

# Safety Data Sheet

Material Name: CERAMIC PIGMENTS

ID: 00100

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

**Material name:** CERAMIC PIGMENTS-(encapsulated)

**Chemical Name:** MASON 6021 RED

**Product Use:** GLAZE ON CERAMICS , CERAMIC TILES and PORCELAINS

**Supplier Information:** MASON COLOR WORKS INC.

250 EAST SECOND STREET, EAST LIVERPOOL, OHIO 43920

**Phone number:** 1-330-385-4400

**Fax number:** 1-330-385-4488

## \*\*\* Section 2 - Composition / Information on Ingredients \*\*\*

### Total Confidential Composition

| CAS #      | Component   | Percent |
|------------|---|---------|
| 10101-52-7 | Silicic acid (H <sub>4</sub> SiO <sub>4</sub> ), zirconium(4+) salt (1:1) | 35-50   |
| 1306-23-6  | Cadmium sulfide   | 8-15    |
| 1314-23-4  | Zirconium oxide   | 1-25    |
| 7782-49-2  | Selenium  | 1-10    |

## \*\*\* Section 3 - Hazards Identification \*\*\*

### Emergency Overview

Dust accumulation from this product may present an explosion hazard in the presence of an ignition source. May irritate eye and upper respiratory tract. Long term or repeated exposure to the powder may dermatitis and skin granulomas.

### Potential Health Effects: Eyes

Dust or powder may irritate eye tissue. Rubbing may cause abrasion of cornea.

### Potential Health Effects: Skin

Prolonged or repeated contact may cause dermatitis and skin granulomas

### Potential Health Effects: Ingestion

Not a likely route of entry, but should it occur, may cause stomach discomfort, diarrhea and nausea.

### Potential Health Effects: Inhalation

Dust or powder of this material may cause irritation of the nose, throat, and respiratory tract. Lungs may be affected by repeated or prolonged exposure to the dust or powder of this material.

## \*\*\* Section 4 - First Aid Measures \*\*\*

### First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Do not rub eyes.

### First Aid: Skin

Flush with large amounts of water.

### First Aid: Ingestion

Rinse mouth, give plenty of water to drink and then seek medical attention.

### First Aid: Inhalation

If inhaled, immediately remove the affected person to fresh air.

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## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

Flash Point: NA

Method Used: NA

Flammability Classification: NA

### General Fire Hazards

Dust accumulation from this product may present an explosion hazard in the presence of an ignition source.

### Hazardous Combustion Products

Product is not considered combustible.

Toxic and irritating fumes are given off of unknown composition if burned. If the substance is heated, it will decompose producing toxic and irritating fumes, including sulfur oxides which will react with strong oxidants and reacts with acids forming toxic gas (hydrogen sulfide).

### Extinguishing Media

Carbon dioxide, extinguishing powder or water spray.

Fight larger fires with water spray or alcohol resistant foam.

### Fire Fighting Equipment/Instructions

Wear a NIOSH approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

### Containment Procedures

Sweep spilled substance into containers and if appropriate, moisten first to minimize or prevent dusting and the generation of airborne particulates, then move to a safe place. Do not let the spilled substance enter the environment.

### Clean-Up Procedures

Avoid the generation of dust during clean-up. Collect dust or powder using a vacuum cleaner with a HEPA filter.

### Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering.

## \*\*\* Section 7 - Handling and Storage \*\*\*

### Handling Procedures

Remove all ignition sources from material handling, transfer, and processing areas where dust may be present. Local exhaust ventilation should be provided in work areas. Ensure that airborne dust concentrations are controlled within regulatory dust standards.

### Storage Procedures

Keep container dry. Store away from excessive heat and away from strong oxidizing agents, strong acids, food and feedstuffs. Keep container tightly closed to prevent contamination.

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## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Component Exposure Limits

#### Selenium (7782-49-2)

|                |                                      |
|----------------|--------------------------------------|
| ACGIH          | 0.2 mg/m3 TWA                        |
| German DFG     | 0.05 mg/m3 MAK (inhalable fraction)  |
|                | 0.20 mg/m3 Peak (inhalable fraction) |
| United Kingdom | 0.1 mg/m3 TWA                        |
| Sweden         | 0.1 mg/m3 LLV                        |

#### Cadmium sulfide (1306-23-6)

|                |  |
|----------------|--|
| United Kingdom | 0.03 mg/m3 TWA (respirable dust as Cd) |
|----------------|--|

### ENGINEERING CONTROLS

Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product. Local exhaust ventilation is recommended when generating excessive levels of airborne dust or vapors from handling or thermal processing.  
Use explosion-proof equipment if high dust/air concentrations are possible.

### PERSONAL PROTECTIVE EQUIPMENT

#### Personal Protective Equipment: Eyes/Face

Wear dust goggles.

#### Personal Protective Equipment: Skin

Protective clothing should always be worn when working with this material. Open shoes should not be worn either.

#### Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of dusts, appropriate NIOSH/MSHA respiratory protection must be provided.

#### Personal Protective Equipment: General

Eye wash fountain is recommended. Keep formation of dusts, particulates and fumes to a minimum.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

|                          |            |                          |         |
|--------------------------|------------|--------------------------|---------|
| <b>Appearance:</b>       | RED Powder | <b>Odor:</b>             | None    |
| <b>Physical State:</b>   | Powder     | <b>pH:</b>               | Neutral |
| <b>Vapor Pressure:</b>   | NA         | <b>Vapor Density:</b>    | NA      |
| <b>Boiling Point:</b>    | NA         | <b>Melting Point:</b>    | 2450 °C |
| <b>Solubility (H2O):</b> | ND         | <b>Specific Gravity:</b> | 4.6     |

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

This is a stable material.

#### Chemical Stability: Conditions to Avoid

Avoid contact with strong oxidizers, acids, excessive heat, sparks or open flame or dust accumulation.

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## Incompatibility

Strong oxidizing agents, acids, and heat.

## Hazardous Decomposition

Sulfur oxides, hydrogen sulfide and metal oxide fume.

## Hazardous Polymerization

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute and Chronic Toxicity

US OSHA has chosen to regulate occupational exposure to all cadmium compounds, including pigments, as a single category. The standard states that substances containing cadmium are a cancer hazard and can cause lung and kidney disease.

Cadmium and cadmium compounds are listed in the Annual NTP Report as carcinogenic to animals, but with only limited evidence of carcinogenicity to humans. This information is based on test results for cadmium compounds other than pigmentary forms.

Although certain cadmium compounds are known to cause kidney damage in humans and has been shown to cause lung cancer in laboratory animals, no chronic health effects have been shown to result from exposure to cadmium pigments. Cadmium pigments have been shown to be significantly less biologically available and less active than other cadmium compounds.

The product contains zirconium silicate that contains trace quantities of naturally occurring radioactive uranium and thorium. Inhalation of respirable dusts may cause lung cancer.

### Component Analysis - LD50/LC50

#### Cadmium sulfide (1306-23-6)

Oral LD50 Rat: 7080 mg/kg

Oral LD50 Mouse: 1166 mg/kg

#### Selenium (7782-49-2)

Oral LD50 Rat: 6700 mg/kg

### Carcinogenicity

This product may be carcinogenic to humans.

### Component Carcinogenicity

#### Cadmium sulfide (1306-23-6)

German DFG Category 2 (considered to be carcinogenic for man); (Listed under Cadmium and its compounds)

#### Selenium (7782-49-2)

IARC Supplement 7, 1987; Monograph 9, 1975 (Group 3 (not classifiable))

German DFG Category 3B (could be carcinogenic for man)

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## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity

#### A: General Product Information

No information available for the product.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

In the food chain important to humans, bioaccumulation of cadmium compounds take place, specifically in crustacean and plants. It is strongly recommended not to let the material enter into the environment because cadmium sulfide persists in the environment for a very long time.

#### Environmental Fate

No information found in our selected references.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### Waste Disposal Instructions

Consult regulations to ensure proper disposal.

## \*\*\* Section 14 - Transportation Information \*\*\*

**Not a hazardous material for transportation.**

|  |      |
|--|------|
| <b>DOT REGULATIONS: hazard class:</b>        | None |
| <b>Land transport ADR/RID (cross-border)</b> |      |
| <b>ADR/RID class:</b>                        | None |
| <b>Maritime transport IMDG:</b>              |      |
| <b>IMDG Class:</b>                           | None |
| <b>Air transport ICAO-TI and IATA-DGR:</b>   |      |
| <b>ICAO/IATA Class:</b>                      | None |

## \*\*\* Section 15 - Regulatory Information \*\*\*

### Component Classification and Labeling (EEC)

The following components have labeling requirements under Council Directive 67/548/EEC, Annex I.

#### **Cadmium sulfide (1306-23-6)**

Annex #: 048-010-00-4 EINECS #: 215-147-8

#### **Classification:**

Toxic  
Carcinogen Category 3.

#### **Label Information:**

R-22 Harmful if swallowed.  
R-40 Possible risk of irreversible effects.  
R-48/23/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

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R-53 May cause long-term adverse effects in the aquatic environment.  
S-1/2 Keep locked up and out of the reach of children.  
S-22 Do not breathe dust.  
S-36/37 Wear suitable protective clothing and gloves.  
S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S-61 Avoid release to the environment. Refer to special instructions/ Safety Data Sheets.

## Notes:

Concentrations are percentage by weight of metallic element calculated with reference to total weight of the preparation.

## Selenium (7782-49-2)

Annex #: 034-001-00-2 EINECS #: 231-957-4

## Classification:

Toxic

## Label Information:

R-23/25 Toxic by inhalation and if swallowed.  
R-33 Danger of cumulative effects.  
R-53 May cause long-term adverse effects in the aquatic environment.  
S-1/2 Keep locked up and out of the reach of children.  
S-20/21 When using do not eat, drink or smoke.  
S-28 After contact with skin, wash immediately with plenty of ...  
S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S-61 Avoid release to the environment. Refer to special instructions/ Safety Data Sheets.

## Component Analysis - Inventory

| Component   | CAS #      | TSCA | DSL | EINECS |
|---|------------|------|-----|--------|
| Silicic acid (H <sub>4</sub> SiO <sub>4</sub> ), zirconium(4+) salt (1:1) | 10101-52-7 | Yes  | Yes | Yes    |
| Cadmium sulfide   | 1306-23-6  | Yes  | Yes | Yes    |
| Zirconium oxide   | 1314-23-4  | Yes  | Yes | Yes    |
| Selenium  | 7782-49-2  | Yes  | Yes | Yes    |

## \* \* \* Section 16 - Other Information \* \* \*

**Disclaimer:** Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Material Safety Data Sheet before handling product.

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### Key/Legend

NA = Not available or Not Applicable. ACGIH = American Conference of Governmental Industrial Hygienists. TLV = Threshold Limit Value. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration.

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**This is the end of MSDS**