 mg/m ³ (inhalable aerosol) 0.2 mg/m ³ (respirable aerosol)	Grænseværdier for stoffer og materialer
France	0.1 mg/m ³ (respirable aerosol)	None established	Institut National de Recherche et de Sécurité (INRS)
Hungary	0.15 mg/m ³ (respirable aerosol)	None established	Chemical Safety of Workplaces
Ireland	0.1 mg/m ³ (respirable fraction)	None established	Code of Practice for the Safety, Health and Welfare at Work

			(Chemical Agents) Regulations
New Zealand	0.2 mg/m ³ (respirable fraction)	None established	Workplace Exposure Standards and Biological Exposure Indices
Singapore	0.1 mg/m ³ (respirable aerosol)	None established	Workplace Safety and Health (General Provisions) Regulations
South Korea	0.05 mg/m ³	None established	[Need reference]
Spain	0.1 mg/m ³ (respirable fraction)	None established	Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT)
Sweden	0.1 mg/m ³ (respirable aerosol)	None established	Occupational Exposure Limit Values and Measures Against Air Contaminants (AFS 2005:17)
Switzerland	0.15 mg/m ³ (respirable aerosol)	None established	Verordnung über die Verhütung von Unfällen und Berufskrankheiten (VUV)", Art. 50 Abs.3
The Netherlands	0.075 mg/m ³ (respirable dust)	None established	MAC-Values / Public limit values Dutch OEL Databank
USA (ACGIH)	0.25 mg/m ³ (respirable aerosol)	None established	None
USA (NIOSH)	0.05 mg/m ³	None established	NIOSH Pocket Guide to Chemical Hazards (Recommendations Only)
USA (OSHA)	30 / (% silica + 2) (total dust) 10 / (% silica + 2) (respirable dust)	None established	29 CFR 1910 Subpart Z, Toxic and Hazardous Substances

^[1] This material is incorporated into the adhesive mixture and exposure via inhalation is not likely to occur unless the cured product is subjected to finishing operations such as sanding, grinding, cutting, etc.

Aliphatic solvent
CAS No. 0064742-47-8

Country	Occupational Exposure Limit (OEL) Values		Legal Basis
	Eight Hour TWA	Fifteen Minute STEL	
Germany (DFG)	20 ppm	40 ppm	List of MAK and BAT Values

Red iron oxide
CAS No. 0001309-37-1

Country	Occupational Exposure Limit (OEL) Values		Legal Basis
	Eight Hour TWA	Fifteen Minute STEL	
Australia	5 mg/m ³	None established	Workplace Exposure Standards for Airborne Contaminants
Austria	5 mg/m ³ (respirable aerosol)	10 mg/m ³ (respirable aerosol)	Maximum Workplace Concentrations (MAK) Technical Guidance Concentrations (TRK)
Belgium	5 mg/m ³	None established	limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Canada – Alberta	5 mg/m ³	None established	Occupational Safety and Health Code
Canada – British Columbia	5 mg/m ³	None established	Occupational Health and Safety Regulation, Table of Exposure Limits for Chemical and Biological Substances
Canada - Ontario	5 mg/m ³	None established	Regulation 883, Control of Exposure

			to Biological or Chemical Agents
Canada - Quebec	5 mg/m ³	None established	Regulation respecting occupational safety and health
Canada - Saskatchewan	5 mg/m ³	10 mg/m ³	The Occupational Safety and Health Regulations
Denmark	3.5 mg/m ³	7 mg/m ³	Grænseværdier for stoffer og materialer
Hungary	6 mg/m ³ (respirable aerosol)	None established	Chemical Safety of Workplaces
Ireland	5 mg/m ³	10 mg/m ³	Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations
New Zealand	5 mg/m ³ (respirable aerosol)	None established	Workplace Exposure Standards and Biological Exposure Indices
Poland	5 mg/m ³	10 mg/m ³	Principles and Methods of Assessing the Working Environment
Singapore	5 mg/m ³	None established	Workplace Safety and Health (General Provisions) Regulations
South Korea	5 mg/m ³	None established	[Need reference]
Spain	5 mg/m ³	None established	Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT)
Sweden	3.5 mg/m ³	None established	Occupational Exposure Limit Values and Measures Against Air Contaminants (AFS 2005:17)
Switzerland	3 mg/m ³ (respirable aerosol)	None established	Verordnung über die Verhütung von Unfällen und Berufskrankheiten (VUV)", Art. 50 Abs.3
USA (ACGIH)	5 mg/m ³ (respirable aerosol)	None established	None
USA (NIOSH)	5 mg/m ³ (respirable aerosol)	None established	NIOSH Pocket Guide to Chemical Hazards (Recommendations Only)
USA (OSHA)	10 mg/m ³	None established	29 CFR 1910 Subpart Z, Toxic and Hazardous Substances
United Kingdom	5 mg/m ³	10 mg/m ³	EH40 Workplace exposure limits

Particulates not otherwise classified/regulated (PNOC / PNOR) (may be generated if cured product is subjected to sanding, grinding, cutting, etc.)

CAS No. – Not applicable

Country	Occupational Exposure Limit (OEL) Values		Legal Basis
	Eight Hour TWA	Fifteen Minute STEL	
Austria	10 mg/m ³ (inhalable)	None established	Workplace Exposure Standards for Airborne Contaminants
Belgium	10 mg/m ³	None established	limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Canada - Alberta	10 mg/m ³ (total) 3 mg/m ³ (respirable)	None established	Occupational Safety and Health Code
Canada – British Columbia	10 mg/m ³ (total dust) 3 mg/m ³ (respirable)	None established	Occupational Health and Safety Regulation, Table of Exposure Limits for Chemical and Biological Substances
Canada - Manitoba	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	None established	Workplace Safety and Health Act, Part 36
Canada - Ontario	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	None established	Regulation 883, Control of Exposure to Biological or Chemical Agents
Canada - Quebec	10 mg/m ³ (total dust)	None established	Regulation respecting occupational

			safety and health
China	3 mg/m ³ (fiberglass reinforced plastic dust)	None established	GBZ 2.1-2007, Occupational exposure limits for hazardous agents in the workplace
Ireland	10 mg/m ³ (inhalable) 4 mg/m ³ (respirable)	None established	Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations
Malaysia	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	None established	Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
New Zealand	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	None established	Workplace Exposure Standards and Biological Exposure Indices
Singapore	10 mg/m ³ (nuisance)	None established	Workplace Safety and Health (General Provisions) Regulations
South Korea	10 mg/m ³	None established	[Need reference]
USA (ACGIH)	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	None established	None
USA (OSHA)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable)	None established	29 CFR 1910 Subpart Z, Toxic and Hazardous Substances
United Kingdom	10 mg/m ³ (inhalable) 4 mg/m ³ (respirable)	None established	EH40 Workplace exposure limits

8.2 Exposure controls

Appropriate engineering controls

- Provide adequate general and local exhaust ventilation to control airborne concentrations to below the occupational exposure limit values.
- When sanding, cutting, grinding the cured product, it is recommended that all dust control equipment contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Personal protective equipment

- Eye and face protection
 - Approved safety glasses with side shields (e.g., ANSI Z87, EN166)
- Skin protection
 - Hand protection: Butyl rubber, Nitrile rubber or Neoprene gloves are generally recommended for epoxy resin. Different glove materials, thicknesses, and from different glove manufacturers may provide varying degrees of protection. Temperature and specific use can impact glove effectiveness. Some gloves may be intended to be used only once and then discarded, while others may be used for longer periods of time. The glove supplier should provide the user with information regarding permeability and breakthrough time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
 - Other skin protection: Such clothing as to minimize or eliminate the chance of skin contact with the adhesive product.
- Respiratory protection
 - If ventilation is insufficient to keep airborne concentrations below the occupation exposure limit levels, full or half-mask respirator fitted with organic vapor cartridges and/or particulate filters (for sanding, grinding, cutting, etc. cured material). Filter masks may be of limited use in cases of high or unknown exposure.

Environmental exposure controls

- Do not flush into surface water or sanitary sewer system.
 - Do not place directly onto ground.
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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance	Reddish-orange thixotropic paste
- Odor	Slight, epoxy
- Odor threshold	No data available
- pH	No data available
- Melting point/freezing point	No data available
- Initial boiling point and boiling range	No data available
- Flash point	> 200°C / > 392°F (Setaflash Closed Cup)
- Evaporation rate	No data available
- Flammability (solid, gas)	No data available
- Upper/lower flammability or explosive limits	No data available
- Vapor pressure	< 1 mmHg @ 20°C / 68°F (epoxy resin)
- Vapor density (air = 1)	Heavier than air (epoxy resin)
- Relative density	No data available
- Solubility(ies)	Negligible in water (epoxy resin)
- Partition coefficient: n-octanol/water	No data available
- Auto-ignition temperature	No data available
- Decomposition temperature	No data available
- Viscosity	600,000-2,00,00 cP @ 25°C / 77°F
- Explosive properties	Not explosive (epoxy resin)
- Oxidizing properties	Not oxidizing (epoxy resin)

9.2 Other information

- No data available.
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SECTION 10: Stability and reactivity

10.1 Reactivity

- No hazardous decomposition expected if product is stored and used as directed.
- Exothermic reactions, including polymerization, may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents, and excessive heat.

10.2 Chemical stability

- Product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions

- Exothermic reactions, including polymerization, may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents, and excessive heat.

10.4 Conditions to avoid

- Excessive heat, flames, and sparks.
- Avoid unintended mixing with amine catalyst.

10.5 Incompatible materials

- Avoid contact with oxidizing materials and unintended mixing with amine catalyst.

10.6 Hazardous decomposition products

- On combustion, may emit toxic fumes of carbon monoxide (CO), carbon dioxide (CO₂), aldehydes, and other products of incomplete combustion; phenolics..

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- | | | | |
|--------------|------|------|---------------|
| - Oral | Rat: | LD50 | > 2000 mg/kg |
| - Inhalation | — | — | No data found |
| - Dermal | Rat | LD50 | > 2000 mg/kg |

Crystalline silica (quartz) (CAS No. 0014808-60-7)

- | | | | |
|--------------|------|------|---------------|
| - Oral | Rat: | LD50 | 500 mg/kg |
| - Inhalation | — | — | No data found |
| - Dermal | — | — | No data found |

Dibutyltin diacetate (CAS No. 001607-33-0)

- | | | | |
|--------------|--------|------|----------------|
| - Oral | Rat: | LD50 | 900-1235 mg/kg |
| - Inhalation | — | — | No data found |
| - Dermal | Rabbit | LD50 | 2320 mg/kg |

Aliphatic solvents (CAS No. 064742-47-8)

- | | | | |
|--------------|--------|----------------|--------------|
| - Oral | Rat: | LD50 | > 5000 mg/kg |
| - Inhalation | Rat | LC50 (4 hours) | 5.2 mg/L |
| - Dermal | Rabbit | LD50 | > 2000 mg/kg |

Red iron oxide (CAS No. 001309-37-1)

- | | | | |
|--------------|--------|--|---------------|
| - Oral | Rat: | LD50 | > 10000 mg/kg |
| - Inhalation | Human: | exposure to iron oxide (dust and fumes) can cause metal fever. | |

- Dermal Dog LDLo 30 mg/kg

Skin corrosion/irritation

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Rabbit Slightly to moderately irritating

Dibutyltin diacetate (CAS No. 001607-33-0)

- Rabbit Severely irritating

Aliphatic solvents (CAS No. 064742-47-8)

- Rabbit Irritating

Red iron oxide (CAS No. 001309-37-1)

- Human Irritating

Serious eye damage/irritation

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Rabbit Slightly irritating

Dibutyltin diacetate (CAS No. 001607-33-0)

- Unknown species: Causes serious eye damage; risk of blindness.

Aliphatic solvents (CAS No. 064742-47-8)

- Rabbit Slightly irritating

Red iron oxide (CAS No. 001309-37-1)

- Human Corrosive

Respiratory or skin sensitization

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Inhalation — No data found
- Skin Guinea pig Not sensitizing

Aliphatic solvents (CAS No. 064742-47-8)

- Inhalation — No data found
- Skin Guinea pig Not sensitizing

Red iron oxide (CAS No. 001309-37-1)

- Inhalation — No data found

- Skin Guinea pig Not sensitizing

Germ cell mutagenicity

- Data for ingredients were not found or not sufficient for classification.

Carcinogenicity

- Data for ingredients not listed were not found or not sufficient for classification.

Crystalline silica (quartz) (CAS No. 0014808-60-7)

- When inhaled:
 - IARC: Group 1 (carcinogenic to humans)
 - NTP: known to be a human carcinogen
 - ACGIH: suspected human carcinogen

Aliphatic solvents (CAS No. 064742-47-8)

- Not classified as a carcinogen. Repeated skin contact has resulted in irritation and skin cancer in animals.

Reproductive toxicity

- Data for ingredients were not found or not sufficient for classification.

STOT-single exposures

- Data for ingredients not listed were not found or not sufficient for classification.

Crystalline silica (quartz) (CAS No. 0014808-60-7)

- Respiratory system Irritation

STOT-repeated exposures

- Data for ingredients not listed were not found or not sufficient for classification.

Crystalline silica (quartz) (CAS No. 0014808-60-7)

- Respiratory system Silicosis

Aspiration hazard

- Data for ingredients were not found or not sufficient for classification.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Fish: Unknown species. LC50 (96-hour) > 1-10 mg/L
- Crustacea Unknown species. EC50 (24-hour) > 1-10 mg/L

- Algae / Aquatic plants No data found.
- Bacteria No data found.

Crystalline silica (quartz) (CAS No. 0014808-60-7)

- Fish: No data found.
- Crustacea No data found.
- Algae / Aquatic plants No data found.
- Bacteria No data found.

Dibutyltin diacetate (CAS No. 001607-33-0)

- Fish: *Oryzias latipes* LC50 (48-hour) 3 mg/L
- Crustacea No data found.
- Algae / Aquatic plants Unknown species. LC50 (72-hour) 0.035-0.127 mg/L
- Bacteria No data found.

Aliphatic solvents (CAS No. 064742-47-8)

- Fish *Lepomic macrochirus* LC50 (96-hour) 1740 mg/L
- Crustacea *Mysidopsis bahia* LC50 (96-hour) 4720 mg/L
- Algae / Aquatic plants *Selenastrum capricornutum* IC50 (96-hour) 4.2 mg/L
- Bacteria No data found.

Red iron oxide (CAS No. 001309-37-1)

- Fish *Leuciscus idus* LC50 (46-hour) > 1000 mg/L
- Crustacea No data found.
- Algae / Aquatic plants No data found.
- Bacteria *Pseudomonas fluorescens* EC50 (24-hour) > 5000 mg/L

Chronic toxicity

- Data for ingredients were not found or not sufficient for classification.

12.2 Persistence and degradability

- Data for ingredients were not found or not sufficient for classification.

12.3 Bioaccumulative potential

- Data for ingredients were not found or not sufficient for classification.

12.4 Mobility in soil

- Data for ingredients were not found or insufficient for classification.

12.5 Results of PBT and vPvB assessment

- None of the ingredients are listed.

12.6 Other adverse effects

- No additional data is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Must be disposed of in accordance with local regulatory requirements.
 - Land disposal of uncured product is discouraged and illegal in many jurisdictions.
 - Sewer disposal is discouraged.
 - Empty containers may contain hazardous residue and must be disposed accordingly.
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SECTION 14: Transport information

US Department of Transportation (Road and Rail)

- Not regulated

International Carriage of Dangerous Goods by Road (ADR)

International Carriage of Dangerous Goods by Rail (RID)

International Civil Aviation Organization (ICAO) Technical Instructions

- UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin), 9, PG III

International Maritime Dangerous Goods (IMDG) Code

International Carriage of Dangerous Goods by Inland Waterways

- UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin), 9, PG III, MARINE POLLUTANT
-

SECTION 15: Regulatory information

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

The regulatory information provided below may not be comprehensive.

Canada

Controlled Products Regulation (CPR)

- This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Ingredient Disclosure List (IDL)

- All components of this mixture that are on the IDL above their specified concentration are disclosed in this SDS.

United States

EPCRA			CERCLA	RCRA	CAA	OSHA
Section 302 (EHS) TPQ (LB/KG)	Section 304 RQ (LB/KG)	Section 313	RQ (LB/KG)	P/U Codes	112(r) TQ (LB/KG)	Highly Hazardous Chemical
None of the ingredients are listed						

15.2 Chemical safety assessment

- No chemical safety assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Revision history

Revision Number	Revision Date	Revision Description
1	25-JUL-2013	Initial SDS creation in conformance with OSHA hazard communication standard (29 CFR 1910.1200) and UN Globally Harmonized System (GHS).
2	27-NOV-2013	Reformatted entire SDS.
3	1-AUG-2014	Reformatted entire SDS and added information in conformance with Regulation (EC) No. 1907/2006 (REACH).
4	27-MAY-2015	Updated Section 14 – Transportation Information

Legend to abbreviations and acronyms used

- ACC Abel Closed Cup
- ACGIH American Conference of Governmental Industrial Hygienists
- ANSI American National Standards Institute
- CAA Clean Air Act
- cP centipoise
- CFR Code of Federal Regulations (US)
- EPCRA Emergency Planning and Community Right-to-Know Act
- IARC International Agency for Research on Cancer
- IBC Code International Bulk Chemical Code
- MARPOL Marine Pollution
- NIOSH National Institute for Occupational Safety and Health
- NTP National Toxicological Program
- OSHA Occupational Safety and Health Administration (US)
- PBT Persistent Bioaccumulative and Toxic
- RCRA Resource Conservation and Recovery Act
- vPvB very Persistent and very Bioaccumulative

Key literature references and sources for data

- ESIS. European chemical Substances Information System. <http://esis.jrc.ec.europa.eu/>.

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- USEPA. 2006. List of Lists, Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-Know Act (EPCRA) and Section 112(r) of the Clean Air Act. EPA 550-B-01-003. October 2006.