

**T243-GR301 QUARTZ GRAY****1. PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** T243-GR301 QUARTZ GRAY  
**PRODUCT USE:** Industrial Powder Coating

**MANUFACTURER**

Cardinal Paint and Powder  
1329 Potrero Ave  
S. El Monte, CA, 91733  
626 444-9274

**24 HR. EMERGENCY TELEPHONE NUMBER**

**CHEMTREC (US Transportation):** (800)424-9300  
**CHEMTREC (International Transportation):** (202)483-7616  
**WEB:** WWW.CARDINALPAINT.COM

**2. HAZARDS IDENTIFICATION****PICTOGRAMS :**

**SIGNAL WORD :** DANGER

**HAZARD STATEMENTS :**

H412 Harmful to aquatic life with long lasting effects.  
H340 May cause genetic defects.  
H351 Suspected of causing cancer.  
H317 May cause an allergic skin reaction.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H318 Causes serious eye damage.

**PRECAUTIONARY STATEMENTS :**

P201 Obtain special instructions before use.  
P260 Do not breathe dust.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P202 Do not handle until all safety precautions have been read and understood.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Weight %	CAS Number
Titanium Dioxide	25% - 30%	13463-67-7
1,3,5-Triglycidyl Isocyanurate	1% - 5%	2451-62-9
Aluminum Oxide	<1%	1344-28-1

**4. FIRST AID MEASURES****Description of first aid measures.**

**EYE CONTACT :** 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.



**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**

<b>1,3,5-Triglycidyl Isocyanurate(2451-62-9)</b>		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.05 mg/m <sup>3</sup> 8 hours
<b>2-Mercaptobenzothiazole(149-30-4)</b>		
USA WEEL	(WEEL) TWA	5 mg/m <sup>3</sup>
<b>Aluminum Oxide(1344-28-1)</b>		
USA OSHA	(OEL) Table Z-1, TWA	15 mg/m <sup>3</sup>
USA ACGIH	(TLV) TWA	1 mg/m <sup>3</sup>
<b>Amorphous Pyrogenic Silica(112945-52-5)</b>		
USA OSHA	USA OSHA TWA (OEL Table Z-3)	80 mg/m <sup>3</sup> 3/%SiO <sub>2</sub>
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m <sup>3</sup>
<b>Amorphous Silica(112926-00-8)</b>		
USA OSHA	USA OSHA TWA (Table Z-1)	6 mg/m <sup>3</sup>
USA OSHA	USA OSHA TWA (Table Z-3)	20 Million particals per cubic foot.
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m <sup>3</sup>
<b>Carbon Black(1333-86-4)</b>		
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
<b>Crystalline Silica(14808-60-7)</b>		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.025 mg/m <sup>3</sup> 8 hours
<b>Iron Oxide(1309-37-1)</b>		
USA ACGIH	USA ACGIG (TLV) TWA	5 mg/m <sup>3</sup>
USA OSHA	USA OSHA (OEL) TWA Table Z-1	15 mg/m <sup>3</sup>
USA NIOSH	USA NIOSH (REL) TWA	5 mg/m <sup>3</sup>
<b>Limestone(1317-65-3)</b>		
ACGIH	Not Applicable	Not Applicable
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m <sup>3</sup> (Total Dust) 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	5 mg/m <sup>3</sup> (Respirable Fraction) 8 hours
NIOSH REL (Recommend Exposure Limit)	TWA (Time Weighted Average)	15 mg/m <sup>3</sup> (Total Dust) 8 hour
NIOSH REL (Recommend Exposure Limit)	TWA (Time Weighted Average)	5 mg/m <sup>3</sup> (Respirable Fraction) 8 hours
<b>Titanium Dioxide(13463-67-7)</b>		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	10 mg/m <sup>3</sup> 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m <sup>3</sup> 8 hours

**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>	:	1.6681
<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/m <sup>3</sup>
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>2-Mercaptobenzothiazole(149-30-4)</b>	
Acute toxicity - LD50 - oral - male and femal rat	3800 mg/kg
Acute toxicity - LC50 - inhalation - rat	> 1270 mg/m <sup>3</sup>
Acute toxicity - LD50 - dermal - male and female rabbit	> 7940 mg/kg



Skin irritation - rabbit	No skin irritation / 24 h
Eye irritation - rabbit	No eye irritation / 24 h
Respiratory or skin sensitisation - Buehler test - guinea pig	May cause allergic skin reaction
Respiratory or skin sensitisation - Maximisation test - guinea pig	May cause allergic skin reaction
Germ cell mutagenicity - Ames test - S. typhimurium	Negative
Germ cell mutagenicity - male and female mouse	Negative
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	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 - lowest observed adverse effect level - 2500 mg/kg
Additional information	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
<b>Aluminum Oxide(1344-28-1)</b>	
Acute toxicity - LD50 - oral - rat	> 10,000 mg/kg
Acute toxicity - LC50 - inhalation - rat	> 2.6 mg/L / 4 h
Acute toxicity - dermal	No data available
Skin irritation - rabbit	No skin irritation
Eye irritation - rabbit	No eye irritation
Respiratory or skin sensitisation - maximisation test - guinea pig	Did not cause sensitisation on laboratory animals
Germ cell mutagenicity	No data available
Carcinogenicity	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification
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
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	Cough, chest pain, difficulty in breathing, gastrointestinal disturbance
Additional information	Liver irregularities based on human evidence
<b>Amorphous Pyrogenic Silica(112945-52-5)</b>	
Acute toxicity - Inhalation	No data available
Acute toxicity - Dermal	No data available
Skin irritation	No data available
Respiratory or skin sensation	No data available
Germ cell mutagenicity - rat - lungs	Body fluid assay
Germ cell mutagenicity - rat	Unscheduled DNA synthesis
Carcinogenicity - Rat - Inhalation	Tumorigenic: Carcinogenic by RTECS criteria. Lungs, thorax, or respiration: tumors
IARC	Not classifiable as to its carcinogenicity to human
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 as 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	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
Additional information	Stomach irregularities based on human evidence
<b>Amorphous Silica(112926-00-8)</b>	
Acute toxicity	no data available
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	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, <i>S. typhimurium</i> , negative
Hamster - Ovary	Negative
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>Crystalline Silica(14808-60-7)</b>	
Acute Inhalation toxicity	no data available
Acute Dermal toxicity	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	Limited evidence of carcinogenicity in human studies
IARC	Group 1: Carcinogenic to humans (Quartz)
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	Known to be human carcinogen (Quartz)
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 - inhalation	may cause damage to organs through prolonged or repeated exposure
Aspiration hazard	no data available
Additional information	Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stage, loss of appetite, pleuric pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 "known to be carcinogenic to humans" by IARC and "sufficient evidence" of carcinogenicity by the NTP., The chronic health risks are associated with respirable particles of 3-4 um over protracted periods of time. Currently, there is a limited understanding of the mechanisms of quartz toxicity, including its mechanisms for lung carcinogenicity. Additional studies are needed to determine whether the cell transforming activity of quartz is related to its carcinogenic potential.
Additional information	Liver - Irregularities - based on human evidence



<b>Iron Oxide(1309-37-1)</b>	
Acute toxicity	No data available
Acute toxicity - dermal	No data available
Skin irritation - human	Skin irritation
Eye irritation - human	Moderate eye irritation
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity - rat - subcutaneous	Equivocal tumorigenic agent by RTECS criteria. Tumors at site of application.
Carcinogenicity	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification.
IARC	Group 3: not classifiable as to its carcinogenicity to humans (diiron trioxide).
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	inhalation - may cause respiratory irritation.
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional information	Long term inhalation exposure to iron (oxide fume or dust) can cause siderosis. Siderosis is considered to be a benign pneumoconiosis and does not normally cause significant physiological impairment. Siderosis can be observed on x-rays with the lungs having a mottled appearance., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
<b>Limestone(1317-65-3)</b>	
Draize test, rabbit, eye	750 ug/24H severe
Draize test, rabbit, skin	500 mg/24H moderate
Oral, rat: LD50	6450 mg/kg
ACGIH, IARC, NTP, CA Prop 65	Not listed
Epidemiology	No information available
Teratogenicity	No information available
Reproductive effects	No information available
Mutagenicity	No information available
Neurotoxicity	No information available
<b>Titanium Dioxide(13463-67-7)</b>	
Acute toxicity - LD50 - oral - rat	> 10000 mg/kg
Acute toxicity - inhalation	No data available
Acute toxicity - LD50 - dermal - rabbit	> 10000 mg/kg
Skin irritation - human	Mild skin irritation - 3 h
Eye irritation - rabbit	No eye irritation
Respiration or skin sensitisation	Will not occur
Germ cell mutagenicity - hamster - ovary - micronucleus test	No results available
Germ cell mutagenicity - hamster - lungs	DNA inhibition
Germ cell mutagenicity - hamster - ovary - sister chromatid exchange	No results available
Germ cell mutagenicity - mouse - micronucleus test	No results available
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
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	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>Zinc Stearate(557-05-1)</b>	
Acute toxicity - LD50 - oral - rat	> 10000 mg/kg
Acute toxicity - dermal	No data available
Skin irritation	No data available
Eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
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
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	Aspiration or inhalation may cause chemical pneumonitis., Lung irritation, chest pain, pulmonary edema
Additional information	Stomach irregularities based on human evidence

**12. ECOLOGICAL INFORMATION**

<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 - Desmodesmus subspicatus	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>2-Mercaptobenzothiazole(149-30-4)</b>	
Toxicity to fish - flow-through test - LC50 - rainbow trout	0.73 mg/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - immobilization EC50 - Daphnia magna (water flea)	0.71 mg/L / 48 h
Toxicity to algae - growth inhibition - EC50 - green algae	0.5 mg/L - 72 h
Persistence and degradability - biodegradability - biotic/aerobic	1% - not readily biodegradable - exposure time: 28 d
Bioaccumulative potential - bioaccumulation - carp	0.1 mg/L / 42 d
Bioaccumulative potential - Bioconcentration factor	< 0.8
Mobility in soil	No data available
PBT and vPvB	Not available/not required
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.



<b>Aluminum Oxide(1344-28-1)</b>	
Toxicity	No toxicity at the limit of solubility
Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances
Bioaccumulative potential	Does not bioaccumulate
Mobility in soil	No data available
PBT and vPvB	Not available/not required
Other adverse effects	No data available.
<b>Amorphous Pyrogenic Silica(112945-52-5)</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>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	Desmodesmus subspicatus (green algae > 10,000 mg/l - 72 h (OECD Test Guideline 201)
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB assessment	Not available/not required
<b>Crystalline Silica(14808-60-7)</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>Iron Oxide(1309-37-1)</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
Other adverse effects	No data available
<b>Limestone(1317-65-3)</b>	
Ecotoxicity	No data available
Environmental	No information reported
Physical	No information available
<b>Titanium Dioxide(13463-67-7)</b>	
Toxicity to fish - LC50 - other fish	> 1000 mg/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (water flea)	> 1000 mg/L / 48 h
Toxicity to daphnia and other aquatic invertebrates - EC0 - Daphnia magna (water flea)	1000 mg/L / 48 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
Zinc Stearate(557-05-1)	
Toxicity	No data available
Persistence and degradability	50% - readily biodegradable
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB	Not available/not required
Other adverse effects	No data available

**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>
Titanium Dioxide	13463-67-7
1,3,5-Triglycidyl Isocyanurate	2451-62-9
Aluminum Oxide	1344-28-1

**SARA 313 :** No SARA 313 chemicals are present**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>
~Titanium Dioxide	13463-67-7

**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**

<b>This product contains:</b>	<b>Chemical CAS#</b>
*Titanium Dioxide	13463-67-7
*Crystalline Silica	14808-60-7
*Carbon Black	1333-86-4
*2-Mercaptobenzothiazole	149-30-4

**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**

<b>This product contains</b>	<b>Chemical CAS#</b>
Titanium Dioxide	13463-67-7
Limestone	1317-65-3
Aluminum Oxide	1344-28-1
Zinc Stearate	557-05-1
Crystalline Silica	14808-60-7
Amorphous Silica	112926-00-8
Carbon Black	1333-86-4
Iron Oxide	1309-37-1
Barium Sulfate	7727-43-7

**Pennsylvania Right to Know**

<b>This product contains</b>	<b>Chemical CAS#</b>
Titanium Dioxide	13463-67-7
Limestone	1317-65-3
Aluminum Oxide	1344-28-1
Zinc Stearate	557-05-1
Crystalline Silica	14808-60-7
Amorphous Silica	112926-00-8
Carbon Black	1333-86-4
Iron Oxide	1309-37-1
2-Mercaptobenzothiazole	149-30-4
Amorphous Pyrogenic Silica	112945-52-5
Barium Sulfate	7727-43-7

**New Jersey Right to Know**

<b>This product contains</b>	<b>Chemical CAS#</b>
Titanium Dioxide	13463-67-7
Limestone	1317-65-3
1,3,5-Triglycidyl Isocyanurate	2451-62-9
Aluminum Oxide	1344-28-1
Zinc Stearate	557-05-1
Crystalline Silica	14808-60-7
Amorphous Silica	112926-00-8
Carbon Black	1333-86-4
Iron Oxide	1309-37-1
2-Mercaptobenzothiazole	149-30-4
Amorphous Pyrogenic Silica	112945-52-5
Barium Sulfate	7727-43-7

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

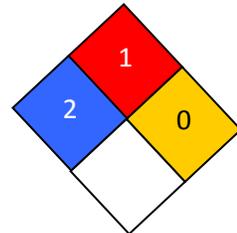
% Volatile by Volume : 0.00                      % Volatile by Weight : 0.00  
% Solids by volume : 100.00                    % Solids by Weight : 100.00

**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.