





**SKIN CONTACT :** Remove affected clothing and wash all exposed area with mild soap and water, followed by warm water rinse. Wash with plenty of soap and water. If skin irritation or rash occurs: Wash with plenty of soap and water. Get medical advice/attention. Wash contaminated clothing before reuse. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

**INGESTION :** Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a Poison Center or doctor/physician if you feel unwell

**INHALATION :** Allow Victim to breathe fresh air. Allow victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Center or doctor/physician if you feel unwell

**Most important symptoms and effect, both acute and delayed :** Symptoms/Injuries: May cause genetic defects. Causes damage to organs. - After Inhalation: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause an allergic skin reaction. May cause cancer by inhalation. - After Eye Contact: Causes serious eye damage. - After Ingestion: Swallowing a small quantity of this material may result in serious health hazard. Indication of any immediate medical attention and special treatment needed: No additional information available.

## 5. FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Foam, alcohol foam, dry chemical, carbon dioxide, water fog or sand.

**UNSUITABLE EXTINGUISHING MEDIA:** Do not use heavy water stream.

**FIRE FIGHTING PROCEDURE:** Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment.

Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure modes.

**UNUSUAL FIRE AND EXPLOSION HAZARD:** This product is stable at normal handling and storage conditions.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES :** General measures: Remove ignition sources. Use special care to avoid static electric charges. No smoking.

**FOR NON-EMERGENCY PERSONNEL :** For non-Emergency procedures: Evacuate unnecessary personnel.

**FOR EMERGENCY RESPONDERS :** Protective equipment : Equip cleanup crew with proper protection. - Emergency procedures : Ventilate area.

**ENVIRONMENTAL PRECAUTIONS :** Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public water. Avoid release to the environment.

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP :** On land, sweep or shovel into suitable containers,. Minimize generation of dust.

## 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING :** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when you are leaving work. Provide good ventilation in process area. Use only in well ventilated areas. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Avoid breathing dust, fumes and/or vapors.

Hygiene measures: Wash Skin thoroughly after handling.

**CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES :** Avoid heat sources and direct sunlight. Store in a dry place. Protect from moisture. Keep container closed when not in use. Keep only in the original container in a cool well ventilated place away from heat, ignition sources and direct sunlight.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Source of ignition. Direct sunlight.

**8. EXPOSURE CONTROLS\PERSONAL PROTECTION**

|   |                              |  |
|---|------------------------------|--|
| 1,3,5-Triglycidyl Isocyanurate(2451-62-9) |                              |  |
| ACGIH TLV (Threshold Limit Value)         | TWA (Time Weighted Average)  | 0.05 mg/m <sup>3</sup> 8 hours                     |
| Aluminum(7429-90-5)                       |                              |  |
| ACGIH TLV (Threshold Limit Value)         | TWA (Time Weighted Average)  | 1 mg/m <sup>3</sup> 8 hours                        |
| OSHA PEL (Permissible Exposure Limit)     | TWA (Time Weighted Average)  | 5 mg/m <sup>3</sup> (Respirable Fraction) 8 hours  |
| NIOSH REL (Recommended Exposure Limit)    | TWA (Time Weighted Average)  | 5 mg/m <sup>3</sup> (Respirable Fraction) 10 hours |
| Amorphous Silica(112926-00-8)             |                              |  |
| USA OSHA                                  | USA OSHA TWA (Table Z-1)     | 6 mg/m <sup>3</sup>                                |
| USA OSHA                                  | USA OSHA TWA (Tabla Z-3)     | 20 Million particals per cubic foot.               |
| USA NIOSH                                 | USA NIOSH TWA (REL)          | 6 mg/m <sup>3</sup>                                |
| Carbon Black(1333-86-4)                   |                              |  |
| ACGIH TLV (Threshold Limit Value)         | TWA (Time Weighted Average)  | 3 mg/m <sup>3</sup> 8 hours                        |
| OSHA PEL (Permissible Exposure Limit)     | TWA (Time Weighted Average)  | 3.5 mg/m <sup>3</sup> 8 hours                      |
| NIOSH REL (Recommended Exposure Limit)    | TWA (Time Weighted Average)  | 3.5 mg/m <sup>3</sup> 8 hours                      |
| NIOSH REL (Recommended Exposure Limit )   | TWA (Time Weighted Average)  | 0.1mg of PAHs/cm <sup>3</sup> 10 hours             |
| E-Caprolactam(105-60-2)                   |                              |  |
| ACGIH TLV (Threshold Limit Value)         | TWA ( Time Weighted Average) | 5mg/m <sup>3</sup> 8 hours                         |
| USA NIOSH                                 | USA NIOSH TWA (REL)          | 1 mg/m <sup>3</sup>                                |
| USA NIOSH                                 | USA NIOSH ST (REL)           | 3 mg/m <sup>3</sup>                                |

**PERSONAL PROTECTIVE EQUIPMENT****RESPIRATORY PROTECTION :** Wear approved dust mask.**HAND PROTECTION :** Wear protective gloves.**EYE PROTECTION :** Chemical goggles or safety glasses.**SKIN AND BODY PROTECTION :** Wear suitable protective clothing.**WORK HYGIENIC PRACTICES:** When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                  |   |                     |
|----------------------------------|---|---------------------|
| <b>Physical state</b>            | : | Solid               |
| <b>Melting point</b>             | : | 55 - 90 deg C       |
| <b>Flash point</b>               | : | No data available.  |
| <b>Lower explosion limit</b>     | : | 10 g/m <sup>3</sup> |
| <b>Upper explosion limit</b>     | : | 70 g/m <sup>3</sup> |
| <b>Density</b>                   | : | 1.5197              |
| <b>Solubility</b>                | : | No data available.  |
| <b>Autoignition temperature</b>  | : | No data available.  |
| <b>Decomposition temperature</b> | : | No data available.  |

**10. STABILITY AND REACTIVITY****REACTIVITY :** This product is stable at normal handling and storage conditions.**CHEMICAL STABILITY :** Stable under normal conditions.**CONDITIONS TO AVOID :** Direct sunlight. Extremely high or low temperatures.**INCOMPATIBLE MATERIALS :** Avoid contact with strong oxidizing agents.**HAZARDOUS DECOMPOSITION PRODUCTS:** Fume. Carbon monoxide. Carbon dioxide.

**11. TOXICOLOGICAL INFORMATION**

|  |  |
|--|--|
| <b>1,3,5-Triglycidyl Isocyanurate(2451-62-9)</b>               |  |
| Acute toxicity - LD50 - oral - rat                             | 100 - 200 mg/kg  |
| Acute toxicity - LC50 - inhalation - rat - male - 4 h          | > 650 mg/m3  |
| Acute toxicity - LD50 - Dermal - rat- male & female            | > 2000 mg/kg   |
| Skin irritation - rabbit                                       | Mild skin irritation - 24 hours  |
| Eye irritation - rabbit  | Severe eye irritation  |
| Respiratory or skin sensation - Maximization test - guinea pig | May cause sensitization by skin contact  |
| Germ cell mutagenicity   | In vivo tests showed mutagenic effects   |
| Germ cell mutagenicity - AMES test - S. typhimurium            | Positive   |
| Germ cell mutagenicity - AMES test - mouse - male              | Positive   |
| IARC   | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC |
| ACGIH  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH              |
| NTP  | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP                   |
| OSHA   | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA               |
| Reproductive toxicity  | No data available  |
| Specific target organ toxicity - single exposure               | No data available  |
| Specific target organ toxicity - repeated exposure             | No data available  |
| Aspiration hazard  | No data available  |
| Additional information   | To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated                                 |
| <b>Aluminum(7429-90-5)</b>                                     |  |
| Likely routes of exposure - inhalation                         | Not available  |
| Likely route of exposure - skin contact                        | No adverse effects due to skin contact are expected.   |
| Likely routes of exposure - eye contact                        | Direct eye contact with eyes may cause temporary irritation.   |
| Likely routes of exposure - ingestion                          | Expected to be a low ingestion hazard.   |
| Symptoms related to toxicological characteristics              | Dusts may irritate the respiratory tract, skin and eyes.   |
| Acute toxicity - dermal - LD50 - rat                           | 2000 mg/kg   |
| Acute toxicity - oral - LD50 - mouse                           | > 15000 mg/kg  |
| Acute toxicity - oral - LD50 - rat                             | 5000 mg/kg   |
| Skin irritation  | Not expected to be hazardous by OSHA criteria.   |
| Eye irritation   | Direct contact with eyes may cause temporary irritation.   |
| Respiratory sensitization                                      | Not a respiratory sensitizer.  |
| Skin sensitization   | This product is not expected to cause skin sensitization.  |
| Germ cell mutagenicity   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.   |
| Carcinogenicity  | Not expected to be hazardous by OSHA criteria. Not expected to be hazardous by WHMIS criteria.   |
| IARC overall evaluation of carcinogenicity                     | 3 Not classifiable as to carcinogenicity to humans.  |
| OSHA specifically regulated substances                         | Not listed.  |
| Reproductive toxicity  | Not expected to be hazardous by OSHA criteria.   |
| Specific target organ toxicity - single exposure               | Not classified   |
| Specific target organ toxicity - repeated exposure             | Not classified   |
| Aspiration hazard  | Not an aspiration hazard   |
| Chronic effects  | Not expected to be hazardous by OSHA criteria. Not expected to be hazardous by WHMIS criteria.   |
| Further information  | This product has no known adverse effects on human health.   |
| <b>Amorphous Silica(112926-00-8)</b>                           |  |
| Acute toxicity   | no data available  |
| Acute toxicity: Inhalation                                     | no data available  |

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| Acute toxicity: Dermal                             | no data available   |
| Skin irritation                                    | no data available   |
| Eye irritation                                     | no data available   |
| Respiratory or skin sensation                      | no data available   |
| Germ cell mutagenicity                             | no data available   |
| Carcinogenicity: IARC: Group 3:                    | not classifiable as to its carcinogenicity to humans  |
| ACGIH  | no component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH   |
| NTP  | no component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP  |
| OSHA   | no component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA  |
| Reproductive toxicity                              | no data available   |
| Specific target organ toxicity - single exposure   | no data available   |
| Specific target organ toxicity - repeated exposure | no data available   |
| Aspiration hazard                                  | no data available   |
| Additional information                             | Amorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC). Therefore, amorphous silica should be handled as if possessing the same hazards as the crystalline form. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |
| Additional information                             | Stomach - irregularities - based on human evidence  |
| <b>Barium Sulfate(7727-43-7)</b>                   |   |
| Acute toxicity - inhalation                        | No data available   |
| Acute toxicity - Dermal                            | No data available   |
| Skin irritation                                    | No data available   |
| Eye irritation                                     | No data available   |
| Respiratory or skin sensation                      | No data available   |
| Germ cell mutagenicity - mouse - micronucleus test | No reported data  |
| Carcinogenicity - rat - intrapleural - tumorigenic | Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors  |
| IARC   | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC   |
| ACGIH  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH   |
| NTP  | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP  |
| OSHA   | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA  |
| Reproductive toxicity                              | No data available   |
| Specific target organ toxicity - single exposure   | No data available   |
| Specific target organ toxicity - repeated exposure | No data available   |
| Aspiration hazard                                  | No data available   |
| Additional information                             | Prolonged inhalation of dust may cause baritosis, a benign pneumoconiosis. If ingested, the presence of soluble barium salts as impurities may cause toxic reactions due to bioaccumulation., Damage to the lungs., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.   |
| Additional information                             | Stomach irregularities - based on human evidence  |
| <b>Carbon Black(1333-86-4)</b>                     |   |
| LD50 Oral - Rat                                    | > 8,000 mg/kg, male and female, (OECD Test Guideline 401)   |
| LD50 Inhalation - Rat                              | No data available   |
| LD50 Dermal - Rabbit                               | > 3,000 mg/kg   |
| Skin corrosion/irritation                          | No skin irritation - 24 h, (OECD Test Guideline 404)  |
| Eye damage/irritation - Rabbit                     | No eye irritation, (OECD Test Guideline 405)  |
| Respiratory/skin sensitization - Guinea pig        | Did not cause sensitization on laboratory animals, (OECD Test Guideline 406)  |
| Germ cell mutagenicity                             | Ames test, S. typhimurium, negative   |
| Hamster - Ovary                                    | Negative  |



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| DNA repair - Rat - Female                                     | Negative  |
| Carcinogenicity - Rat - Inhalation                            | Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies. |
| IARC  | 2B - Group 2B: Possibly carcinogenic to humans (carbon black)   |
| NTP   | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP  |
| OSHA  | No component of this product present at levels greater than 0.1% is identified as a carcinogen or potential carcinogen by OSHA  |
| Reproductive toxicity   | No data available   |
| Organ toxicity  | Specific target organ toxicity - single exposure: No data available   |
| Organ toxicity  | Specific target organ toxicity - repeated exposure: No data available   |
| Aspiration hazard   | No data available   |
| Additional Information  | RTECS: FF5800000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  |
| <b>E-Caprolactam(105-60-2)</b>                                |   |
| Acute toxicity - LD50 - oral - rat                            | 1210 mg/kg  |
| Remarks   | Sense organs and special senses (nose, eye, ear and taste): Eye: Chromodacryorrhea  |
| Behavioral  | Convulsions or effect on seizure threshold.   |
| Nutritional and Gross Metabolic - changes in body temperature | Decrease  |
| Acute toxicity - LC50 - inhalation - rat                      | 300 mg/m <sup>3</sup>   |
| Acute toxicity - LC50 - inhalation - mouse                    | 450 mg/m <sup>3</sup> : Muscle contraction or spasticity  |
| Acute toxicity - LD50 - dermal - rat                          | > 2000 mg/kg  |
| Skin irritation - rabbit                                      | Mild skin irritation - 24 h   |
| Eye irritation - rabbit                                       | Moderate eye irritation - 24 h  |
| Respiration or skin sensitization - germ cell mutagenicity    | No data available   |
| Carcinogenicity   | This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.   |
| IARC  | Group 4: Probably not carcinogenic to humans  |
| NTP   | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP  |
| OSHA  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA  |
| Reproductive toxicity   | No data available   |
| Specific target organ toxicity - single exposure              | May cause respiratory irritation  |
| Specific target organ toxicity - repeated exposure            | No data available   |
| Aspiration hazard   | No data available   |
| Additional information  | Convulsions, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated   |
| Additional information  | Stomach irregularities based on human evidence  |
| <b>Pentaerythritol tetrakis(6683-19-8)</b>                    |   |
| Acute toxicity - LD50 - oral - male rat                       | > 5000 mg/kg  |
| Acute toxicity - LC50 - inhalation - male and female rat      | > 1.95 mg/l / 4h  |
| Acute toxicity - LD50 - dermal - male and female rabbit       | > 3160 mg/kg  |
| Acute toxicity - LD50 - intraperitoneal - rat                 | > 1000 mg/kg  |
| Skin corrosion - rabbit                                       | No skin irritation - 24 h   |
| Eye irritation - rabbit                                       | No eye irritation   |
| Respiratory or skin sensitization - guinea pig                | Does not cause skin sensitization   |
| Germ cell mutagenicity - Ames test - S. typhimurium           | Negative  |
| Mutagenicity - micronucleus test - male and female hamster    | Negative  |
| IARC carcinogenicity  | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC   |
| ACGIH   | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH   |

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| NTP   | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP                    |
| OSHA  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA                |
| Reproductive toxicity   | No data available   |
| Specific target organ toxicity - single exposure                                | No data available   |
| Specific target organ toxicity - repeated exposure                              | No data available   |
| Aspiration hazard   | No data available   |
| <b>Phthalocyanine Blue(147-14-8)</b>  |   |
| Acute toxicity - LD50 - oral - male and female rat                              | > 2000 mg/kg  |
| Acute toxicity - Inhalation   | No data available   |
| Acute toxicity - dermal - male and female rat                                   | > 5000 mg/kg  |
| Skin irritation - rabbit  | No skin irritation - 4h   |
| Eye irritation - rabbit   | No eye irritation - 24 h  |
| Respiration or skin sensitization - maximisation test - guinea pig              | Does not cause skin sensitisation   |
| Germ cell mutagenicity - hamster - fibroblast                                   | Negative  |
| Germ cell mutagenicity - Ames test - S. typhimurium                             | Negative  |
| Germ cell mutagenicity - male and female mouse                                  | Negative  |
| Germ cell mutagenicity  | Mutation in mammalian somatic cells   |
| IARC  | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC  |
| ACGIH   | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH               |
| NTP   | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP                    |
| OSHA  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA                |
| Reproductive toxicity   | No data available   |
| Specific target organ toxicity - single exposure                                | No data available   |
| Specific target organ toxicity - repeated exposure                              | No data available   |
| Aspiration hazard   | No data available   |
| Additional information  | Repeated dose toxicity - male and female rat - oral - no observed adverse effect level - 1000 mg/kg   |
| <b>Tris(2,4-ditert-butylphenyl) phosphite(31570-04-4)</b>                       |   |
| LD50 - oral - male and female rat - Acute Toxicity                              | > 6000 mg/kg  |
| LD50 - dermal - male and female rat   | > 2000 mg/kg  |
| Skin irritation - rabbit  | No skin irritation / 24 h   |
| Eye irritation- rabbit  | No eye irritation / 30 s  |
| Respiratory or skin sensitization - guinea pig                                  | Does not cause skin sensitization   |
| Germ cell mutagenicity -Ames test (micronucleus test) - male and female hamster | Negative  |
| Carcinogenicity - oral - male and female rat                                    | No adverse effect has been observed in chronic toxicity tests   |
| IARC  | No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC |
| ACGIH   | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH               |
| NTP   | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen                           |
| OSHA  | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA                |
| Reproductive toxicity   | Not data available  |





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| Developmental toxicity - oral - rabbit             | No adverse effect has been observed in chronic toxicity tests  |
| Specific target organ toxicity - single exposure   | No data available  |
| Specific target organ toxicity - repeated exposure | No data available  |
| Additional information                             | Repeated dose toxicity - rat - male and female - oral - No observed adverse effect level - >/ 1000 mg/kg |
| Additional information                             | No adverse effect has been observed in chronic toxicity tests  |

**12. ECOLOGICAL INFORMATION**

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| <b>1,3,5-Triglycidyl Isocyanurate(2451-62-9)</b>   |   |
| Toxicity to fish - static test LC50 - danio rerio (zebra fish)   | > 77 mg/l - 96 h  |
| Toxicity to daphnia and other aquatic invertebrates - Immobilization - EC50 - daphnia magna (water flea) | > 100 mg/l - 24 h   |
| Toxicity to algae - growth inhibition - EC50 - <i>Desmodesmus subspicatus</i>                            | 29 - 30 mg/l - 72 h   |
| Toxicity to bacteria - Respiration inhibition - IC50 - Sludge Treatment                                  | > 100 mg/l 3 h  |
| Persistence and degradability - biodegradability - aerobic - exposure time: 44 d                         | 0.5 - 1% - not biodegradable  |
| Bioaccumulative potential  | No data available   |
| Mobility in soil   | No data available   |
| PBT & vPvB   | not available/not required  |
| Other adverse effects  | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects                                       |
| <b>Aluminum(7429-90-5)</b>   |   |
| Ecotoxicity  | Ecological injuries are not known or expected under normal use.   |
| Aquatic toxicity - aluminum - LC50 - rainbow trout   | 0.16 mg/L / 96 h  |
| Aquatic toxicity - silicon dioxide - IC50 - algae  | 440 mg/L / 72 h   |
| Aquatic toxicity - silicon dioxide - EC50 - daphnia  | 7600 mg/L / 48 h  |
| Aquatic toxicity - silicon dioxide - LC50 - fish   | 5000 mg/L / 96 h  |
| Persistence and degradability  | No data is available on the degradability of this product.  |
| Bioaccumulative potential  | No data available   |
| Mobility in soil   | No data available   |
| Other adverse effects  | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |
| <b>Amorphous Silica(112926-00-8)</b>   |   |
| Toxicity   | no data available   |
| Persistence and degradability  | no data available   |
| Bioaccumulative potential  | no data available   |
| Mobility in soil   | no data available   |
| PBT and vPvB   | not available/not required  |
| <b>Barium Sulfate(7727-43-7)</b>   |   |
| Toxicity   | No data available   |
| Persistence and degradability  | The methods for determining biodegradability are not applicable in inorganic substances   |
| Bioaccumulative potential  | No data available   |
| Mobility in soil   | No data available   |
| PBT and vPvB   | not available/not required  |
| <b>Carbon Black(1333-86-4)</b>   |   |
| Toxicity to fish LC50  | Danio rerio (zebra fish) >1000 mg/l - 96 h  |
| EC50 Toxicity to daphnia and other aquatic invertebrates   | Daphnia magna (Water flea) > 5600 mg/l - 24 h (OECD Test Guideline 202)   |
| EC50 Toxicity to algae   | <i>Desmodesmus subspicatus</i> (green algae) > 10,000 mg/l - 72 h (OECD Test Guideline 201)   |
| Persistence and degradability  | No data available   |





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| Bioaccumulative potential  | No data available                               |
| Mobility in soil   | No data available                               |
| PBT and vPvB assessment  | Not available/not required                      |
| <b>E-Caprolactam(105-60-2)</b>   |   |
| Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (water flea)                | 828 - 2920 mg/l - 48 h                          |
| Toxicity to algae - EC50 - green algae   | 4320 - 4800 mg/l - 72 h                         |
| Persistence and degradability  | No data available                               |
| Bioaccumulative potential  | No data available                               |
| Mobility in soil   | No data available                               |
| PBT and vPvB   | not available/not required                      |
| Other adverse effects  | No data available.                              |
| <b>Pentaerythritol tetrakis(6683-19-8)</b>   |   |
| Toxicity to fish - static LC50 - zebra fish  | > 100 mg/L / 96 h                               |
| Toxicity to daphnia and other aquatic invertebrates - immobilization EC50 - daphnia magna (water flea) | > 86 mg/L / 24 h                                |
| Toxicity to algae - static EC50 - Scenedesmus subspicatus  | > 100 mg/L / 72 h                               |
| Toxicity to bacteria - respiration inhibition IC50 - sludge treatment                                  | > 100 mg/L / 3 h                                |
| Persistence and degradability - biodegradability - aerobic   | 5% - not biodegradable : exposure time - 28 d   |
| Bioaccumulative potential  | No data available                               |
| Mobility in soil   | No data available                               |
| PBT and vPvB   | Not available/not required                      |
| Other adverse effects  | No data available                               |
| <b>Phthalocyanine Blue(147-14-8)</b>   |   |
| Toxicity to fish - mortality LC50 - zebra fish   | > 100 mg/L / 96 h                               |
| Toxicity to fish - mortality LC50 - carp   | > 100 mg/L / 96 h                               |
| Toxicity to daphnia and other aquatic invertebrates - immobilization EC50 - Daphnia magna (water flea) | > 500 mg/L / 48 h                               |
| Toxicity to algae - static EC50 - green algae  | > 100 mg/L / 72 h                               |
| Toxicity to bacteria - respiration inhibition - EC50 - sludge treatment                                | > 10000 mg/L / 3h                               |
| Persistence and degradability - biodegradability - aerobic   | 5% - not biodegradable - exposure time: 28 d    |
| Bioaccumulative potential  | No data available                               |
| Mobility in soil   | No data available                               |
| PBT and vPvB   | Not available/not required                      |
| <b>Tris(2,4-ditert-butylphenyl) phosphite(31570-04-4)</b>  |   |
| Toxicity to fish - static LC0 - zebra fish   | 100 mg/L / 96 h                                 |
| Toxicity to daphnia and other aquatic invertebrates - static EC50 - Daphnia magna                      | 510 mg/L / 24 h                                 |
| Toxicity to algae - static EC50 - Scenedesmus subspicatus  | > 75 mg/L / 72 h                                |
| Toxicity to bacteria - respiration inhibition IC50 - sludge treatment                                  | > 100 mg/L / 3 h                                |
| Persistence and degradability - biodegradability - aerobic   | 6% - not readily biodegradable - exposure: 28 d |
| Bioaccumulative potential  | No data available                               |
| Mobility in soil   | No data available                               |
| PBT and vPvB   | not available/not required                      |

**13. DISPOSAL CONSIDERATIONS****WASTE TREATMENT METHODS****GENERAL INFORMATION :** No data available.**DISPOSAL METHOD:** Dispose of in accordance with Local, State, Regional, National and International Regulations.

Ecology - waste materials: Avoid release to the environment.

**14. TRANSPORT INFORMATION****\*CHECK WITH YOUR CARRIER FOR ADDITIONAL RESTRICTIONS THAT MAY APPLY.****USDOT GROUND****DOT (DEPARTMENT OF TRANSPORTATION)****PROPER SHIPPING NAME (DOT) :** Not Regulated/Not Applicable**HAZARDS CLASS :** None**UN/NA NUMBER :** Not Applicable**PACKING GROUP :** None**EMERGENCY RESPONSE GUIDE (ERG) :** Not Applicable**IATA (AIR)****DOT (INTERNATIONAL AIR TRANSPORTATION ASSOCIATION)****PROPER SHIPPING NAME :** Not Regulated/Not Applicable**HAZARDS CLASS :** Not Applicable**UN/NA NUMBER :** Not Applicable**PACKING GROUP :** Not Applicable**EMERGENCY RESPONSE GUIDE (ERG) :** Not Applicable**IMDG (OCEAN)****PROPER SHIPPING NAME :** Not Regulated , Not Applicable**HAZARDS CLASS :** Not Applicable**UN/NA NUMBER :** Not Applicable**PACKING GROUP :** Not Applicable**EMERGENCY RESPONSE GUIDE (ERG) :** Not Applicable**MARINE POLLUTANT :** No**SPECIAL PRECAUTIONS :** P235 Keep cool.

**15. REGULATORY INFORMATION****US FEDERAL REGULATIONS**

All ingredients are TSCA (Toxic Substance Control Act) listed.

**OSHA HAZARDS :** Moderate skin irritant, Moderate eye irritant.

**EPCRA - Emergency**

**CERCLA REPORTABLE QUANTITY**

**SARA 304 Extremely Hazardous Substances Reportable Quantity :** This material does not contain any components with a section 304 EHS RQ.

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**SARA 311/312 Hazards :** Acute Health Hazard, Chronic Health Hazard.

| <b>This product contains:</b>  | <b>Chemical CAS#</b> |
|--------------------------------|----------------------|
| 1,3,5-Triglycidyl Isocyanurate | 2451-62-9            |
| Carbon Black                   | 1333-86-4            |
| Aluminum                       | 7429-90-5            |

**SARA 313 :** This Product Contains Aluminum Powder (CAS 7429-90-5)

**CLEAN AIR ACT :****INTERNATIONAL REGULATIONS****CLASSIFICATION ACCORDING TO REGULATION (EC) No. 1272/2008 (CLP) :**

|                   |      |  |
|-------------------|------|--|
| Eye Dam. 1        | H318 | Causes serious eye damage                                      |
| Skin Sens. 1      | H317 | May cause an allergic skin reaction                            |
| Muta. 1B          | H340 | May cause genetic defects                                      |
| Carc. 2           | H351 | Suspected of causing cancer                                    |
| STOT RE 1         | H372 | Causes damage to organs through prolonged or repeated exposure |
| Aquatic Chronic 3 | H412 | Harmful to aquatic life with long lasting effects              |

**NATIONAL REGULATIONS**

| <b>This product contains:</b> | <b>Chemical CAS#</b> |
|-------------------------------|----------------------|
| ~Carbon Black                 | 1333-86-4            |

**National Regulations Key**




~ Indicates a chemical listed by IARC as a possible carcinogen.

^ Indicates a chemical listed by IARC as carcinogenic to humans.

**STATE REGULATIONS  
CALIFORNIA PROPOSITION 65**

| This product contains: | Chemical CAS# |
|------------------------|---------------|
| *Carbon Black          | 1333-86-4     |

**Proposition 65 Key**

- \*  **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause cancer.  
For more information visit [WWWPROP65.CA.GOV](http://WWWPROP65.CA.GOV).
- #  **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause birth defects or other reproductive harm.  
For more information visit [WWWPROP65.CA.GOV](http://WWWPROP65.CA.GOV).
- +  **WARNING:** This product can expose you to a chemical(s), including those listed above, which is (are) known to the State of California to cause cancer and birth defects or other reproductive harm.  
For more information visit [WWWPROP65.CA.GOV](http://WWWPROP65.CA.GOV).

**Massachusetts Right to Know**

| This product contains | Chemical CAS# |
|-----------------------|---------------|
| Barium Sulfate        | 7727-43-7     |
| Carbon Black          | 1333-86-4     |
| Aluminum              | 7429-90-5     |
| E-Caprolactam         | 105-60-2      |
| Amorphous Silica      | 112926-00-8   |

**Pennsylvania Right to Know**

| This product contains                  | Chemical CAS# |
|--|---------------|
| Barium Sulfate                         | 7727-43-7     |
| Carbon Black                           | 1333-86-4     |
| Aluminum                               | 7429-90-5     |
| E-Caprolactam                          | 105-60-2      |
| Pentaerythritol tetrakis               | 6683-19-8     |
| Tris(2,4-ditert-butylphenyl) phosphite | 31570-04-4    |
| Amorphous Silica                       | 112926-00-8   |

**New Jersey Right to Know**

| This product contains                  | Chemical CAS# |
|--|---------------|
| Barium Sulfate                         | 7727-43-7     |
| 1,3,5-Triglycidyl Isocyanurate         | 2451-62-9     |
| Carbon Black                           | 1333-86-4     |
| Aluminum                               | 7429-90-5     |
| E-Caprolactam                          | 105-60-2      |
| Pentaerythritol tetrakis               | 6683-19-8     |
| Phthalocyanine Blue                    | 147-14-8      |
| Tris(2,4-ditert-butylphenyl) phosphite | 31570-04-4    |
| Amorphous Silica                       | 112926-00-8   |

**16. OTHER INFORMATION****Other Product Information:**

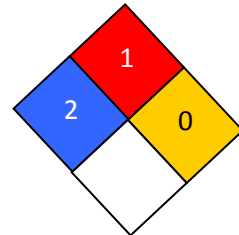
% Volatile by Volume : 0.00                      % Volatile by Weight : 0.00  
% Solids by volume : 100.00                    % Solids by Weight : 100.00

**VOC CONTENT:**

Content tested per EPA METHOD 24, ASTM D2369 is less than 1% Wt/Wt.

**HMIS RATING**

|                       |   |
|-----------------------|---|
| Health :              | 2 |
| Flammability :        | 1 |
| Reactivity :          | 0 |
| Personal Protection : | E |

**NFPA CODES**

**MANUFACTURER DISCLAIMER :** The information contained in this Safety Data Sheet is considered to be true and accurate. Cardinal Paint and Powder makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. This data is offered solely for the user's consideration, investigation and verification.