



Revision Number: 006.0

Issue date: 05/03/2016

**1. PRODUCT AND COMPANY IDENTIFICATION**

|                            |   |                             |  |
|----------------------------|---|-----------------------------|--|
| <b>Product name:</b>       | <b>LOCTITE EA 3478 A known as<br/>Loctite(R) Fixmaster(R)Superior</b> | <b>IDH number:</b>          | 702242   |
| <b>Product type:</b>       | Epoxy resin   | <b>Item number:</b>         | 97473_10259000   |
| <b>Restriction of Use:</b> | None identified   | <b>Region:</b>              | United States  |
| <b>Company address:</b>    | Henkel Corporation<br>One Henkel Way<br>Rocky Hill, Connecticut 06067 | <b>Contact information:</b> | Telephone: (860) 571-5100<br>MEDICAL EMERGENCY Phone: Poison Control Center<br>1-877-671-4608 (toll free) or 1-303-592-1711<br>TRANSPORT EMERGENCY Phone: CHEMTREC<br>1-800-424-9300 (toll free) or 1-703-527-3887<br>Internet: www.henkelna.com |

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**WARNING:** CAUSES SKIN IRRITATION.  
MAY CAUSE AN ALLERGIC SKIN REACTION.  
CAUSES SERIOUS EYE IRRITATION.  
MAY CAUSE RESPIRATORY IRRITATION.

| HAZARD CLASS                                     | HAZARD CATEGORY |
|--|-----------------|
| SKIN IRRITATION                                  | 2               |
| EYE IRRITATION                                   | 2A              |
| SKIN SENSITIZATION                               | 1               |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | 3               |

**PICTOGRAM(S)**



**Precautionary Statements**

|                    |   |
|--------------------|---|
| <b>Prevention:</b> | Avoid breathing dust or fumes. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.  |
| <b>Response:</b>   | IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. |
| <b>Storage:</b>    | Store in a well-ventilated place. Keep container tightly closed. Store locked up.   |
| <b>Disposal:</b>   | Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.   |

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**See Section 11 for additional toxicological information.**

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number  | Percentage* |
|------------------------|-------------|-------------|
| Ferrosilicon           | Proprietary | 60 - 100    |
| Epoxy resin            | Proprietary | 30 - 60     |
| Treated fumed silica   | 67762-90-7  | 1 - 5       |
| Substituted silane     | Proprietary | 0.1 - 1     |

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

|                      |  |
|----------------------|--|
| <b>Inhalation:</b>   | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.   |
| <b>Skin contact:</b> | Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. |
| <b>Eye contact:</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.  |
| <b>Ingestion:</b>    | DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.  |
| <b>Symptoms:</b>     | See Section 11.  |

### 5. FIRE FIGHTING MEASURES

|   |   |
|---|---|
| <b>Extinguishing media:</b>               | Water spray (fog), foam, dry chemical or carbon dioxide.  |
| <b>Special firefighting procedures:</b>   | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.  |
| <b>Unusual fire or explosion hazards:</b> | In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. |
| <b>Hazardous combustion products:</b>     | Oxides of carbon. Oxides of nitrogen. Formaldehyde. Phenolics. Toxic fumes. Irritating vapors.  |

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

|                                   |   |
|-----------------------------------|---|
| <b>Environmental precautions:</b> | Do not allow product to enter sewer or waterways.   |
| <b>Clean-up methods:</b>          | Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal. |

## 7. HANDLING AND STORAGE

- Handling:** Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed. Refer to Section 8.
- Storage:** Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Store in original container until ready to use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s) | ACGIH TLV  | OSHA PEL   | AIHA WEEL | OTHER |
|------------------------|--|--|-----------|-------|
| Ferrosilicon           | None   | None   | None      | None  |
| Epoxy resin            | None   | None   | None      | None  |
| Treated fumed silica   | 10 mg/m <sup>3</sup> TWA<br>Inhalable dust.<br>3 mg/m <sup>3</sup> TWA<br>Respirable fraction. | 15 mg/m <sup>3</sup> TWA Total<br>dust.<br>5 mg/m <sup>3</sup> TWA<br>Respirable fraction. | None      | None  |
| Substituted silane     | None   | None   | None      | None  |

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Respiratory protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
- Eye/face protection:** Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- |   |   |
|---|---|
| <b>Physical state:</b>                          | paste   |
| <b>Color:</b>                                   | Gray  |
| <b>Odor:</b>                                    | mild  |
| <b>Odor threshold:</b>                          | Not available.  |
| <b>pH:</b>                                      | Not available.  |
| <b>Vapor pressure:</b>                          | Nil   |
| <b>Boiling point/range:</b>                     | Not available.  |
| <b>Melting point/ range:</b>                    | Not available.  |
| <b>Specific gravity:</b>                        | 1.14  |
| <b>Vapor density:</b>                           | Not available.  |
| <b>Flash point:</b>                             | 204 °C (399.2 °F)   |
| <b>Flammable/Explosive limits - lower:</b>      | Not available.  |
| <b>Flammable/Explosive limits - upper:</b>      | Not available.  |
| <b>Autoignition temperature:</b>                | Not available.  |
| <b>Flammability:</b>                            | Not applicable  |
| <b>Evaporation rate:</b>                        | Not available.  |
| <b>Solubility in water:</b>                     | Slight  |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.  |
| <b>VOC content:</b>                             | 1.0 %; < 10 g/l (value for resin and hardener together) (estimated) |
| <b>Viscosity:</b>                               | Not available.  |
| <b>Decomposition temperature:</b>               | Not available.  |

## 10. STABILITY AND REACTIVITY

|  |   |
|--|---|
| <b>Stability:</b>                        | Stable under normal conditions of storage and use.  |
| <b>Hazardous reactions:</b>              | Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization. |
| <b>Hazardous decomposition products:</b> | Oxides of carbon. Oxides of nitrogen. Formaldehyde. Phenolics. Toxic fumes. Irritating vapors.                                |
| <b>Incompatible materials:</b>           | Oxidizing agents. Acids. Bases.   |
| <b>Reactivity:</b>                       | Not available.  |
| <b>Conditions to avoid:</b>              | Keep away from heat, ignition sources and incompatible materials.   |

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Ingestion

### Potential Health Effects/Symptoms

|                      |   |
|----------------------|---|
| <b>Inhalation:</b>   | May cause respiratory tract irritation.   |
| <b>Skin contact:</b> | Causes skin irritation. May cause allergic skin reaction.                       |
| <b>Eye contact:</b>  | Causes serious eye irritation.  |
| <b>Ingestion:</b>    | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|------------------------|-----------------|--------------------------------------|
| Ferrosilicon           | None            | Respiratory                          |
| Epoxy resin            | None            | Allergen, Irritant                   |
| Treated fumed silica   | None            | Irritant                             |
| Substituted silane     | None            | Allergen, Irritant                   |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|------------------------|----------------|-----------------|--|
| Ferrosilicon           | No             | No              | No                                       |
| Epoxy resin            | No             | No              | No                                       |
| Treated fumed silica   | No             | No              | No                                       |
| Substituted silane     | No             | No              | No                                       |

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**Hazardous waste number:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III

### Water Transportation (IMO/IMDG)

**Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)  
**Hazard class or division:** 9  
**Identification number:** UN 3082  
**Packing group:** III  
**Marine pollutant:** Bisphenol-A Epichlorhydrin resin

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:** None above reporting de minimis  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Immediate Health  
**CERCLA/SARA Section 313:** None above reporting de minimis.

**California Proposition 65:** This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Rebecca Coons, Regulatory Affairs Specialist

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**1. PRODUCT AND COMPANY IDENTIFICATION**

|                            |   |                             |   |
|----------------------------|---|-----------------------------|---|
| <b>Product name:</b>       | <b>LOCTITE EA 3478 B known as<br/>Loctite(R) Fixmaster(R) Superio</b> | <b>IDH number:</b>          | 702243  |
| <b>Product type:</b>       | Epoxy Hardener  | <b>Item number:</b>         | 97473_240000  |
| <b>Restriction of Use:</b> | None identified   | <b>Region:</b>              | United States   |
| <b>Company address:</b>    | Henkel Corporation<br>One Henkel Way<br>Rocky Hill, Connecticut 06067 | <b>Contact information:</b> | Telephone: +1 (860) 571-5100<br>MEDICAL EMERGENCY Phone: Poison Control Center<br>1-877-671-4608 (toll free) or 1-303-592-1711<br>TRANSPORT EMERGENCY Phone: CHEMTREC<br>1-800-424-9300 (toll free) or 1-703-527-3887<br>Internet: www.henkelna.com |

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**DANGER:** CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.  
MAY CAUSE AN ALLERGIC SKIN REACTION.  
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING  
DIFFICULTIES IF INHALED.  
SUSPECTED OF CAUSING CANCER.

| HAZARD CLASS              | HAZARD CATEGORY |
|---------------------------|-----------------|
| SKIN CORROSION            | 1B              |
| SERIOUS EYE DAMAGE        | 1               |
| RESPIRATORY SENSITIZATION | 1               |
| SKIN SENSITIZATION        | 1               |
| CARCINOGENICITY           | 2               |

**PICTOGRAM(S)**



**Precautionary Statements**

|                    |  |
|--------------------|--|
| <b>Prevention:</b> | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection.   |
| <b>Response:</b>   | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. |
| <b>Storage:</b>    | Store locked up.   |
| <b>Disposal:</b>   | Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.  |

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s)  | CAS Number  | Percentage* |
|---|-------------|-------------|
| Calcium carbonate   | 471-34-1    | 30 - 40     |
| Epoxy polyamine adduct  | Unknown     | 10 - 20     |
| C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer | 68082-29-1  | 10 - 20     |
| Triethylenetetramine  | 112-24-3    | 5 - 10      |
| Diethylenetriamine  | 111-40-0    | 5 - 10      |
| Silica Filler   | 112926-00-8 | 5 - 10      |
| Nonylphenol   | 25154-52-3  | 1 - 5       |
| Titanium dioxide  | 13463-67-7  | 1 - 5       |
| 4-Methylimidazole   | 822-36-6    | 0.1 - 1     |

\* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

|                      |  |
|----------------------|--|
| <b>Inhalation:</b>   | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.   |
| <b>Skin contact:</b> | Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. |
| <b>Eye contact:</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.  |
| <b>Ingestion:</b>    | Rinse the mouth. Drink 1-2 glasses of water. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.           |
| <b>Symptoms:</b>     | See Section 11.  |

### 5. FIRE FIGHTING MEASURES

|   |   |
|---|---|
| <b>Extinguishing media:</b>               | Water spray (fog), foam, dry chemical or carbon dioxide.  |
| <b>Special firefighting procedures:</b>   | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.  |
| <b>Unusual fire or explosion hazards:</b> | Burning produces obnoxious and toxic fumes. Personnel in vicinity and downwind should be evacuated. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. |



**Hazardous combustion products:**

Oxides of carbon. Oxides of nitrogen. Acids. Ammonia. Calcium oxide.  
Chlorine. Phenolics. Toxic fumes. Irritating vapors.

## 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:**

Do not allow product to enter sewer or waterways.

**Clean-up methods:**

Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

## 7. HANDLING AND STORAGE

**Handling:**

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

**Storage:**

For safe storage, store between 2 °C (35.6 °F) and 8 °C (46.4 °F)  
Store in original container until ready to use. Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s)  | ACGIH TLV                            | OSHA PEL  | AIHA WEEL                               | OTHER |
|---|--------------------------------------|---|---|-------|
| Calcium carbonate   | 10 mg/m <sup>3</sup> TWA Total dust. | 5 mg/m <sup>3</sup> PEL Respirable fraction.<br>15 mg/m <sup>3</sup> PEL Total dust.  | None                                    | None  |
| Epoxy polyamine adduct  | None                                 | None  | None                                    | None  |
| C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer | None                                 | None  | None                                    | None  |
| Triethylenetetramine  | None                                 | None  | 1 ppm (6 mg/m <sup>3</sup> ) TWA (SKIN) | None  |
| Diethylenetriamine  | (SKIN)<br>1 ppm TWA                  | None  | None                                    | None  |
| Silica Filler   | 6 mg/m <sup>3</sup> TWA              | 20 MPPCF TWA<br>0.8 mg/m <sup>3</sup> TWA   | None                                    | None  |
| Nonylphenol   | None                                 | None  | None                                    | None  |
| Titanium dioxide  | 10 mg/m <sup>3</sup> TWA             | 15 mg/m <sup>3</sup> PEL Total dust.<br>15 MPPCF TWA Respirable fraction.<br>15 mg/m <sup>3</sup> TWA Total dust.<br>50 MPPCF TWA Total dust.<br>5 mg/m <sup>3</sup> TWA Respirable fraction. | None                                    | None  |
| 4-Methylimidazole   | None                                 | None  | None                                    | None  |

**Engineering controls:**

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

|                                |   |
|--------------------------------|---|
| <b>Respiratory protection:</b> | Use NIOSH approved respirator if there is potential to exceed exposure limit(s).  |
| <b>Eye/face protection:</b>    | Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. |
| <b>Skin protection:</b>        | Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.                               |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |   |
|---|---|
| <b>Physical state:</b>                          | Paste, Solid, Product is a solid by ASTM D4359-90                     |
| <b>Color:</b>                                   | Dark, Blue, Gray  |
| <b>Odor:</b>                                    | amine-like  |
| <b>Odor threshold:</b>                          | Not available.  |
| <b>pH:</b>                                      | Not available.  |
| <b>Vapor pressure:</b>                          | Not available.  |
| <b>Boiling point/range:</b>                     | Not determined  |
| <b>Melting point/ range:</b>                    | Not available.  |
| <b>Specific gravity:</b>                        | 1.57  |
| <b>Vapor density:</b>                           | Not available.  |
| <b>Flash point:</b>                             | > 93 °C (> 199.4 °F) Tagliabue closed cup                             |
| <b>Flammable/Explosive limits - lower:</b>      | Not available.  |
| <b>Flammable/Explosive limits - upper:</b>      | Not available.  |
| <b>Autoignition temperature:</b>                | Not available.  |
| <b>Flammability:</b>                            | Not applicable  |
| <b>Evaporation rate:</b>                        | Not available.  |
| <b>Solubility in water:</b>                     | Slight  |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.  |
| <b>VOC content:</b>                             | < 1.0 %; < 10 g/l (value for resin and hardener together) (estimated) |
| <b>Viscosity:</b>                               | Not available.  |
| <b>Decomposition temperature:</b>               | Not available.  |

## 10. STABILITY AND REACTIVITY

|  |  |
|--|--|
| <b>Stability:</b>                        | Stable under normal conditions of storage and use.   |
| <b>Hazardous reactions:</b>              | None under normal processing.  |
| <b>Hazardous decomposition products:</b> | Oxides of carbon. Oxides of nitrogen. Acids. Ammonia. Calcium oxide. Chlorine. Phenolics. Toxic fumes. Irritating vapors.  |
| <b>Incompatible materials:</b>           | Acids. Oxidizing agents. Peroxides. Sodium hypochlorite. Amines. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Nitrous acid and other nitrosating agents. CAUTION! N-nitrosamines (many of which are known to be potent carcinogens) may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. |
| <b>Reactivity:</b>                       | Not available.   |
| <b>Conditions to avoid:</b>              | Keep away from heat, ignition sources and incompatible materials.  |

## 11. TOXICOLOGICAL INFORMATION

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| <b>Relevant routes of exposure:</b> | Skin, Inhalation, Eyes, Ingestion |
|-------------------------------------|-----------------------------------|

**Potential Health Effects/Symptoms**

**Inhalation:** Can cause severe irritation and burns to the respiratory tract. May cause allergic respiratory reaction. Shortness of breath.

**Skin contact:** Causes skin burns. May cause allergic skin reaction. Product may be absorbed through skin and cause nausea, headache and general discomfort.

**Eye contact:** Causes serious eye damage.

**Ingestion:** If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

| Hazardous Component(s)  | LD50s and LC50s   | Immediate and Delayed Health Effects                    |
|---|---|---|
| Calcium carbonate   | Oral LD50 (Rat) = 6,450 mg/kg<br>Oral LD50 (Mouse) = 6,450 mg/kg  | Nuisance dust   |
| Epoxy polyamine adduct  | None  | No Data   |
| C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer | None  | No Records  |
| Triethylenetetramine  | None  | Allergen, Corrosive, Developmental, Irritant, Mutagen   |
| Diethylenetriamine  | Oral LD50 (Rat) Approximate 1,140 mg/kg<br>Oral LD50 (Rat) = 1,080 mg/kg<br>Oral LD50 (Rat) = 2.33 g/kg | Allergen, Irritant, Eyes                                |
| Silica Filler   | None  | Nuisance dust   |
| Nonylphenol   | Oral LD50 (Rat) = 1,600 mg/kg<br>Dermal LD50 (Rabbit) = 2,140 mg/kg                                     | Allergen, Corrosive, Irritant, Kidney                   |
| Titanium dioxide  | None  | Irritant, Respiratory, Some evidence of carcinogenicity |
| 4-Methylimidazole   | Oral LD50 (Mouse) = 370 mg/kg<br>Oral LD50 (Rat) = 751 mg/kg<br>Dermal LD50 (Rabbit) = 440 mg/kg        | No Data   |

| Hazardous Component(s)  | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---|----------------|-----------------|--|
| Calcium carbonate   | No             | No              | No                                       |
| Epoxy polyamine adduct  | No             | No              | No                                       |
| C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer | No             | No              | No                                       |
| Triethylenetetramine  | No             | No              | No                                       |
| Diethylenetriamine  | No             | No              | No                                       |
| Silica Filler   | No             | No              | No                                       |
| Nonylphenol   | No             | No              | No                                       |
| Titanium dioxide  | No             | Group 2B        | No                                       |
| 4-Methylimidazole   | No             | Group 2B        | No                                       |

**12. ECOLOGICAL INFORMATION**

**Ecological information:** Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

|  |  |
|--|--|
| <b>Recommended method of disposal:</b> | Follow all local, state, federal and provincial regulations for disposal.  |
| <b>Hazardous waste number:</b>         | It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24. |

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

|                                  |  |
|----------------------------------|--|
| <b>Proper shipping name:</b>     | Amines, solid, corrosive, n.o.s. (Triethylenetetramine, Diethylenetriamine, Nonylphenol) |
| <b>Hazard class or division:</b> | 8  |
| <b>Identification number:</b>    | UN 3259  |
| <b>Packing group:</b>            | II   |

### International Air Transportation (ICAO/IATA)

|                                  |  |
|----------------------------------|--|
| <b>Proper shipping name:</b>     | Amines, solid, corrosive, n.o.s. (Triethylenetetramine, Diethylenetriamine, Nonylphenol) |
| <b>Hazard class or division:</b> | 8  |
| <b>Identification number:</b>    | UN 3259  |
| <b>Packing group:</b>            | II   |

### Water Transportation (IMO/IMDG)

|                                  |  |
|----------------------------------|--|
| <b>Proper shipping name:</b>     | AMINES, SOLID, CORROSIVE, N.O.S. (Triethylenetetramine, Diethylenetriamine, Nonylphenol) |
| <b>Hazard class or division:</b> | 8  |
| <b>Identification number:</b>    | UN 3259  |
| <b>Packing group:</b>            | II   |
| <b>Marine pollutant:</b>         | Nonylphenol  |

## 15. REGULATORY INFORMATION

### United States Regulatory Information

|   |   |
|---|---|
| <b>TSCA 8 (b) Inventory Status:</b>     | All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.   |
| <b>TSCA 12 (b) Export Notification:</b> | Alkyl phenol (CAS# 25154-52-3).   |
| <b>CERCLA/SARA Section 302 EHS:</b>     | None above reporting de minimis.  |
| <b>CERCLA/SARA Section 311/312:</b>     | Immediate Health, Delayed Health  |
| <b>CERCLA/SARA Section 313:</b>         | This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Nonylphenol (CAS# 25154-52-3). |
| <b>California Proposition 65:</b>       | This product contains a chemical known in the State of California to cause cancer.  |

### Canada Regulatory Information

|                              |   |
|------------------------------|---|
| <b>CEPA DSL/NDSL Status:</b> | Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details. |
|------------------------------|---|

## 16. OTHER INFORMATION

**This safety data sheet contains changes from the previous version in sections: 2,3**

**Prepared by:** Product Safety and Regulatory Affairs

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