

**T357-GR105 SILVER****1. PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: T357-GR105 SILVER
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	10% - 15%	13463-67-7
1,3,5-Triglycidyl Isocyanurate	1% - 5%	2451-62-9
Aluminum	<1%	7429-90-5
Aluminum Oxide	<1%	1344-28-1
Carbon Black	0.10% - 0.50%	1333-86-4



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

1,3,5-Triglycidyl Isocyanurate(2451-62-9)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.05 mg/m3 8 hours
Aluminum Oxide(1344-28-1)		
USA OSHA	(OEL) Table Z-1, TWA	15 mg/m3
USA ACGIH	(TLV) TWA	1 mg/m3
Aluminum(7429-90-5)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	1 mg/m3 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	5 mg/m3 (Respirable Fraction) 8 hours
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	5 mg/m3 (Respirable Fraction) 10 hours
Amorphous Pyrogenic Silica(112945-52-5)		
USA OSHA	USA OSHA TWA (OEL Table Z-3)	80 mg/m3 3/%SiO2
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m3
Amorphous Silica(112926-00-8)		
USA OSHA	USA OSHA TWA (Table Z-1)	6 mg/m3
USA OSHA	USA OSHA TWA (Table Z-3)	20 Million particals per cubic foot.
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m3
Carbon Black(1333-86-4)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	3 mg/m3 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	3.5 mg/m3 8 hours
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	3.5 mg/m3 8 hours
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	0.1mg of PAHs/cm3 10 hours
Crystalline Silica(14808-60-7)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.025 mg/m3 8 hours
Limestone(1317-65-3)		
ACGIH	Not Applicable	Not Applicable
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m3 (Total Dust) 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	5 mg/m3 (Respirable Fraction) 8 hours
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	15 mg/m3 (Total Dust) 8 hour
NIOSH REL (Recommended Exposure Limit)	TWA (Time Weighted Average)	5 mg/m3 (Respirable Fraction) 8 hours
Silicon Dioxide(7631-86-9)		
USA NIOSH	USA NIOSH TWA (REL)	6 mg/m3
USA OSHA	USA OSHA TWA (Table Z-3)	20 mppcf
Styrene(100-42-5)		
USA NIOSH	USA NIOSH TWA (REL)	50 ppm, 215 mg/m3
USA NIOSH	USA NIOSH ST (REL)	100 ppm, 425 mg/m3
USA OSHA	USA OSHA TWA (OEL) Table Z-2	100 ppm
USA ACGIH	USA ACGIH STEL (TLV)	40 ppm
Titanium Dioxide(13463-67-7)		
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	10 mg/m3 8 hours
OSHA PEL (Permissible Exposure Limit)	TWA (Time Weighted Average)	15 mg/m3 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**

Physical state	:	Solid
Melting point	:	55 - 90 deg C
Flash point	:	No data available.
Lower explosion limit	:	10 g/m ³
Upper explosion limit	:	70 g/m ³
Density	:	1.4086
Solubility	:	No data available.
Autoignition temperature	:	No data available.
Decomposition temperature	:	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**

1,3,5-Triglycidyl Isocyanurate(2451-62-9)	
Acute toxicity - LD50 - oral - rat	100 - 200 mg/kg
Acute toxicity - LC50 - inhalation - rat - male - 4 h	> 650 mg/m ³
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



Aluminum Oxide(1344-28-1)	
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
Aluminum(7429-90-5)	
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.
Amorphous Pyrogenic Silica(112945-52-5)	
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
Amorphous Silica(112926-00-8)	
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
Carbon Black(1333-86-4)	
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.
Crystalline Silica(14808-60-7)	
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
Limestone(1317-65-3)	
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
Pentaerythritol tetrakis(6683-19-8)	
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 sesnsitization - 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



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
Silicon Dioxide(7631-86-9)	
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 sensitisation	No data available
Germ cell mutagenicity	No data available
IARC	Group 3: Not classifiable as to its carcinogenicity to humans (Silicon dioxide)
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
Additional information	Stomach irregularities based on human evidence (silicon dioxide)
Styrene(100-42-5)	
Acute toxicity - LD50 - oral - rat	> 6000 mg/kg
Acute toxicity - LC50 - inhalation - rat	12000 mg/m3 / 4 h
Acute toxicity - LD50 - dermal - male and female rat	> 2000 mg/kg
Skin irritation - rabbit	Skin irritation
Eye irritation - rabbit	Eye irritation / 24 h
Respiratory or skin sensitization - maximisation test - guinea pig	Does not cause skin sensitization.
Germ cell mutagenicity	Laboratory experiments have shown mutagenic effects.
Carcinogenicity	The product is or contains a component that has been reported to be possible carcinogenic based on its IARC, NTP or EPA classification.
IARC	Group 2B - possible carcinogenic to humans
NTP	Reasonably anticipated to be carcinogenic to humans.
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	Suspected of damaging the unborn child. Suspected human reproductive toxicant.
Specific target organ toxicity - single exposure	No data available
specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	No data available
Additional information	Dermatitis, central nervous system depression, nausea, dizziness, headache. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Additional information	Endocrine system
Titanium Dioxide(13463-67-7)	
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
Tris(2,4-ditert-butylphenyl) phosphite(31570-04-4)	
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 femae 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 carconogen by OSHA
Reproductive toxicity	Not data available
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

1,3,5-Triglycidyl Isocyanurate(2451-62-9)	
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
Aluminum Oxide(1344-28-1)	
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.
Aluminum(7429-90-5)	
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.
Amorphous Pyrogenic Silica(112945-52-5)	
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
Amorphous Silica(112926-00-8)	
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
Carbon Black(1333-86-4)	
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
Crystalline Silica(14808-60-7)	
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
Limestone(1317-65-3)	
Ecotoxicity	No data available
Environmental	No information reported
Physical	No information available



Pentaerythritol tetrakis(6683-19-8)	
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
Silicon Dioxide(7631-86-9)	
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
Styrene(100-42-5)	
Toxicity to fish - NOEC - fathead minnow	4 mg/L / 96 h
Toxicity to fish - LC50 - fathead minnow	32 mg/L / 96 h
Toxicity to fish - LOEC - fathead minnow	7.6 mg/L / 96 h
Toxicity to daphnia and other aquatic invertebrates - EC50 - water flea	4.7 mg/L / 48 h
Toxicity to algae - IC50 - green algae	1.4 mg/L / 72 h
Persistence and degradability - aerobic	60% - readily biodegradable - 28 d
Bioaccumulative potential	No data available
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. Toxic to aquatic life.
Titanium Dioxide(13463-67-7)	
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
Tris(2,4-ditert-butylphenyl) phosphite(31570-04-4)	
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.

This product contains:	Chemical CAS#
Titanium Dioxide	13463-67-7
1,3,5-Triglycidyl Isocyanurate	2451-62-9
Aluminum	7429-90-5
Aluminum Oxide	1344-28-1
Carbon Black	1333-86-4

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

This product contains:	Chemical CAS#
~Titanium Dioxide	13463-67-7
~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#
*Titanium Dioxide	13463-67-7
*Carbon Black	1333-86-4
*Crystalline Silica	14808-60-7
*Styrene	100-42-5

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.
- #  **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.
- +  **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.

Massachusetts Right to Know

This product contains	Chemical CAS#
Limestone	1317-65-3
Titanium Dioxide	13463-67-7
Aluminum	7429-90-5
Amorphous Silica	112926-00-8
Aluminum Oxide	1344-28-1
Carbon Black	1333-86-4
Crystalline Silica	14808-60-7
Styrene	100-42-5
Silicon Dioxide	7631-86-9

Pennsylvania Right to Know

This product contains	Chemical CAS#
Limestone	1317-65-3
Titanium Dioxide	13463-67-7
Aluminum	7429-90-5
Amorphous Silica	112926-00-8
Pentaerythritol tetrakis	6683-19-8
Aluminum Oxide	1344-28-1
Carbon Black	1333-86-4
Tris(2,4-ditert-butylphenyl) phosphite	31570-04-4
Crystalline Silica	14808-60-7
Styrene	100-42-5
Silicon Dioxide	7631-86-9
Amorphous Pyrogenic Silica	112945-52-5

**New Jersey Right to Know**

This product contains	Chemical CAS#
Limestone	1317-65-3
Titanium Dioxide	13463-67-7
1,3,5-Triglycidyl Isocyanurate	2451-62-9
Aluminum	7429-90-5
Amorphous Silica	112926-00-8
Pentaerythritol tetrakis	6683-19-8
Aluminum Oxide	1344-28-1
Carbon Black	1333-86-4
Tris(2,4-ditert-butylphenyl) phosphite	31570-04-4
Crystalline Silica	14808-60-7
Styrene	100-42-5
Silicon Dioxide	7631-86-9
Amorphous Pyrogenic Silica	112945-52-5



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

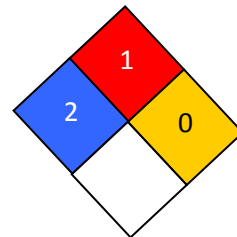
VOC CONTENT:

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.