

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product: Red Glaze
Product Use: A cone 06 ceramic glaze for use on earthenware.
Date Prepared: February 11, 2016



Manufacturer and Supplier:
The Pottery Supply House Limited
1120 Speers Road
Oakville, ON, Canada L6L 2X4
Emergency Tel.: 1-800-465-8544

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview: Not acutely hazardous. Chronic exposure to respirable mists or particulates may cause lung disease.

Route of entry **Skin contact:** Prolonged skin contact may cause skin irritation.
Skin absorption: Not absorbed through the skin.
Eye contact: May cause abrasion of the cornea.
Inhalation: Contains crystalline silica (quartz). Chronic exposure may cause silicosis, cancer and other disorders. Dust or fumes from firing are irritating to the respiratory tract.
Ingestion: Not acutely hazardous. May cause gastrointestinal upset.

Effects of acute exposure to product: No effects expected.

Effects of chronic exposure to product: Excessive inhalation of fumes or dust may cause chemical pneumonitis, cyanosis, and pulmonary edema. Overexposure to cadmium may cause kidney damage through ingestion or inhalation, lung disease through inhalation, and bone disease if high levels are ingested. The cadmium compound in this product is encapsulated within acid-insoluble zircon. Respirable crystalline silica (quartz) can cause:

- Silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death.
- Lung Cancer: Crystalline silica (quartz) inhaled from occupational sources is classified by IARC as carcinogenic to humans.
- Tuberculosis: Silicosis increases the risk of tuberculosis.
- Autoimmune and Chronic Kidney Diseases.
- Non-Malignant Respiratory Diseases (other than silicosis).

Irritancy of the product: Not a likely irritant.

Sensitization of the product: No effects known.

Carcinogenicity of the product: Crystalline silica (quartz) inhaled from occupational sources is classified by IARC as carcinogenic to humans. Chronic overexposure to cadmium compounds may result in lung cancer, although a definite cause-effect relationship has not been fully established. Zircon contains trace quantities of naturally occurring radioactive uranium, thorium and radium (106-120 Pico curies/gram). Overexposure to respirable dusts containing radioactive uranium, thorium and radium may cause lung cancer.

Reproductive toxicity: No known effects.

Teratogenicity: No known effects.

Mutagenicity: No known effects.

Name of toxicologically synergistic products: None known

SECTION 3. COMPOSITION INFORMATION ON INGREDIENTS

Component	CAS#	Percentage	LD 50	LC 50
Crystalline silica (quartz)	14808-60-7	0.1 – 1.0	>22,500 mg/kg Oral, Rat	Not available
Frit ¹	65997-18-4	30 -60	2000 mg/kg Oral, rat	Not available
Kaolin ²	1332-58-7	3 – 7	Not available	Not available
Glaze stain ³	72-828-62-7	1 – 5	> 5,000 mg/kg Oral, Rat	Not available

1. Glass containing fused oxides of aluminum, boron, calcium, silicon and sodium. 2. Aluminum silicate mineral.
3. Zircon encapsulated cadmium sulphoselenide

SECTION 4. FIRST AID MEASURES

Procedures **Skin contact:** Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.
Eye contact: Wash immediately with plenty of water. If irritation persists, seek medical attention.
Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion: Only if victim is conscious, give plenty of water. Do not induce vomiting. Consult a physician if necessary.

SECTION 5. FIRE FIGHTING MEASURES

Conditions of flammability: Not flammable.
Flash point and method of determination: Not applicable.
Upper flammable limit: Not applicable.
Lower flammable limit: Not applicable.
Lower flammable limit: Not applicable.
Auto-ignition temperature: Not applicable.
Explosion data – sensitivity to mechanical impact: Not explosive. Not sensitive.
Explosion data – sensitivity to static discharge: Not explosive. Not sensitive.
Extinguishing media, means of extinction: Product is not flammable, combustible or explosive. Use extinguishing media appropriate for surrounding fire.
Hazardous combustion products: Metal compounds.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures to be followed in case of leak or spill: Discard any product, residue, disposable container or liner in compliance with regulatory requirements.

SECTION 7. HANDLING AND STORAGE

Handling procedures and equipment: Avoid dust/mist formation. Do not breathe dust or mist. If spraying, use adequate exhaust ventilation. Keep airborne dust/mist concentrations below permissible exposure limits. In case of insufficient ventilation, wear a respirator approved for silica dust when spraying. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Do not mill or grind. When firing, use adequate kiln ventilation.
Storage: No special requirement. To prevent possible container damage, keep from freezing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: **TWA (Ontario)**

Crystalline silica (quartz)	0.1 mg/m ³ (respirable)
Frit	10 mg/m ³ (PNOS*)
Kaolin	2 mg/m ³
Glaze Stain	0.01 mg/m ³ (cadmium compound)

* PNOS: Particles (insoluble or poorly soluble) not otherwise specified

Specific engineering controls to be used: Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s). Ensure that eye washing facilities are nearby. If spraying, use a ventilated spray booth to minimize exposure to respirable mist. When firing, use adequate kiln ventilation.

Personal protective equipment to be used: In case of exposure to dust/mist, and in any case if such exposure is above regulatory limits (see above), wear a personal respirator.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid/solid suspension.

Odour and appearance: Opaque, pink fluid with mild odour.

Odour threshold: Not available.

Specific gravity: Approximately 1.6.

Vapour pressure: Not available.

Vapour density: Not available.

Evaporation rate: Not available.

Boiling point: About 100°C for the liquid (water) portion. >1250°C for the solids portion.

Freezing point: About 0°C for the liquid (water) portion.

PH: Not available.

Coefficient of water/oil distribution: Not available.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid: Mechanical impact such as grinding or milling. The cadmium-bearing stain in this product is encapsulated in chemically inert and thermally stable zircon. Destruction of the protective coating increases cadmium bioavailability.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: None if stored normally. Thermal decomposition can produce irritating gases and vapors including oxides of carbon, nitrogen, and sulfur as well as toxic metal compounds.

Possibility of hazardous reactions: Unlikely in normal use.

SECTION 11. TOXICOLOGICAL INFORMATION

LD50: Not established for this product. See Section 3 for information on ingredients.

LC50: Not established for this product. See Section 3 for information on ingredients.

The method of exposure that can lead to the adverse health effects described below is inhalation.

A. **SILICOSIS** The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. Symptoms, if present, are shortness of breath, wheezing, cough and sputum production and may be associated with decreased and disabling lung function and death. It may lead to heart disease secondary to the lung disease.

B. **CANCER IARC** - The International Agency for Research on Cancer ("IARC") concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources"

C. **AUTOIMMUNE DISEASES** Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.

D. **TUBERCULOSIS** Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis.

E. **KIDNEY DISEASE** Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers.

F. **NON-MALIGNANT RESPIRATORY DISEASES** There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases including chronic bronchitis, emphysema and small airways disease, particularly among smokers.

SECTION 12. ECOLOGICAL INFORMATION

No data available for this product. No specific adverse effect known.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, provincial and local environmental control regulations. Where possible recycling is preferred to disposal or incineration.

SECTION 14. TRANSPORT INFORMATION

Special shipping information: None.

SECTION 15. REGULATORY INFORMATION

This product has been classified D2A in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

SECTION 16. OTHER INFORMATION

Preparation information: Prepared by Jon Walls.

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