

**ARDINAL** SAFETY DATA SHEET

# 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

1,3,5-Triglycidyl Isocyanurate(2451-62-9	9)			
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.05 mg/m3 8 hours		
2-Mercaptobenzothiazole(149-30-4)	· · · · · · · · · · · · · · · · · · ·			
USA WEEL	(WEEL) TWA	5 mg/m3		
Aluminum Oxide(1344-28-1)	· · ·			
USA OSHA	(OEL) Table Z-1, TWA	15 mg/m3		
USA ACGIH	(TLV) TWA	1 mg/m3		
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 (Tabla 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	TWA (Time Weighted Average)	3.5 mg/m3 8 hours		
Limit)				
NIOSH REL (Recommended Exposure	TWA (Time Weighted Average)	0.1mg of PAHs/cm3 10 hours		
Limit )				
Crystalline Silica(14808-60-7)				
ACGIH TLV (Threshold Limit Value)	TWA (Time Weighted Average)	0.025 mg/m3 8 hours		
Iron Oxide(1309-37-1)				
USA ACGIH	USA ACGIG (TLV) TWA	5 mg/m3		
USA OSHA	USA OSHA (OEL) TWA Table Z-1	15 mg/m3		
USA NIOSH	USA NIOSH (REL) TWA	5 mg/m3		
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 (Recommende Exposure	TWA (Time Weighted Average)	15 mg/m3 (Total Dust) 8 hour		
LImit)				
NIOSH REL (Recommende Exposure	TWA (Time Weighted Average)	5 mg/m3 (Respirable Fraction) 8		
LImit)		hours		
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 <sup>3</sup>
Upper explosion limit	:	70 g/m <sup>3</sup>
Density	:	1.6681
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 -	> 650 mg/m3
male - 4 h	
Acute toxicity - LD50 - Dermal - rat- male	> 2000 mg/kg
& female	
Skin irritation - rabbit	Mild skin irritation - 24 hours
Eye irritation - rabbit	Severe eye irritation
Respiratory or skin sensation -	May cause sensitization by skin contact
Maximization test - guinea pig	
Germ cell mutagenicity	In vivo tests showed mutagenic effects
Germ cell mutagenicity - AMES test - S.	Positive
typhimurium	
Germ cell mutagenicity - AMES test -	Positive
mouse - male	
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
NTD	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
00114	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
Desve du stive texisitu	0.1% is identified as a carcinogen or potential carcinogen by OSHA No data available
Reproductive toxicity	
Specific target organ toxicity - single	No data available
exposure Specific target organ toxicity - repeated	No data available
exposure	
Aspiration hazard	No data available
Additional information	To the best of our knowledge, the chemical, physical, and toxicological
	properties have not been thoroughly investigated
2-Mercaptobenzothiazole(149-30-4)	
Acute toxicity - LD50 - oral - male and	3800 mg/kg
femal rat	ביי <i>וב</i> ייי ב
Acute toxicity - LC50 - inhalation - rat	> 1270 mg/m3
Acute toxicity - LD50 - dermal - male and	> 7940 mg/kg
female rabbit	
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# CARDINAL SAFETY DATA SHEET

Skin irritation rabbit	No skip irritation / 24 h
Skin irritation - rabbit Eye irritation - rabbit	No skin irritation / 24 h No eye irritation / 24 h
Respiratory or skin sensitisation - Buehler	May cause allergic skin reaction
test - guinea pig	Mary anyon allowin allow was aking
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
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 carcinogenicty 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
Addittional information	Liver irregularities based on human evidence
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



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 - inpeated exposure     No data available       Specific target organ toxicity - repeated exposure     No data available       Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated       Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated       Additional information     To data available       Acute toxicity:     In o data available       Acute toxicity:     In o data available       Acute toxicity:     In o data available       Skin initation     no data available       Carcinogenicity:     IARC: Group 3:       not classifiable as to its carcinogenicity to humans       Carcinogenicity:     IARC: Group 3:       not component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA       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       OSHA	NTP	No component of this product present at levels greater than or equal to 0.1% is identified as as known or anticipated carcinogen
Reproductive toxicity     No data available       Specific target organ toxicity - repeated     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 throughly investigated       Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been throughly investigated       Additional information     To data available       Acute toxicity: Inflation     no data available       Acute toxicity: Dermal     no data available       Acute toxicity: Inflation     no data available       Acute toxicity: Inflation     no data available       Carcinogenicity: Inflation     no data available       Reproductive toxicity: Inflation     no data available       Carcinogenicity: IARC: Group 3:     no totassifiele as to its carcinogenicity to humans       ACGEIN     no component of this product present at levels greater than or equal to 0. 1% its identified as a carcinogen or potential carcinogen by ACGIN       NTP     no data available       Specific target organ toxicity - repeated     no data available       Specific target organ toxicity - repeated     no data available       Specific target	OSHA	No component of this product present at levels greater than or equal to
Specific target organ toxicity - single     No data available       Specific target organ toxicity - repeated     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     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       Acute toxicity.     Ino data available       Acute toxicity.     Ino data available       Acute toxicity.     Ino data available       Ege inritation     Ino data available       Care toxicity.     Ino data available       Ege inritation     Ino data available       Care toxicity.     Ino data available	Reproductive toxicity	
exposure     No data available       Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been throughly investigated       Additional information     Stomach irregularities based on human evidence       Amorphous Silica(112926-00-8)     no data available       Acute toxicity: Inhalation     no data available       Acute toxicity: Inhalation     no data available       Acute toxicity: Inhalation     no data available       Respiratory or skin sensation     no data available       Garcinogenicity: IARC: Group 3:     no data available       Carcinogenicity: IARC: Group 3:     no data available       ACGIH     0.15% is identified as a to its carcinogenicity to humans       ACGIH     0.15% is identified as a to its carcinogen or potential carcinogen by NTP       O.5% A     0.15% is identified as a torinogen or potential carcinogen by OSHA       O.15% is identified as a torinogen or potential carcinogen by OSHA     0.15% is identified as a torinogen or potential carcinogen by OSHA       Reproductive toxicity - repeated     no data available     exposure       Specific target organ toxicity - repeated     no data available     available       Additional information     No data available     available <td>Specific target organ toxicity - single exposure</td> <td></td>	Specific target organ toxicity - single exposure	
Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been throughly investigated       Additional information     Stomach irregularities based on human evidence       Amorphous Stilleq112926-00-8)     no data available       Acute toxicity: Inhalation     no data available       Acute toxicity: Inhalation     no data available       Skin irritation     no data available       Skin irritation     no data available       Germ cell mutagenicity: IARC: Group 3:     no data available       Order available     no data available       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 VRGH       OSFA		No data available
Additional information     To the best of our knowledge, the chemical, physical, and toxicological properties have not been throughly investigated       Additional information     Stomach irregularities based on human evidence       Amorphous Stilleq112926-00-8)     no data available       Acute toxicity: Inhalation     no data available       Acute toxicity: Inhalation     no data available       Skin irritation     no data available       Skin irritation     no data available       Germ cell mutagenicity: IARC: Group 3:     no data available       Order available     no data available       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 VRGH       OSFA	•	No data available
Additional information   Stomach irregularities based on human evidence     Arourphous Silica(112926-00-8)   no data available     Acute toxicity: Inhalation   no data available     Acute toxicity: Inhalation   no data available     Skin irritation   no data available     Germ cell mutagenicity   no data available     Germ cell mutagenicity   no data available     Germ cell mutagenicity   no data available     Carcinogenicity: IARC: Group 3:   not classifiable as to its 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 carcinogen or potential 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 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 - repeated   no data available     Additional information   Amorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica shuld be handled as if possessing the same not knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.     Additiona		To the best of our knowledge, the chemical, physical, and toxicological
Amorphous Silica (12926-00-8)     no data available       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:     no data available       Germ cell mutagenicity:     no data available       Germ cell mutagenicity:     no data available       ACGIH     no data available       ACGIH     no data available       NTP     0.1% is identified as a carcinogenity 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 OSHA       NTP     no data available       Specific target organ toxicity - single     no data available       Appendix     no data available       Additional information     no data available       Appendix     no data available       Appendix target organ toxicity - repeated     no data available       Appendix     no data available       Additional information     Anorphous silica is not classified as to its carcinogenicity to humans, havewere, rystalline silica inhaled in the form of quar	Additional information	
Acute toxicity     no data available       Acute toxicity: Inhalation     no data available       Acute toxicity: Inhalation     no data available       Skin irritation     no data available       Respiratory or skin sensation     no data available       Garcinogenicity: IARC: Group 3:     not data available       ACGIH     no data available       Carcinogenicity: IARC: Group 3:     not classifiable as to its carcinogene 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 carcinogen or potential carcinogen by ACGIH       OSHA     no data available       OSHA     no data available       Specific target organ toxicity - single     no data available       Seposure     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 cristoballite from occupational sources is carcinogenic to humans (Group 1, IARC).       Additional information     No data available       Additional information     No data available       Advariable     No data available       Advariable     No data available       Additional information		
Acute toxicity: Inhalation     no data available       Acute toxicity: Dermal     no data available       Skin irritation     no data available       Py irritation     no data available       Germ cell mutagenicity     no data available       Carcinogenicity: IARC: Group 3:     not classifiable as to its carcinogen or potential carcinogen by ACGIH       O.1% is identified as a carcinogen or potential carcinogen by ACGIH     not component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA       O.1% is identified as a carcinogen or potential carcinogen by 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       O.1% is identified as a carcinogen or potential carcinogen by OSHA     no data available       Specific target organ toxicity - single     no data available       Specific target organ toxicity - repeated     no data available       Additional information     Anorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica inhaled in the form of guarts 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 investigaed.       Additional		no data available
Acute toxicity: Dermal     no data available       Skin 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 arcinogen by NTP       OSHA     no data available       Reproductive toxicity     no data available       Specific target organ toxicity - single     exposure       Additional information     no data available       Additional information     no data available       Additional information     Amorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica sinulate on the nord quarts or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC).       Additional information     No data available       Additional information     No data available       Stomach - irregularities - based on human evidence       Barium Suffate(77227-43-7)       Acute toxicity - inhalaton		
Skin irritation     no data available       Respiratory or skin sensation     no data available       Germ cell mutagenicity     not data available       Garcinogenicity: IARC: Group 3:     not classifiable as to its carcinogen or potential carcinogen by ACGIH       NTP     not classifiable as to its 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 carcinogen or potential carcinogen by VTP       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 - repeated     no data available       Additional information     Anorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica inhaled in the form of quart or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC).       Additional information     No data available       Additional information     No data available       Acute toxicity - inhalation     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     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 data available       Reproductive toxicity     no data available       Specific target organ toxicity - repeated     no data available       exposure     no data available       Additional information     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 is not classified as to its carcinogenicity to humans, however, and toxicological properties have ent been thoroughly investigated.       Additional information     No data available       Stomach - irregularities - based on human evidence       Barium Suffate(7227-43-7)       Acute toxicity - inhalation     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 NTP       OSHA     no data available       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 NTP       OSHA     no data available       Specific target organ toxicity - single     no data available       specific target organ toxicity - repeated     no data available       exposure     no data available       Additional information     Amorphous silica is not classified as to its carcinogenicity to humans, however, crystalline silica inhaled in the form of quarz or cristobalite from occupational sources its carcinogenic to humans (fromoviledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.       Additional information     Stomach - irregularities - based on human evidence       Barium Sulface(7727-43-7)     Acute toxicity - inhalation       Acute toxicity - inhalation     No data available       Acute toxicity - rat - intrapleural - turpicy and avail		
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     0.1% is identified as a carcinogen or potential carcinogen by ACGIH       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       Properties     no data available       Properties     no data available       Properties     no data available       Properties     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 its carcinogenic to humans (Group 1, IARC).       Additional information     Stomach - irregularities - based on human evidence       Barium Suffate(7227-43-7)     Acute toxicity - inhalation       Acute toxicity - inhalation     No data available       Skin irritation     No data available       Skin irritation     No data available       Skin irritation     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 carcinogen or potential 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 NTP       OSHA     no data available       Specific target organ toxicity - single     no data available       Specific target organ toxicity - repeated     no data available       exposure     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 (for however, crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (for howeledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.       Additional information     Stomach - irregularities - based on human evidence       Barium Sulfate(7227-43-7)     Mo data available       Acute toxicity - Inhalation     No data available       Respiratory or skin sensation     No data available <td></td> <td></td>		
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 NTP     OSHA   0.1% is identified as a carcinogen or potential carcinogen by NTP     OSHA   0.1% is identified as a carcinogen or potential carcinogen by NTP     OSHA   0.1% is identified as a carcinogen or potential carcinogen by NTP     Specific target organ toxicity - single   no data available     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   No data available     Skin intritation   No data available     Respiration   No data available     Skin intritation		
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Specific target organ toxicity - single     no data available       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       Barium Sulfate(7227-43-7)     No data available       Acute toxicity - Dermal     No data available       Skin irritation     No data available       Respiratory or skin sensation     No data available       Respiratory or skin sensation     No data available       Carcinogenicity - mouse - microucleus test     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 carcinogen or potential carcinogen by ACGIH       NP     No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by OSHA       ACGIH     No component of this pr	OSHA	
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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       Barium Sulfate(72727-43-7)     Acute toxicity - inhalation       Acute toxicity - inhalation     No data available       Acute toxicity - inhalation     No data available       Skin irritation     No data available       Respiratory or skin sensation     No data available       Germ cell mutagenicity - mouse - micronucleus test     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 great		no data available
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	Specific target organ toxicity - repeated	No data available
	Aspiration hazard	No data available



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 advance stage, loss of appetite, pleuric pain, and total incapacity to work.		
impurities may cause toxic reactions due to bioaccumulation., Damage t       Additional information     Stomach irregularities - based on human evidence       Carbon Black(133-86-4)     Image to the store of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.       LD50 Orl- Rat     > 8,000 mg/kg, male and female, (DECD Test Guideline 401)       LD50 Inhalation - Rat     No data available       LD50 Test Guideline 401     > 3,000 mg/kg, male and female, (DECD Test Guideline 404)       Eve damage/irritation - Rabbit     > 3,000 mg/kg, male and female, (DECD Test Guideline 404)       Eve damage/irritation - Rabbit     No eve initiation, OE Test Guideline 405)       Respiratory/skin sensitization - Guinea pig     DId not cause sensitization on laboratory animals, (OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       Carcinogenicity - Rat - Female     Negative       Carcinogenicity - Rat - Inhalation     Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thoraw, or       Respiration: Jumited evidence of carcinogenic by NTP     No component of this product present at levels greater than o regual       NTP     No component of this product present at levels greater than o regual       OFHA     No component of this product prese	Additional information	
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Itoxicological properties have not been thoroughly investigated.       Additional information     Stomach irregularities - based on human evidence       Carbon Black(133:86-4)     > 8,000 mg/kg, male and female, (OECD Test Guideline 401)       LD50 Oral - Rat     > 8,000 mg/kg, male and female, (OECD Test Guideline 401)       LD50 Dermal - Rabbit     > 3,000 mg/kg, male and female, (OECD Test Guideline 404)       Skin corrosion/irritation     No skin irritation - 24 h, (OECD Test Guideline 404)       Experiodity/skin sensitization - Guinea pig     Did not cause sensitization on laboratory animals, (OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     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 JARC, ACGIH, NT       NTP     No component of this product present levels greater than or equal to 0.1% is identified as a known or anticipated carinogen by NTP       OSHA     No component of this product present levels greater than 0.1% is identified as a acrinogen or potential carcinogen by NTP       OSHA     No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Organ toxicity     Spec		
Additional information     Stomach irregularities - based on human evidence       Carbon Black(1333-86-4)     > 8,000 mg/kg, male and female, (DECD Test Guideline 401)       LD50 Ornal-Rabbit     > 3,000 mg/kg,       Skin corrosin/Irritation - Rabbit     > 3,000 mg/kg,       Skin corrosin/Irritation - Rabbit     No eya irritation, OECD Test Guideline 403)       Eye damage/Irritation - Rabbit     No eye irritation, OECD Test Guideline 404)       Eye damage/Irritation - Rabbit     No eye irritation, OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       DNA repair - Rat - Tenhaletion     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 IACA, ACGH, NU or DFA classification. Limited evidence of carcinogenicity in animal studit to		
Carbon Black(1333-86-4)     > 8,000 mg/kg, male and female, (OECD Test Guideline 401)       LD50 Dinhalation - Rat     No data available       LD50 Dermal - Rabbit     > 3,000 mg/kg       Skin corrosion/irritation     No skin irritation - 24 h, (OECD Test Guideline 402)       Respiratory/skin sensitization - Guinea pip     No eye irritation on laboratory animals, (OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     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 to numas (carbon black)       NTP     No component of this product present at levels greater than or equal too.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 NTP       OSHA     No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Organ toxicity     No data available       Organ toxicity     no data available       Organ toxicity     no	Additional information	
LD50 Oral - Rat     > 5,000 mg/kg, male and female, (OECD Test Guideline 401)       LD50 Inhalation - Rabbit     > 3,000 mg/kg       Skin corrosion/irritation     No skin irritation - 24 h, (OECD Test Guideline 404)       Eye damage/irritation - Rabbit     No skin irritation (OECD Test Guideline 405)       Respiratory/skin sensitization - Guinea pip     Did not cause sensitization on laboratory animals, (OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       DNA repair - Rat - Female     Negative       Carcinogenicity - Rat - Inhalation     Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or EPA classification. Limited evidence of carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal tool.1% is identified as a carcinogen to known or anticipated carcinogen by NTP       OSHA     No component of this product present at levels greater than 0.1% is identified as a carcinogen toxicity - single exposure: No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Additional Information     no data available       Additional Information     no data available       <		Stomach irregularities - based on human evidence
LD50 Inhalation - Rat     No data available       LD50 Dermal - Rabbit     > 3.000 mg/kg       Skin corrosion/irritation     No skin irritation - 24 h, (OECD Test Guideline 405)       Respiratory/skin sensitization - Guinea pig     Did not cause sensitization on laboratory animals, (OECD Test Guideline 405)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       Carcinogenicity - Rat - Female     Negative       Carcinogenicity - Rat - Inhalation     Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or       Respiratory.     Negative       Carcinogenicity - Rat - Inhalation     Tumorigenic: Carcinogenic based on its IARC, ACGIH, NT       NPP     No component of this product present at levels greater than or equal too. 1% is identified as a known or anticipated carcinogen by NTP       OSHA     No component of this product present at levels greater than or 1% is identified as a carcinogen or postrat la carcinogen by NTP       OSHA     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       Additional Information     no data available       Acute Dernal toxicity     no data available		> 8,000 mg/kg, male and famale (OECD Test Cuideline 401)
LD50 Dermal - Rabbit     > 3,000 mg/kg       Skin corroson/irritation     No skin irritation - 24 h, (OECD Test Guideline 404)       Eve damage/irritation     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       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, ACGH, NT or EPA classification. Limited evidence of carcinogenic try in summal studie.       NTP     No component of this product present at levels greater than or equal to0.1% is identified as a known or anticipated carcinogen by NTP       OSHA     No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica antical available       Additional Information     no data available       Acute Dermal toxicity     no data available		
Skin corrosion/irritation     No skin irritation - 24 h, QECD Test Guideline 404)       Eye damage/irritation - Rabbit     No eye irritation, QECD Test Guideline 405)       Respiratory/skin sensitization - Guinea pig Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       Carcinogenicity - Rat - Female     Negative       Carcinogenicity - Rat - Inhalation     Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumoris. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, MT       NTP     No component of this product present at levels greater than or equal to0.1% 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       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Additional Information     RTECS: FFS80000 To the best of our knowledge, the chemical , physici and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     no data available       Acute Dermal toxicity     no data available       Crystalline Silica(14808-60-7)     no data available		
Eve 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       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, ACGH, NT       IARC     2B - Group 2B: Possibly carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal to0.1% 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 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       Aspiration hazard     No data available       Asute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available       Acute Dermal toxicity <t< td=""><td></td><td></td></t<>		
Respiratory/skin sensitization - Guinea pig     Did not cause sensitization on laboratory animals, (DECD Test Guideline 406)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Hamster - Ovary     Negative       Carcinogenicity - Rat - Inhalation     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, MT       IARC     2B - Group 2B: Possibly carcinogenic bumans (carbon black)       NTP     No component of this product present at levels greater than or equal tool.1% is identified as a carcinogen or potential 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 - sepaset exposure: No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physic and available       Acute Dermal toxicity     no data available       Carcinogenic		
406)       Germ cell mutagenicity     Ames test, S. typhimurium, negative       Inhance     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, MT       IARC     2B - Group 2B: Dossibly 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 or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Additional Information     RTECS: FFS800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Acute Inhalation toxicity     no data available       Acute Dermal toxicity     no data available       Acute Inhalation toxicity     no data available       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity       Acute Dermal toxicity		
Germ cell mutagenicity     Ames test, S. typhimurium, 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, NT or EPA classification. Limited evidence of carcinogenicity in animal studie IARC       NP     No component of this product present at levels greater than or equal to0.1% is identified as a known or anticipated carcinogen by NTP       OSHA     No component of this product present at levels greater than or equal to0.1% 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 NTP       OSHA     No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Organ toxicity     Specific target organ toxicity - repeated exposure: No data available       Additional Information     RTCCS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity     no data available       Acute Inhalation in data available     Group 1: Carcinogenic to humans (Quartz) <td>Respiratory/skin sensitization - Guinea pig</td> <td></td>	Respiratory/skin sensitization - Guinea pig	
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, MI       IARC     2B - Group 2B: Ossibly carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal to0.1% 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 - repeated exposure: No data available       Aspiration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physic and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     no data available       Acute Inhalation toxicity     no data available       Respiratory or skin sensation     no data available       Respiratory or skin sensation     no data available       Respiratory or skin sensation     no data available       Carcinogenicity     Lim	Corm coll mutagonicity	
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, NT or EPA classification. Limited evidence of carcinogenicity in animal studie IARC       IARC     2B - Group 2B: Possibly carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal to0.1% 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       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     No data available       Acute Inhalation toxicity     no data available       Skin irritation     no data available       Skin irritation     no data available       Garcinogenicity     Inited evidence of carcinogenic to human studies       IARC     Group 1: Carcinogenic to humans (Quartz)       Acute Inhalation toxicity     no data available		
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, NT 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 1% is identified as a carcinogen or potential 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       Organ toxicity     No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     no data available       Acute Inhalation toxicity     no data available       Germ cell mutagenicity     no data available       Germ cell mutagenicity     no data available       Germ cell mutagenicity     no data available       Acute Inhalation toxicity     no data available       Group 1: Carcinogenicity in human studies     Carcinogenicity in odata available       Germ cell mut		
Respiration: Tumors. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NT or EPA classification. Limited evidence of carcinogenicity in animal studie       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       Additional Information     RTECS: FFS800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity     no data available       Acute Dermal toxicity     no data available     Sin irritation       Reproductive or skin sensation     no data available     Group 1: Carcinogenicity in human studies       IARC     Group 1: Carcinogenicity in human studies     IARC       ACGIH     No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potenti		
been reported to be possibly carcinogenic based on its IARC, ACGIH, NT       or EPA classification. Limited evidence of carcinogenicity in animal studie       IARC     28 - Group 28: 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 - repeated exposure: No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity       Acute Dermal toxicity     no data available       Acute Dermal toxicity     no data available       Germ cell mutagenicity     no data available       Carchogenicity     Iumited evidence of carcinogenicity in human studies       IARC     Group 1: Carcinogenic to humans (Quartz)       Acute Inhalation toxicity     no data available       Segiratory or skin sensation     no data available       Germ cell mutagenicity     no data availabl	Carcinogenicity - Rat - Initialation	
or EPA classification. Limited evidence of carcinogenicity in animal studie       IARC     2B - Group 2B: Possibly carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal too.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 cata available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity       Acute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available       Respiratory or skin sensation     no data available       Respiratory or skin sensation     no data available       Carcinogenicity     Limited evidence of carcinogenicity in human studies       IARC     Group 1: Carcinogenicit 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 carc		
IARC     2B - Group 2B: Possibly carcinogenic to humans (carbon black)       NTP     No component of this product present at levels greater than or equal too 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       Appration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     no data available       Acute Inhalation toxicity     no data available       Skin irritation     no data available       Respiratory or skin sensation     no data available       Carcinogenicity     Initiate 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       Strintion     no data available     Carcinogenicity in human studies       IARC     Group 1: Carcinogenic to humans (Qua		
NTP     No component of this product present at levels greater than or equal to0.1% 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 - repeated exposure: No data available       Aspiration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     -       Acute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available       Acute Indiation toxicity     no data available       Respiratory or skin sensation     no data available       Germ cell mutagenicity     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 OSHA       Reproductive toxicity	IARC	
tol.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       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available     Acute Inhalation toxicity       Acute Inhalation toxicity     no data available     eye irritation       Respiratory or skin sensation     no data available     eye irritation       Garcinogenicity     Limited evidence of carcinogenicity in human studies     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 ACGH       NTP     Known to be human carcinogen or potential carcinogen by 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       NP     Known to be human carcinogen or potential carcinogen by OSHA		
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 - repeated exposure: No data available       Aspiration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)		
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       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)	OSHA	
Reproductive toxicity     No data available       Organ toxicity     Specific target organ toxicity - single exposure: No data available       Agiration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     and toxicological properties have not been throughly investigated.       Acute Inhalation toxicity     no data available       Acute Inhalation toxicity     no data available       Skin irritation     no data available       Germ cell mutagenicity     no data available       Germ cell mutagenicity     no data available       CACGHH     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 or potential carcinogen by OSHA       Reproductive toxicity     no data available       Specific target organ toxicity - single     no data available       Acgir to available     no data available       Acgir to available     no data available       Carcinogenicity     Imited evidence of carcinogenicity in human studies       IARC     Group 1: Carcinogenic to hum		
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 , physica and toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     Acute Inhalation toxicity       Acute Dermal toxicity     no data available       Acute Inhalation     no data available       Skin 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 or potential carcinogen by OSHA       Reproductive toxicity     no data available       Specific target organ toxicity - repeated     exposure       exposure     no data available       Specific target organ toxicity - repeated	Reproductive toxicity	
Organ toxicitySpecific target organ toxicity - repeated exposure: No data availableAspiration hazardNo data availableAdditional InformationRTECS: FF5800000 To the best of our knowledge, the chemical , physica and toxicological properties have not been throughly investigated.Crystalline Silica(14808-60-7)		
Aspiration hazard     No data available       Additional Information     RTECS: FF5800000 To the best of our knowledge, the chemical , physiciand toxicological properties have not been throughly investigated.       Crystalline Silica(14808-60-7)     and toxicological properties have not been throughly investigated.       Acute Inhalation toxicity     no data available       Acute Dermal toxicity     no data available       Skin irritation     no data available       eye irritation     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 or potential carcinogen by OSHA       Reproductive toxicity     no data available       Specific target organ toxicity - single     no data available       exposure - inhalation     no data available       Additional information     Prolonged inhalation of crystalline silica may result in silicosis, a disablin pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, a		
Additional Information   RTECS: FF5800000 To the best of our knowledge, the chemical , physics and toxicological properties have not been throughly investigated.     Crystalline Silica(14808-60-7)   Acute Inhalation toxicity   no data available     Acute Dermal toxicity   no data available     Acute Dermal toxicity   no data available     eye irritation   no data available     Respiratory or skin sensation   no data available     Germ cell mutagenicity   no data available     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   may cause damage to organs through prolonged or repeated exposure     Additional information   Prolonged inhalation of crystalline silica may result in silicosis, a disablin 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 advance stage, loss of appetite, pleuric pain, and total incapacity		
and toxicological properties have not been throughly 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       exposure     no data available       exposure     no data available       specific target organ toxicity - single     no data available       exposure     no data available       Acute     no data available       exposure     no data available		
Crystalline Silica(14808-60-7)Acute Inhalation toxicityno data availableAcute Dermal toxicityno data availableSkin irritationno data availableeye irritationno data availableRespiratory or skin sensationno data availableGerm cell mutagenicityno data availableCarcinogenicityLimited evidence of carcinogenicity in human studiesIARCGroup 1: Carcinogenic to humans (Quartz)ACGIHNo component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIHNTPKnown to be human carcinogen (Quartz)OSHANo component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHAReproductive toxicityno data availableSpecific target organ toxicity - single exposureno data availableAdditional informationProlonged inhalation of crystalline silica may result in silicosis, a disablin 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 advance stage, loss of appetite, pleuric pain, and total incapacity to work.		
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0.1% is identified as a carcinogen or potential carcinogen by OSHA     Reproductive toxicity   no data available     Specific target organ toxicity - single   no data available     exposure   may cause damage to organs through prolonged or repeated exposure     Specific target organ toxicity - repeated   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 disablin 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 advance stage, loss of appetite, pleuric pain, and total incapacity to work.		No component of this product present at levels greater than or equal to
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Aspiration hazard     no data available       Additional information     Prolonged inhalation of crystalline silica may result in silicosis, a disablin 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 advance stage, loss of appetite, pleuric pain, and total incapacity to work.	Specific target organ toxicity - repeated	may cause damage to organs through prolonged or repeated exposure
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chest expansion, and increased susceptibility to tuberculosis. In advance stage, loss of appetite, pleuric pain, and total incapacity to work.		pulmonary fibrosis characterized by fibrotic changes and miliary nodules
stage, loss of appetite, pleuric pain, and total incapacity to work.		
stage, loss of appetite, pleuric pain, and total incapacity to work.		
Advanced cilicocic may recult in death due to cardiae failure or destructi		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		Lincluding its mechanisms for lung carcinogenicity. Additional studies are
		needed to determine whether the cell transforming activity of quartz is
Additional information Liver - Irregularities - based on human evidence		needed to determine whether the cell transforming activity of quartz is related to its carcinogenic potential.



Iron Oxide(1309-37-1)	
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 tumorogenic agent by RTECS criteria. Tumors at site of
	appilcation.
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 carcinogeniciy to humans (diiron trioxide).
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a kown or anticpated carcinogen by NTP.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as ca 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.
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 Not listed
ACGIH, IARC, NTP, CA Prop 65	
Epidemiology	No information available
Teratogenicity	No information available
Reproductive effects	No information available
Mutagenicity	No information available
Neurotoxicity	No information available
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 -	No results available
micronucleus test IARC	No component of this product present at levels greater than or equal to
IAKC	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
Aspiraduli lidzdru	



Additional information	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Zinc Stearate(557-05-1)	<u> </u>
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	No data available
exposure	
Aspiration hazard	No data available
Additional information	Aspiration or inhalation may cause chemical pneumonitis., Lung irritation, chest pain, pulmonary edema
Aditional information	Stomach irregularities based on human evidence

### **12. ECOLOGICAL INFORMATION**

1,3,5-Triglycidyl Isocyanurate(2451-62-9) Toxicity to fish - static test LC50 - danio	> 77 mg/l - 96 h
rerio (zebra fish)	> // mg/i - 90 m
Toxicity to daphnia and other aquatic	> 100 mg/l - 24 h
invertebrates - Immobilization - EC50 -	> 100 mg/1 - 24 m
daphnia magna (water flea)	
	29 - 30 mg/l - 72 h
Toxicity to algae - growth inhibition - EC50	29 - 30 mg/l - 72 m
- Desmodesmus subspicatus	· 100 ···· - // 2 h
Toxicity to bacteria - Respiration inhibition	> 100 mg/l 3 h
- IC50 - Sludge Treatment	
Persistence and degradability -	0.5 - 1% - not biodegradable
biodegradability - aerobic - exposure time:	
44 d	
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
2-Mercaptobenzothiazole(149-30-4)	
Toxicity to fish - flow-through test - LC50 -	0.73 mg/L / 96 h
rainbow trout	
Toxicity to daphnia and other aquatic	0.71 mg/L / 48 h
invertebrates - immobilization EC50 -	
Daphnia magna (water flea)	
Toxicity to algae - growth inhibition - EC50	0.5 mg/L - 72 h
- green algae	
Persistence and degradability -	1% - not readily biodegradable - exposure time: 28 d
biodegradability - biotic/aerobic	
Bioaccumulative potential -	0.1 mg/L / 42 d
bioaccumulation - carp	
Bioaccumulative potential -	< 0.8
Bioconcentration factor	
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.



Aluminum Oxide(1344-28-1)	
Toxicity	No toxicity at the limit of solubility
Persisitence 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.
Amorphous Pyrogenic Silica(112945-52-5)	
Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil PBT and vPvB	No data available
Amorphous Silica(112926-00-8)	not available/not required
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
Barium Sulfate(7727-43-7)	
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
Carbon Black(1333-86-4)	
Toxicity to fish LC50 EC50 Toxicity to daphnia and other aquatic	Danio rerio (zebra fish) >1000 mg/l - 96 h Daphnia magna (Water flea) > 5600 mg/l - 24 h (OECD Test Guideline
invertebrates	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 Iron Oxide(1309-37-1)	not available/not required
Toxicity	No data available
Persisitence 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
Limestone(1317-65-3)	
Ecotoxicity	No data available
Environmental	No information reported
Physical	No information available
Titanium Dioxide(13463-67-7)	
Toxicity to fish - LC50 - other fish	> 1000 mg/L / 96 h
Toxicity to daphnia and other aquatic	> 1000 mg/L / 48 h
invertebrates - EC50 - Dapphnia magna	
(water flea) Toxicity to daphnia and other aquatic	1000 mg/L / 48 h
invertebrates - ECO - Daphnia magna	1000 mg/L / 40 m
(water flea)	
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Bioaccumulative potential Mobility in soil	No data available No data available



# CARDINAL SAFETY DATA SHEET

No data available
No data available
50% - readily biodegradable
No data available
No data available
Not available/not required
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.



SAFETY DATA SHEET

### **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 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. 1H318Causes serious eye damageSkin Sens. 1H317May cause an allergic skin reactionMuta. 1BH340May cause genetic defectsCarc. 2H351Suspected of causing cancerSTOT RE 1H372Causes damage to organs through prolonged or repeated exposureAquatic Chronic 3H412Harmful to aquatic life with long lasting effects

### NATIONAL REGULATIONS

This product contains:	Chemical CAS#
~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**

This product contains:	Chemical CAS#
*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 <u>WWWPROP65.CA.GOV</u>.
  - **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 <u>WWWPROP65.CA.GOV</u>.
    - 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#
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

This product contains	Chemical CAS#
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**

This product contains	Chemical CAS#
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



**RDINAL** SAFETY DATA SHEET

### **16. OTHER INFORMATION**

## **Other Product Information:**

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

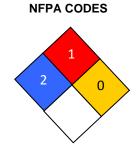
% Volatile by Weight : 0.00 % Solids by Weight : 100.00

### **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



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