



Safety Data Sheet

Issue Date: 24-Jul-2014

Revision Date: 28-Jul-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Diversified Epoxy Bonder – DEB Part A - Resin

Other means of identification

SDS # DPM-014

Recommended use of the chemical and restrictions on use

Recommended Use Epoxy resin.

Details of the supplier of the safety data sheet

Supplier Address

Diversified Products Mfg, Inc.
5523 Baggett Marysville Rd
Oroville, CA 95965

Emergency Telephone Number

Company Phone Number 530-534-3966 Phone
530-534-7404 Fax
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance White paste

Physical State Paste

Odor Mild

Classification

| | |
|-----------------------------------|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word

Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Toxic to aquatic life with long lasting effects

Unknown Acute Toxicity

14.9% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|--|---------------|-----------------|
| Bisphenol A Diglycidyl Ether | 25068-38-6 | 60-100 |
| Quartz | 14808-60-7 | 10-30 |
| Synthetic Amorphous Silica | 67762-90-7 | 5-10 |
| 1,4-bis((2,3-epoxypropoxy)methyl)cyclohexane | 14228-73-0 | 5-10 |
| Tripoli | 1317-95-9 | 0.1-1 |
| Titanium Dioxide | 13463-67-7 | 0.1-1 |

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off contaminated clothing. Flush affected area with water. Wash with soap and water, rinse thoroughly. If skin irritation or rash occurs: Get medical advice/attention.

| | |
|-------------------|--|
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| Ingestion | Do not induce vomiting without medical advice. Get medical attention if you feel unwell. |

Most important symptoms and effects

| | |
|-----------------|--|
| Symptoms | Prolonged exposure by inhalation may cause irritation of the nose, throat and respiratory tract. Contact may cause irritation and redness. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|------------------------|
| Notes to Physician | Treat symptomatically. |
|---------------------------|------------------------|

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon oxides. Irritating organic fragments. Acids. Aldehydes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Container explosion may occur under fire conditions. Use water spray to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

| | |
|----------------------------------|--|
| Personal Precautions | Use personal protective equipment as required. Remove all sources of ignition. |
| Environmental Precautions | Do not release into sewers or waterways. |

Methods and material for containment and cleaning up

| | |
|--------------------------------|--|
| Methods for Containment | Prevent further leakage or spillage if safe to do so. |
| Methods for Clean-Up | Scrape up as much material as possible. Flush residue with soap and water. Place in appropriate containers for disposal. |

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Use personal protection recommended in Section 8. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from heat, sparks, flame. Store away from incompatible materials. Keep only in original container.

Incompatible Materials

Strong acids. Strong oxidizing agents. Strong bases. Amines. Water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------------------|--|--|---|
| Quartz 14808-60-7 | TWA: 0.025 mg/m ³ respirable fraction | (vacated) TWA: 0.1 mg/m ³ respirable dust : (30)/(%SiO ₂ + 2) mg/m ³ TWA total dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |
| Tripoli 1317-95-9 | TWA: 0.025 mg/m ³ respirable fraction | (vacated) TWA: 0.1 mg/m ³ quartz respirable dust | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |
| Titanium Dioxide 13463-67-7 | TWA: 10 mg/m ³ | TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust | IDLH: 5000 mg/m ³ |

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Chemical resistant, impermeable gloves.

Respiratory Protection

Use NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State
Appearance
Color

Paste
White paste
White

Odor
Odor Threshold

Mild
Not available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|------------------------------|--|-------------------------|
| pH | Not applicable | |
| Melting Point/Freezing Point | Not available | |
| Boiling Point/Boiling Range | Not available | |
| Flash Point | > 149 °C / > 300.2 °F | Tag Closed Cup |
| Evaporation Rate | Not available | |
| Flammability (Solid, Gas) | Not determined | |
| Upper Flammability Limits | Not available | |
| Lower Flammability Limit | Not available | |
| Vapor Pressure | Negligible | |
| Vapor Density | Not available | |
| Specific Gravity | >1 | |
| Water Solubility | Insoluble in water | |
| Solubility in other solvents | Not determined | |
| Partition Coefficient | Not available | |
| Auto-ignition Temperature | Not available | |
| Decomposition Temperature | Not determined | |
| Kinematic Viscosity | Not determined | |
| Dynamic Viscosity | Not determined | |
| Explosive Properties | Not determined | |
| Oxidizing Properties | Not determined | |
| VOC Content | <1%; <10 g/L (estimated value for resin and hardener together) | |

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up.

Conditions to Avoid

Excessive heat.

Incompatible Materials

Strong acids. Strong oxidizing agents. Strong bases. Amines. Water.

Hazardous Decomposition Products

Carbon oxides. Irritating organic fragments. Acids. Aldehydes.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact

Causes serious eye irritation.

Skin Contact

Causes skin irritation. May cause an allergic skin reaction.

Inhalation

Avoid breathing fumes.

Ingestion

May be harmful if swallowed.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|-----------------------|-------------|-----------------|
| Bisphenol A Diglycidyl Ether 25068-38-6 | = 11400 mg/kg (Rat) | - | - |
| Quartz 14808-60-7 | = 500 mg/kg (Rat) | - | - |
| Titanium Dioxide 13463-67-7 | > 10000 mg/kg (Rat) | - | - |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity Silica (quartz) is a possible carcinogen when it appears as a respirable dust. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--------------------------------|-------|----------|-------|------|
| Quartz 14808-60-7 | A2 | Group 1 | Known | X |
| Tripoli 1317-95-9 | A2 | Group 1 | | X |
| Titanium Dioxide 13463-67-7 | | Group 2B | | X |

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity 14.9% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

| | |
|-------------------------------|---|
| Disposal of Wastes | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated Packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

14. TRANSPORT INFORMATION

| | |
|-----------------------------|---|
| <u>Note</u> | Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. |
| <u>DOT</u> | Not regulated |
| <u>IATA</u> | |
| UN/ID No | UN3082 |
| Proper Shipping Name | Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A epichlorhydrin resin) |
| Hazard Class | 9 |
| Packing Group | III |
| <u>IMDG</u> | |
| UN/ID No | UN3082 |
| Proper Shipping Name | Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A epichlorhydrin resin) |
| Hazard Class | 9 |
| Packing Group | III |
| Marine Pollutant | This material may meet the definition of a marine pollutant |

15. REGULATORY INFORMATION

International Inventories

TSCA All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
 Chronic Health Hazard Yes

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Chemical Name | California Proposition 65 |
|-------------------------------|---------------------------|
| Quartz - 14808-60-7 | Carcinogen |
| Titanium Dioxide - 13463-67-7 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------|------------|---------------|--------------|
| Quartz 14808-60-7 | X | X | X |
| Tripoli 1317-95-9 | X | X | X |
| Titanium Dioxide 13463-67-7 | X | X | X |

16. OTHER INFORMATION

| | | | | |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <u>NFPA</u> | Health Hazards | Flammability | Instability | Special Hazards |
| | Not determined | Not determined | Not determined | Not determined |
| <u>HMIS</u> | Health Hazards | Flammability | Physical Hazards | Personal Protection |
| | 2* | 1 | 1 | Not determined |

Chronic Hazard Star Legend * = Chronic Health Hazard

Issue Date: 24-Jul-2014
 Revision Date: 28-Jul-2014
 Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Safety Data Sheet

Issue Date: 24-Jul-2014

Revision Date: 28-Jul-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Diversified Epoxy Bonder - DEB Part B - HARD

Other means of identification

SDS # DPM-013

UN/ID No UN3259

Recommended use of the chemical and restrictions on use

Recommended Use Epoxy hardener.

Details of the supplier of the safety data sheet

Supplier Address

Diversified Products Mfg, Inc.
5523 Baggett Marysville Rd
Oroville, CA 95965

Emergency Telephone Number

Company Phone Number 530-534-3966 Phone
530-534-7404 Fax
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Dark blue/black paste **Physical State** Paste **Odor** Slight ammoniacal odor

Classification

| | |
|--|---------------------------|
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 1 Sub-category C |
| Serious eye damage/eye irritation | Category 1 |
| Skin sensitization | Category 1 |
| Germ cell mutagenicity | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 2 |

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Danger

Hazard Statements

Harmful if swallowed

Harmful if inhaled

Causes severe skin burns and eye damage

May cause an allergic skin reaction

Suspected of causing genetic defects

May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a poison center or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a poison center or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do not induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

Unknown Acute Toxicity

32% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|-----------------------------------|-------------|----------|
| Quartz | 14808-60-7 | 30-60 |
| Amine Terminated Liquid Copolymer | 68683-29-4 | 10-30 |
| Isophorone diamine | 2855-13-2 | 5-10 |
| Formaldehyde Polymer with IPD | 25265-17-2 | 5-10 |
| Benzyl alcohol | 100-51-6 | 5-10 |
| 1,4-Bis(3-aminopropyl)piperazine | 7209-38-3 | 5-10 |
| Silica, fumed | 112945-52-5 | 1-5 |
| Phenol | 108-95-2 | 1-5 |
| N-Aminoethyl piperazine | 140-31-8 | 1-5 |
| Tripoli | 1317-95-9 | 0.1-1 |

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

| | |
|---------------------|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical advice/attention. |
| Skin Contact | Take off contaminated clothing. Flush affected area with water. Wash with soap and water, rinse thoroughly. If skin irritation or rash occurs: Get medical advice/attention. |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately. |
| Ingestion | Do not induce vomiting without medical advice. Get medical attention if you feel unwell. |

Most important symptoms and effects

| | |
|-----------------|--|
| Symptoms | Contact will cause irritation and redness to exposed areas. Prolonged exposure by inhalation may cause irritation of the nose, throat and respiratory tract. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|------------------------|
| Notes to Physician | Treat symptomatically. |
|---------------------------|------------------------|

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NO_x). Irritating organic fragments.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Container explosion may occur under fire conditions. Use water spray to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Use personal protective equipment as required. Remove all sources of ignition.
- Environmental Precautions** Do not release into sewers or waterways.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up** Scrape up as much material as possible. Flush residue with soap and water. Place in appropriate containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store away from heat, sparks, flame.
- Incompatible Materials** Strong acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|------------------------------|--|--|--|
| Quartz 14808-60-7 | TWA: 0.025 mg/m ³ respirable fraction | (vacated) TWA: 0.1 mg/m ³ respirable dust : (30)/(%SiO ₂ + 2) mg/m ³ TWA total dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |
| Phenol 108-95-2 | TWA: 5 ppm S* | TWA: 5 ppm TWA: 19 mg/m ³ (vacated) TWA: 5 ppm (vacated) TWA: 19 mg/m ³ (vacated) S* S* | IDLH: 250 ppm Ceiling: 15.6 ppm 15 min Ceiling: 60 mg/m ³ 15 min TWA: 5 ppm TWA: 19 mg/m ³ |
| Silica, fumed 112945-52-5 | - | TWA: 20 Million particles per cubic feet | - |
| Tripoli 1317-95-9 | TWA: 0.025 mg/m ³ respirable fraction | (vacated) TWA: 0.1 mg/m ³ quartz respirable dust | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Chemical resistant, impermeable gloves.

Respiratory Protection Use NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

| | | | |
|-----------------------|-----------------------|-----------------------|------------------------|
| Physical State | Paste | Odor | Slight ammoniacal odor |
| Appearance | Dark blue/black paste | Odor Threshold | Not available |
| Color | Dark blue-black | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------------|--|--------------------------------|
| pH | Not applicable | |
| Melting Point/Freezing Point | Not available | |
| Boiling Point/Boiling Range | > 149 °C / >300.2 °F | |
| Flash Point | > 93 °C / > 199.4 °F | Estimated |
| Evaporation Rate | Not available | |
| Flammability (Solid, Gas) | Not determined | |
| Upper Flammability Limits | Not available | |
| Lower Flammability Limit | Not available | |
| Vapor Pressure | Not available | |
| Vapor Density | Not available | |
| Specific Gravity | 1.31 | |
| Water Solubility | Insoluble in water | |
| Solubility in other solvents | Not determined | |
| Partition Coefficient | Not available | |
| Auto-ignition Temperature | Not available | |
| Decomposition Temperature | Not determined | |
| Kinematic Viscosity | Not determined | |
| Dynamic Viscosity | Not determined | |
| Explosive Properties | Not determined | |
| Oxidizing Properties | Not determined | |
| VOC Content | <1%; <10 g/L (estimated value for resin and hardener together) | |

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up.

Conditions to Avoid

Excessive heat.

Incompatible Materials

Strong acids. Strong oxidizing agents.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx). Irritating organic fragments.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

| | |
|---------------------|---|
| Eye Contact | Causes severe eye damage. |
| Skin Contact | Causes severe skin burns. May cause an allergic skin reaction. May be harmful in contact with skin. |
| Inhalation | Harmful if inhaled. |
| Ingestion | Harmful if swallowed. |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------------------------|----------------------|--|-------------------------------------|
| Quartz 14808-60-7 | = 500 mg/kg (Rat) | - | - |
| Isophorone diamine 2855-13-2 | = 1030 mg/kg (Rat) | - | - |
| Benzyl alcohol 100-51-6 | = 1230 mg/kg (Rat) | = 2000 mg/kg (Rabbit) | = 8.8 mg/L (Rat) 4 h |
| Phenol 108-95-2 | = 317 mg/kg (Rat) | = 525 mg/kg (Rat) = 630 mg/kg (Rabbit) | = 316 mg/m ³ (Rat) 4 h |
| Silica, fumed 112945-52-5 | = 3160 mg/kg (Rat) | - | - |
| N-Aminoethyl piperazine 140-31-8 | = 2140 mg/kg (Rat) | = 880 mg/kg (Rabbit) | - |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity Silica (quartz) is a possible carcinogen when it appears as a respirable dust.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|------------------------------|-------|---------|-------|------|
| Quartz 14808-60-7 | A2 | Group 1 | Known | X |
| Silica, fumed 112945-52-5 | | Group 3 | | |
| Phenol 108-95-2 | | Group 3 | | |
| Tripoli 1317-95-9 | A2 | Group 1 | | X |

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity 32% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|--|--|--|---|
| Isophorone diamine 2855-13-2 | 37: 72 h Desmodemus subspicatus mg/L EC50 | 110: 96 h Leuciscus idus mg/L LC50 semi-static | | 42: 24 h Daphnia magna mg/L EC50 14.6 - 21.5: 48 h Daphnia magna mg/L EC50 semi-static |
| Benzyl alcohol 100-51-6 | 35: 3 h Anabaena variabilis mg/L EC50 | 460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 static | EC50 = 50 mg/L 5 min EC50 = 63.7 mg/L 15 min EC50 = 63.7 mg/L 5 min EC50 = 71.4 mg/L 30 min | 23: 48 h water flea mg/L EC50 |
| 1,4-Bis(3-aminopropyl)piperazine 7209-38-3 | | 2970 - 3240: 96 h Pimephales promelas mg/L LC50 flow-through | | |

| | | | | |
|---|--|--|---|---|
| <p>Phenol 108-95-2</p> | <p>46.42: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.0188 - 0.1044: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 187 - 279: 72 h Desmodesmus subspicatus mg/L EC50 static</p> | <p>11.9 - 50.5: 96 h Pimephales promelas mg/L LC50 flow-through 20.5 - 25.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Pimephales promelas mg/L LC50 5.449 - 6.789: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.5 - 14: 96 h Oncorhynchus mykiss mg/L LC50 static 4.23 - 7.49: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.0 - 12.0: 96 h Oncorhynchus mykiss mg/L LC50 13.5: 96 h Lepomis macrochirus mg/L LC50 static 11.9 - 25.3: 96 h Lepomis macrochirus mg/L LC50 flow-through 11.5: 96 h Lepomis macrochirus mg/L LC50 semi-static 34.09 - 47.64: 96 h Poecilia reticulata mg/L LC50 static 31: 96 h Poecilia reticulata mg/L LC50 semi-static 27.8: 96 h Brachydanio rerio mg/L LC50 0.00175: 96 h Cyprinus carpio mg/L LC50 semi-static 33.9 - 43.3: 96 h Oryzias latipes mg/L LC50 flow-through 23.4 - 36.6: 96 h Oryzias latipes mg/L LC50 static</p> | <p>EC50 21 - 36 mg/L 30 min EC50 = 23.28 mg/L 5 min EC50 = 25.61 mg/L 15 min EC50 = 28.8 mg/L 5 min EC50 = 31.6 mg/L 15 min</p> | <p>4.24 - 10.7: 48 h Daphnia magna mg/L EC50 Static 10.2 - 15.5: 48 h Daphnia magna mg/L EC50</p> |
| <p>N-Aminoethyl piperazine 140-31-8</p> | <p>495: 72 h Pseudokirchneriella subcapitata mg/L EC50</p> | <p>1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Poecilia reticulata mg/L LC50 semi-static 100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static</p> | | <p>32: 48 h Daphnia magna mg/L EC50</p> |

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

| Chemical Name | Partition Coefficient |
|-------------------------------------|-----------------------|
| Isophorone diamine 2855-13-2 | 0.79 |
| Benzyl alcohol 100-51-6 | 1.1 |
| Phenol 108-95-2 | 1.47 |
| N-Aminoethyl piperazine 140-31-8 | -1.48 |

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

| | |
|-------------------------------|---|
| Disposal of Wastes | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated Packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

US EPA Waste Number

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--------------------|------|--|------------------------|------------------------|
| Phenol 108-95-2 | U188 | Included in waste streams: F039, K001, K022, K087 | | U188 |

California Hazardous Waste Status

| Chemical Name | California Hazardous Waste Status |
|--------------------|-----------------------------------|
| Phenol 108-95-2 | Toxic Corrosive |

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

| | |
|-----------------------------|--|
| UN/ID No | UN3259 |
| Proper Shipping Name | Amines, solid, corrosive, n.o.s. (Isophoronediamine, Bis(aminopropyl)piperazine) |
| Hazard Class | 8 |
| Packing Group | III |

IATA

| | |
|-----------------------------|--|
| UN/ID No | UN3259 |
| Proper Shipping Name | Amines, solid, corrosive, n.o.s. (Isophoronediamine, Bis(aminopropyl)piperazine) |
| Hazard Class | 8 |
| Packing Group | III |

IMDG

| | |
|-----------------------------|--|
| UN/ID No | UN3259 |
| Proper Shipping Name | Amines, solid, corrosive, n.o.s. (Isophoronediamine, Bis(aminopropyl)piperazine) |
| Hazard Class | 8 |
| Packing Group | III |
| Marine Pollutant | This material may meet the definition of a marine pollutant |

15. REGULATORY INFORMATION

International Inventories

TSCA

All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|--------------------|--------------------------|----------------|---|
| Phenol 108-95-2 | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

SARA 311/312 Hazard Categories

| | |
|-----------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |

SARA 313

| Chemical Name | CAS No | Weight-% | SARA 313 - Threshold Values % |
|-------------------|----------|----------|-------------------------------|
| Phenol - 108-95-2 | 108-95-2 | 1-5 | 1.0 |

CWA (Clean Water Act)

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Phenol 108-95-2 (1-5) | 1000 lb | X | X | X |

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Chemical Name | California Proposition 65 |
|---------------------|---------------------------|
| Quartz - 14808-60-7 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|------------|---------------|--------------|
| Quartz 14808-60-7 | X | X | X |
| Isophorone diamine 2855-13-2 | X | | |
| Benzyl alcohol 100-51-6 | | X | X |
| 1,4-Bis(3-aminopropyl)piperazine 7209-38-3 | X | | |
| Phenol 108-95-2 | X | X | X |
| N-Aminoethyl piperazine 140-31-8 | X | X | X |
| Tripoli 1317-95-9 | X | X | X |

16. OTHER INFORMATION**NFPA****Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

2*

Flammability

1

Physical Hazards

0

Personal Protection

Not determined

Chronic Hazard Star Legend

* = Chronic Health Hazard

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New format

Disclaimer

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End of Safety Data Sheet