

# Safety Data Sheet

## Section 1 - Product and Company Identification

### Product Name

*Fire-Red*

### Restrictions on Use

*None applicable*

### Supplier Identification

*Plainsman Clays  
702 Wood Street  
Medicine Hat, Alberta  
T1A 7E5 Canada  
Phone: 403-527-8535  
Website: <http://plainsmanclays.com>*

### Emergency Phone Number

*403-527-8535 (Monday-Friday 9pm-4.30am)*

### Product Use

*Pottery Clay Ingredient*

## Section 2A - Hazards Identification

### Hazard Classification

*Carcinogenicity (inhalation) - Category 1A  
Specific Target Organ Toxicity Exposure - Category 3 (Respiratory System)  
Specific Target Organ Repeat Toxicity Exposure - Category 1 (Respiratory System)*

### GHS Label Elements / Hazard Pictograms

*Signal Word: Warning*



## **Hazard Statements**

*H350: May cause cancer*  
*H332: Harmful if inhaled*  
*H316: Causes mild skin irritation*  
*H320: Causes eye irritation*  
*H335: May cause respiratory irritation*

## **Precautionary Statements**

*P261: Avoid breathing dust/fumes/gas/mist/vapours/spray. [As modified by IV ATP]*  
*P280: Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]*

## **OSHA/HCS Status**

*Clay mixture in dry form is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)*

## **Section 3 - Composition**

<b>Component</b>	<b>CAS#</b>	<b>Approx % by Weight</b>
Quartz (in raw clays)	14808-60-7	<25%
Kaolinite	1318-74-7	<15%
Feldspar	13244-96-5	<10%
Ball Clay	1332-58-7	<10%
Barium Carbonate	513-77-9	<0.3%

## **Section 3A - Ingredients - Information**

### **Substances / Mixtures**

*Mixture - A trade secret claim is made for this item.*

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

### **General**

*Never give anything by mouth to an unconscious person. If you feel unwell seek medical attention.*

## **Inhalation**

*Move victim to well ventilated area. If coughing and irritation persists, seek medical attention.*

## **Skin contact**

*Wash affected area with water. Obtain medical attention if irritation persists.*

## **Eye contact**

*Remove contact lenses (if present and easy to do). Rinse cautiously with water for several minutes.*

*Obtain medical attention if pain, blinking or redness persists.*

## **Ingestion**

*Unlikely to be toxic unless large amounts have been ingested. Rinse mouth. Do NOT induce vomiting. If discomfort persists, seek medical attention.*

## **Most Important Symptoms and Effects, Both Acute and Delayed**

*Repeated or prolonged exposure to respirable crystalline silica dust may cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, dry cough, fever, loss of appetite and weight loss, chest pain. Acute silicosis can be fatal.*

### **First-Aid - Symptoms and Effects, Both Acute and Delayed**

## **Eye Contact**

*Prolonged contact with large amounts of dust may cause mechanical irritation.*

## **Skin Contact**

*Prolonged contact with large amounts of dust may cause mechanical irritation.*

## **Inhalation**

*Inhalation of high concentrations of dry clay dust may cause mechanical irritation and discomfort. Long term exposure may cause chronic effects (see section 11).*

## **Ingestion**

*Large quantities ingested may cause gastrointestinal irritation.*

## **Chronic Symptoms**

*Repeated or prolonged exposure to respirable crystalline silica dust may cause lung damage in form of silicosis. Symptoms include shortness of breath, fever, fatigue, loss of appetite, chest pain, dry non-productive cough.*

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

### **Suitable extinguishing media**

*This product is not combustible. Use dry chemical or water.*

### **Unsuitable extinguishing media**

*No restrictions on extinguishing media.*

### **Hazardous thermal decomposition products**

*Decomposition products include steam (as the product dries), water vapor (as it dehydrates), carbon dioxide, tiny amounts of sulphur (as temperatures exceed 1500F).*

### **Protective equipment and precautions for fire-fighters**

*Clay can become slippery when wet.*

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

### **Personal precautions and protective equipment**

*Avoid inhalation of dust during clean-up. Wear approved respirators when dust levels exceed exposure limits. Wet clay is slippery, exercise caution when walking on it.*

### **Emergency procedures**

*There are no emergency procedures required for this material.*

### **Methods and materials for containment and cleaning up**

*For normal cleanup, use wet methods (hose, mop) to avoid dust generation. Use dry methods to collect powdered or granular clay materials only if significant amounts must be collected. Do not use compressed air. Avoid generating dust.*

*Large cleanups: If needed, evacuate the area downwind during cleanup operations. Collect spilled slurry material using shovels, brooms, squeegees and appropriate containers. Be very cautious of slipping hazards. Water wash to remove any residue.*

## Environmental precautions

Clay is a natural material and will not cause adverse effects to most systems. However it can plug pipes and sumps so do not dump muddy water into your drains. Allow it to settle in containers, then pour off the water and dry out the sediment for disposal.

## Section 7 - Handling and Storage

### Precautions for safe handling

Use proper lifting techniques to avoid physical injury. Wear approved respirators when working in areas where clay products having dust on the packaging are being moved.

### Conditions for safe storage

Keep pugged clay out of direct sunlight. Do not freeze. Stack pugged material only as high as it will be stable. Keep hallways and passage way floors clean and dust free.

## Section 8 - Exposure Controls/Personal Protection

Hazardous Ingredient	CAS#	Occupational Exposure Limits
Quartz, (Crystalline Silica) SiO <sub>2</sub>	14808-60-7	ACGIH TLV: TWA 0.025 mg/ m <sup>3</sup> (respirable) OSHA PEL: TWA 10 mg/m <sup>3</sup> / divided by the value %SiO <sub>2</sub> + 2 (respirable) OSHA PEL: TWA 30 mg/m <sup>3</sup> / divided by the value %SiO <sub>2</sub> + 2 (total dust) CAL OSHA PEL: TWA .1 mg/ m <sup>3</sup> (respirable) CAL OSHA PEL: TWA .3 mg/ m <sup>3</sup> (total)
Kaolinite (Al <sub>2</sub> O <sub>3</sub> .2SiO <sub>2</sub> .2H <sub>2</sub> O)	1332-58-7	ACGIH TLV: TWA 2 mg/ m <sup>3</sup> (respirable) / particulate matter containing no asbestos and <1% crystalline silica (respirable) OSHA PEL: TWA 5 mg/m <sup>3</sup> (respirable) OSHA PEL: TWA 15 mg/m <sup>3</sup> (total) CAL OSHA PEL: TWA 2 mg/ m <sup>3</sup> (respirable)
Barium Carbonate - BaCO <sub>3</sub>	513-77-9	ACGIH TLV: TWA 3 mg/ m <sup>3</sup> (respirable) (as Ba) OSHA PEL: TWA 0.5 mg/ m <sup>3</sup> (total dust) (as Ba)
Mica - (Na,K) <sub>2</sub> O.2Al <sub>2</sub> O <sub>3</sub> .6SiO <sub>2</sub> .2H <sub>2</sub> O	12001-26-2	ACGIH TLV: TWA 3 mg/ m <sup>3</sup> (respirable) OSHA PEL: TWA 3 mg/m <sup>3</sup> (respirable) OSHA PEL: TWA 20 mppcf See Appendix C (Mineral Dusts) See Section 16) CAL OSHA PEL: TWA 3 mg/ m <sup>3</sup> (respirable)

### Engineering Measures

Clay mixture in moist form poses no inhalation health risk. Once clay mixture has dried, there may be dust generated by cleaning and working processes. In the event that dust is generated, use local exhaust ventilation or other engineering controls as required to maintain exposures below applicable occupational exposure limits (TLV).

## **Personal Protective Equipment (PPE)**

*Exhaust system: When sanding or finishing dry ware, use local exhaust to reduce the level of respirable dust that can be breathed or that will settle on floors and objects.*

*Respiratory Protection: Respirable dust should be monitored and levels in excess of appropriate exposure limits should be reduced by better ventilation, changing production methods, keeping floors cleaner, periodically cleaning shelves and other objects on which dust settles. When controls are not feasible wear NIOSH/OSHA approved respirators where airborne concentration exceeds PEL, otherwise wear an N95 particulate respirator.*

*Eye Protection: Use safety glasses where appropriate. Avoid working in areas having crystalline silica dust if you wear contact lenses.*

*Skin Protection: Protective clothing is not essential. Use gloves and/or protective clothing if abrasion or allergic reactions are experienced.*

## **Section 9 - Physical and Chemical Properties**

### **Physical State**

*Powder*

### **Color**

*Red*

### **Odor**

*Earthy*

### **Odor Threshold**

*Not applicable*

### **pH**

*6-8*

### **Melting Point**

*> 1200C*

### **Freezing Point**

*< 0C (32F)*

### **Flash Point**

*Not applicable*

## **Evaporation Rate**

*Not data available*

## **Flamability**

*Not flammable*

## **Explosion Limits**

*Not applicable*

## **Vapor Pressure**

*Not applicable*

## **Vapor Density**

*Not applicable*

## **Relative Density**

*~2.5 g/cc*

## **Solibilities**

*Not soluble in water*

## **Partition Coefficient**

*Not applicable*

## **Decomposition Temperature**

*Not applicable*

## **Viscosity**

*Not applicable*

# **Section 10 - Stability and Reactivity**

## **Reactivity**

*Normally stable.*

## **Chemical Stability**

*No stabilizers required. Safety issue: Mold may form in the plastic bag (moist clay mixture) after several months of shelf life (especially if the material is exposed to sunlight).*

## **Possibility of Hazardous Reactions**

*None known*

## **Conditions to Avoid**

*None known*

## **Incompatible Materials**

*None known*

## **Hazardous Decomposition Products**

*Temperatures above 2000F are required for decomposition products other than small amounts of CO<sub>2</sub>. Possible products are sulfur, metal fumes).*

# **Section 11 - Toxicological Information**

## **Inhalation - Immediate Effects**

*May cause mechanical irritation and discomfort.*

## **Inhalation - Long Term Effects**

*Long term repeated and prolonged inhalation of respirable dust may cause damage in the form of silicosis, or, increase susceptibility to bronchitis, COPD, tuberculosis.*

*Silica has been classified by OSHA as a human lung carcinogen.*

## **Effects of Silicosis**

*Symptoms included progressively more difficult breathing, cough, fever, weight loss. Acute silicosis can be fatal.*

## **Other Routes of Exposure**

*Exposure to high levels of dust can irritate the eyes. Preexisting skin sensitivities or allergies can be aggravated by skin contact of dry or wet clay. No known short or long term mutagenic, teratogenic or development effects.*

# **Section 12 - Ecological Information**



## **Ecotoxicity**

*Clays and mineral powders used in this product are inert and insoluble.*

## **Persistence and Degradability**

*n/a*

## **Bioaccumulative Potential**

*n/a*

## **Mobility in Soil**

*Mechanical only.*

## **Other Adverse Effects**

*Clay particles have an electrolytic affinity for water. As their proportion increases in the soil it becomes more and more impermeable to water penetration.*

# **Section 13 - Disposal Considerations**

## **Personal Protection**

*Refer to section 8.*

## **Appropriate Disposal Containers**

*Standard waste containers - no special requirements.*

## **Appropriate Disposal Methods**

*In accordance with local, state and federal requirements. No special measures. Call your supplier for advice on repurposing specific material to another manufacturing process to eliminate the need for disposal.*

## **Physical and Chemical Properties That May Affect Disposal**

*When dry clay dust is being transported and workers are exposed to it in confined environments, it should be in sealed containers that do not permit release of dust during handling.*

## **Sewage Disposal**

*Do not dispose into sinks or toilets. When clay:mineral powder mixes disperse in plenty of water heavier particles quickly settle out and their sticky nature can make it difficult to flush them away.*

## **Special Precautions for Landfills and Incineration Activities**

*None. This product is non-combustible.*

## **Section 14 - Transportation Information**

### **DOT Classification**

*Not regulated. No UN proper shipping name, transport hazard class, packing group number, bulk transport guidance, special precautions.*

### **TDG Classification**

*Not regulated*

### **ADR/ID Class**

*Not regulated*

### **IMDG Class**

*Not regulated*

### **IATA/DGR Class**

*Not regulated*

## **Section 15 - Regulatory Information**

### **TSCA - Toxic Substances Control Act - EPA**

*Quartz and other materials are listed in the TSCA Chemical Substance Inventory.*

### **SARA/Title III (Emergency Planning & Community Right-to-Know Act)**

*The mixture contains no substances at or above the reporting threshold under section 313, based on available data.*

### **Canada DSL**

*Listed.*

### **Canadian WHMIS Listing**

*D2A Materials causing other toxic effects.*

## Specific State Regulations

*Components found in this product may contain trace amounts of inherent naturally occurring elements (such as, but not limited to manganese, sulfur).*

## **Section 16 - Release Information**

### **Prepared By**

*Tony Hansen*

### **Date**

*June 1, 2018*

### **Revision**

*2*

## **Section 16 - Other Information**

### **Definitions**

*WHMIS means Workers Hazardous Materials Information System (Canada)*

*SDS means Safety Data Sheet*

*HPR means Hazardous Products Regulations*

*ASTM means American System of Testing and Materials*

*OSHA means Occupational Safety & Health Administration*

*OSHA PEL means OSHA Permissible Exposure Limit*

*OSHA STEL means spot exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods*

*CAL-OSHA means California OSHA, most CAL-OSHA standards defer to the federal OSHA standards*

*IARC means International Agency for Research on Cancer*

*NTP means National Toxicology Program*

*HCS means Hazardous Communication Standard*

*CAS means Chemical Abstract Service*

*ACGIH means American Conference of Governmental Industrial Hygienists*

*TWA means Time Weighted Average (average exposure on the basis of an 8h/day, 40h/week work schedule)*

*TLV means Threshold Limit Value - American Conference of Governmental Industrial Hygienists (ACGIH)*

*Three types of TLVs for chemical substances as defined by the ACGIH are:*

*1. TLV-TWA - Time weighted average - average exposure on the basis of an 8h/day, 40h/week work schedule.*

*2. TLV-STEL - Short-term exposure limit - spot exposure for a duration of 15 minutes, that*

*cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods.*

*3. TLV-C - Ceiling limit - absolute exposure limit that should not be exceeded at any time.*