

# SAFETY DATA SHEET

SDS No.:  
Third Revision: Aug. 21, 2023  
Date Created: July 9, 2015

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Powdered/Granular Pigments  
(Applies to all colors except those with carbon black or chromium)  
**General Use:** colorant  
**Product Description:** dry powder

### MANUFACTURER

TCC Materials  
2025 Centre Pointe Blvd  
Mendota Heights, MN 55120  
651-686-4287

### EMERGENCY TELEPHONE NUMBER:

(800)-424-9300 CHEMTREC USA & CANADA

## 2. HAZARD IDENTIFICATION

### EMERGENCY OVERVIEW

#### GHS CLASSIFICATION OF SUBSTANCE

<b>Flammable Liquid</b>	Not Applicable
<b>Aspiration Toxicity</b>	Not Applicable
<b>Skin Corrosion/Irritation</b>	No Classification under GHS
<b>Eye Corrosion/Irritation</b>	No Classification under GHS
<b>Carcinogenicity</b>	Category 1A - crystalline silica present up to 4%
<b>Specific Organ Toxicity Repeated Exposure</b>	Category 1 - crystalline silica present up to 4%
<b>Specific Organ Toxicity Single Exposure</b>	No Classification under GHS
<b>Reproductive Toxicity</b>	No Classification under GHS
<b>Acute Toxicity</b>	No Classification under GHS
<b>Germ Cell mutagenicity</b>	No Classification under GHS
<b>Corrosive to Metals</b>	No Classification under GHS
<b>Hazardous to the aquatic environment</b>	See Section 12

Hazard Category - means the division of criteria within each hazard class, e.g. acute toxicity includes five hazard categories and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class. "GHS Classification of Substance" means the material hazard class under that particular category and should not be taken as a comparison of hazard categories more generally. Degree of severity under GHS is "1" being the most severe and sequential numbers indicating correspondingly less severity. "Not Classified Under GHS" does not have characteristics that fall into any of the categories for that hazard class.

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## GHS LABEL ELEMENTS



### DANGER

(contains crystalline silica as a component in some pigments. Crystalline silica is a known human carcinogen via respiratory route)

### Hazard Statements

H350 - May cause cancer (inhalation of dust)

H372 - Causes damage to the lungs through prolonged and repeated exposure to dust

### Precautionary Statements

#### General:

P101-If medical advice is needed, have product container or label at hand.

P103-Read label before use.

#### Prevention:

P261 - Avoid breathing dust

P264 - Wash hands, forearms and face thoroughly after handling

P280 - Wear eye protection, face protection, protective clothing, protective gloves

#### Response:

P302+P352 - If on skin: wash with plenty of water

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

#### Storage/Disposal:

None Applicable

### UN GHS

Potential for crystalline silica in low levels is responsible for classifications.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>wt%</u>	<u>CAS Registry #</u>
Iron Oxide	0 - 100	mixed
Amorphous Silica	0 - 5	7631-86-9
Crystalline Silica	0 - 4	14808-60-7
Aluminum oxide	0 - 5	1344-28-1
Calcium Carbonate	0 - 100	1317-65-3
Calcium oxide	0 - 6	1305-78-7
Magnesium oxide	0 - 3	1309-48-4
Aluminum	0 - 3	7429-90-3
Manganese oxide	0 - 5	1313-13-9
Titanium dioxide	0 - 100	13463-67-7
Manganese	0 - 5	7439-96-5
Manganese ferrite spinel	0 - 100	68186-94-7
1-methyl-2-pyrrolidone	0 - <3	872-50-4

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## 4. FIRST AID MEASURES

### INHALATION:

Remove to fresh air and keep at rest in a comfortable position. Get medical attention if symptoms persist after moving to fresh air. Give oxygen if available, symptoms persist, and medical attention is not immediate.

### EYE CONTACT:

Remove contact lens (if present). Rinse eyes immediately with plenty of clean water for at least 15 minutes. If necessary, gently hold the eyelid open during the flush. Seek medical attention following initial eye washing.

### SKIN CONTACT:

Immediately wash skin with mild soap solution to remove material from skin. Remove affected clothing and launder prior to re-use. If skin damage occurs other than redness, seek medical attention and provide this SDS to attending medical personnel.

### INGESTION:

Ingestion is not a likely route of exposure based on commercial product use. If ingestion occurs, seek immediate medical attention. Do not induce vomiting or give anything but water by mouth without being directed to do so by POISON CONTROL or attending medical personnel.

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## 5. FIRE FIGHTING MEASURES

**Flashpoint and Method:** Not Applicable

**Flammable Limits:** Unknown

**Autoignition Temperature:** Unknown

### GENERAL HAZARD:

Dry pigment powder contains iron oxide which is flammable when combined with incompatible materials such as oxidizing agents. Incompatible materials likely to cause fire/explosion when contacting iron oxide include: hydrogen peroxide and calcium hypochlorite as the most commonly encountered.

### FIRE FIGHTING INSTRUCTIONS:

Water fog or fine spray; dry chemical fire extinguishers; carbon dioxide fire extinguishers; foam; alcohol resistant foams (ATC type).

### FIRE FIGHTING EQUIPMENT:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### FURTHER INFORMATION:

During a fire, smoke may contain the original material in addition to combustion products which might be more irritating.

### HAZARDOUS COMBUSTION PRODUCTS:

Dependent on the other components of the fire. Product is generally inorganics and not likely to create contaminants beyond metal fume by itself.

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## 6. ACCIDENTAL RELEASE MEASURES

### LAND SPILL RESPONSE:

Material is a dry powder and packaged in small quantities. Use a shovel or similar tool to remove the majority from the spill location. Remaining material is generally inorganic and will blend with the soils.

### WATER SPILL:

Most components are not readily water soluble. Spills are not expected to be sufficiently large to require removal and material will drop to the bottom.

### RECOMMENDED DISPOSAL:

Disposal options may be dictated by other materials mixed with this material. Dispose of in accordance with local, state, and federal regulations using methods which consider recycling/reclamation.

## 7. HANDLING AND STORAGE

**STORAGE TEMPERATURE:** Ambient

**STORAGE PRESSURE:** Atmospheric

### GENERAL:

Keep the container tightly closed. Store in a dry, cool, and well-ventilated place away from incompatible materials such as oxidizing agents and acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200 and other agencies)

Component	EXPOSURE LIMITS 8 hrs TWA (ppm)				
	OSHA PEL	ACGIH TLV	NIOSH REL	AIHA WEEL	Other
Iron Oxide	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>		
Amorphous Silica	(80 mg/m <sup>3</sup> )/%SiO <sub>2</sub>	NE	NE		
Crystalline Silica	0.025 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>		
Aluminum Oxide	5 mg/m <sup>3</sup> (respir)	NE	NE		
Calcium Carbonate	5 mg/m <sup>3</sup> (respir)	NE	5 mg/m <sup>3</sup> (respir)		
Calcium Oxide	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>		
Magnesium Oxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	NE		
Aluminum	5 mg/m <sup>3</sup> (respir)	1 mg/m <sup>3</sup> (respir)	5 mg/m <sup>3</sup> (respir)		
Manganese Oxide	5 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup> (respir)	1 mg/m <sup>3</sup>		
Titanium Dioxide	15 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	NE		
Manganese	5 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup> (respir)	1 mg/m <sup>3</sup>		
Manganese ferrite spinel	5 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup> (respir)	1 mg/m <sup>3</sup>		
1-methyl-2-pyrrolidone	NE	NE	NE	10 ppm	20 ppm DFG DAK

### ENGINEERING CONTROLS:

Standard engineering controls such as eye wash station and general ventilation in the work area.

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## PERSONAL PROTECTION:

Wear safety glasses. Maintain eye wash station in the immediate work area if routinely using quantities of this material.

## EXPOSURE EVALUATION:

Exposures depend on activities being performed and the ventilation in the area.

Personal exposure monitoring can be performed by the employer to determine his/her employee exposures to the product during routine use at the facility. It is beyond the responsibility of the product supplier to estimate/determine airborne exposure in a user's facility.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Vapor Pressure:</b>	NA	<b>Vapor Density:</b>	NA
<b>Specific Gravity:</b>	3.5 - 5.5	<b>Evaporation Rate:</b>	NA
<b>Solubility in Water:</b>	insoluble	<b>Freezing Point:</b>	NA
		<b>Odor:</b>	not appreciable
<b>pH:</b>	neutral	<b>Appearance:</b>	colored granular
<b>Boiling Point:</b>	NA	<b>Physical State:</b>	solid
<b>Viscosity:</b>	NA	<b>Flammable Range:</b>	NA
<b>Flash Point:</b>	NA	<b>VOC content:</b>	NA

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## 10. STABILITY AND REACTIVITY

### GENERAL:

No dangerous reactions known under normal use conditions.

### INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Iron oxide pigments become unstable at temperatures greater than 176 °F and can slowly auto-oxidize into Fe<sub>2</sub>O<sub>3</sub> which generates additional heat. Under certain conditions this heat may be sufficient to cause combustible materials to ignite. Iron oxide can spontaneously combust if mixed with hydrogen peroxide or calcium hypochlorite.

### HAZARDOUS DECOMPOSITION:

None

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## 11. TOXICOLOGICAL INFORMATION

### TOXICITY TO ANIMALS:

<u>Component</u>	<u>Acute Test</u>	<u>Value</u>	<u>Species</u>
Iron Oxide III	LD50	>5000 mg/kg	Rat
Iron Oxide Black	LD50	>2000 mg/kg	Rat
Aluminum Oxide	LD50	>5000 mg/kg	Rat
Amorphous Silica	LD50	>5000 mg/kg	Rat
Manganese Ferrite Spinel	LD50	5000 mg/kg	Rat
Iron III Oxide	LC50 inhalation	>210 mg/m3	Rat
Red Iron Oxide	LD50 dermal	5500 mg/kg	Rat
calcium carbonate	LD50-oral	6450 mg/kg	Rat

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## ROUTES OF ENTRY:

Inhalation of airborne dust and accidental ingestion of large quantities of the pigment blends. Skin contact with the pigment blends.

## CHRONIC EFFECTS ON HUMANS:

### Eyes:

Dust may cause mechanical eye irritation.

### Skin:

Dust may cause mechanical skin irritation. Metal oxides, particularly chromium III oxide, can cause dermatitis.

### Ingestion:

Iron content is of importance by ingestion exposure route. Seek medical attention if quantities are ingested by animals or humans and identify iron component of the product.

### Inhalation:

Iron in this product is not in fume form and is not associated with the lung condition associated with iron fume called siderosis.

### General:

Crystalline silica is a known human carcinogen and is a IARC Group I carcinogen. The iron pigments may have crystalline silica as a contaminant.

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## 12. ECOLOGICAL INFORMATION

<u>Species</u>	<u>Test Information</u>	<u>Concentration</u>	<u>Component</u>
Leuciscus idus	LCo	>1000 mg/L	Red Iron Oxide
Pseudomonas Fluoresceus	ECO	>5000 mg/L	Red Iron Oxide
Leuciscus idus	LCo 48 hrs	>1000 mg/L	Red Iron and Black Iron oxide mix
Leuciscus idus	LCo	>1000 mg/L	Iron oxide

## PRODUCTS OF BIODEGRADATION:

Pigments are primarily metallic oxides with limited water solubility. Breakdown is expected to produce essential growth elements of iron, manganese, magnesium, etc.

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## 13. DISPOSAL CONSIDERATIONS

RCRA metals not present in these pigment blends. Waste disposal, unless mixed with hazardous materials, should be as a non-hazardous waste.

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## 14. TRANSPORT INFORMATION

The following proper shipping name, hazard class and packing group are in accordance to 49 CFR Department of Transportation (U.S. DOT) regulatory requirements from 172.101 Hazardous Materials Table

49 CFR Shipping Information	Powdered Pigments
Symbols	"G" - identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description. See 172.203(k).
UN Number	NA
Proper Shipping Name	NA
Hazard Class	NA
Packing Group	NA
Label Codes	NA
Special Provisions (172.102)	NA
Packaging - Exceptions	NA
Packaging - Nonbulk	NA
Packaging - bulk	NA
Quantity Limitations - Passenger aircraft/rail	NA
Quantity Limitations - Cargo aircraft only	NA
Vessel stowage - Location	NA
Vessel stowage - Other	NA

### INTERNATIONAL AIR TRADE ASSOCIATION (IATA)

IATA 58th Edition Information	Powdered Pigments
UN Number	NA
Proper Shipping Name Description	NA
Class or Division	NA
Hazard Label(s)	NA
Packing Group	NA
EQ - 2.6 Dangerous Goods in Excepted Quantities	NA
Passenger Aircraft - Limited Quantity Packing Instructions	NA
Passenger Aircraft - Limited Quantity Max net Qty/Pkg	NA
Passenger Aircraft - Packing Instructions	NA
Passenger Aircraft - Quantity Max Net Qty/Pkging	NA
Cargo Aircraft only - Packing Instructions	NA
Cargo Aircraft only - Max Net Qty/Pkging	NA
Special Provisions 4.4	NA
ERG Code	NA

### INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMDG CODE)

IMDG 2016 EDITION	Powdered Pigments
UN Number	NA
Proper Shipping Name Description	NA
Class or Division	NA
Subsidiary Risks	NA
Packing Group	NA
Special Provisions	NA
Limited Quantities	NA
Excepted Quantities	NA
Packing Instructions	NA

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Packing Provisions	NA
IBC Instructions 4.1.4	NA
IBC Provisions 4.1.4	NA
Portable tanks and bulk containers - tank instructions	NA
Portable tanks and bulk containers - provisions	NA
EmS	NA
Stowage and Handling	NA
Segregation	NA
Properties and observations	NA

## 15. REGULATORY INFORMATION

### Chemical Inventory Status

Ingredients listed on: TSCA, DSL, Japan, and EC inventories.

**SARA Section 302 - Emergency Planning Notification -**

**SARA Section 304 - Emergency Release Notification -** None

**SARA 311/312 - Hazard categories for SARA Section 311/312 Reporting -**

**CERCLA - Hazardous Substance -**

**RCRA Hazardous Waste Classification -** None

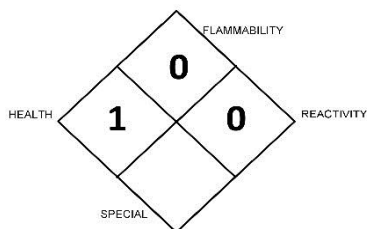
### California Proposition 65:

Components in pigment blends on the list include: crystalline silica, 1-methyl-2-pyrrolidone, and titanium dioxide.

## 16. OTHER INFORMATION

### UNITED STATES NATIONAL FIRE PROTECTION ASSOCIATION (U.S. NFPA)

NFPA 704 "fire diamond" is used by emergency personnel to quickly identify the risks posed by the material during response to a fire or a spill or other unusual event.



### NFPA rating explanation as applied to Powdered Pigments

**FLAMMABILITY 0** - Materials that will not burn under typical fire conditions including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 C/1500 F for a period of 5 minutes.

**HEALTH 1** - Exposure would cause irritation with only minor residual injury.

**REACTIVITY 0** - Normally stable, even under fire exposure conditions, and is not reactive with water.

**SPECIAL** - contains special symbols applicable to the material. In this case there are no applicable special conditions.



## SAFETY DATA SHEET

THE INFORMATION RELATES TO THIS SPECIFIC INFORMATION. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE. ALL MATERIALS MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.