

**SECTION I: PRODUCT INFORMATION**

Product Name: Natural Red  
 Chemical Family: Inorganic pigment  
 Product Uses: Pigment  
 Revision Date: August 27, 2013

**SECTION II: COMPOSITION**

Component	CAS #	%	LD <sub>50</sub> (gm/kg) Oral	LD <sub>50</sub> (gm/kg) Skin	LC <sub>50</sub> ppm Inhalation
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	1309-37-1	85 - 87	>10,000	not known	not known
Crystalline Silica (SiO <sub>2</sub> )	14808-60-7	3 - 5	not known	not known	not known
Non-Hazardous	Not Available	8 - 11	not known	not known	not known
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	1344-28-1	1 - 2	not known	not known	not known

**SECTION III: PHYSICAL DATA**

Odour & Appearance: Odourless reddish - brown powder  
 Odour Threshold: Not known  
 Vapour Pressure: None - will not vaporize  
 Evaporation Rate (Butyl Acetate=1) : None - not volatile  
 Vapour Density (air = 1) : 5.5 (theoretical only)  
 Boiling Range: not applicable  
 Melting Point: 1565°C / 2849°F - *Fe<sub>2</sub>O<sub>3</sub> only*  
 Density: 4.4  
 Water Solubility: Nil  
 Acid Solubility: Yes  
 Viscosity: Not applicable - solid substance  
 pH: 7.8  
 Molecular Weight: 160g per mole (Fe<sub>2</sub>O<sub>3</sub>), 60 g/mole (SiO<sub>2</sub>),  
 102 g/mole (Al<sub>2</sub>O<sub>3</sub>)

**SECTION IV: FIRE AND EXPLOSION**

Flash Point: Cannot burn  
 Auto ignition Temperature: Cannot burn  
 Flammable Limits: Cannot burn  
 Combustion Products: None

Firefighting Precautions: As for materials sustaining fire; firefighters must wear SCBA  
 Static Charge Accumulation: Cannot burn, not applicable

**SECTION V: REACTIVITY DATA**

Dangerously Reactive With: Not known  
 Also Reactive With: Not known  
 Stability: Stable; will not polymerize  
 Decomposes in Presence of: Red hot carbon (Fe<sub>2</sub>O<sub>3</sub>)  
 Decomposition Products: Iron and carbon monoxide/carbon dioxide  
 Sensitive to Mechanical Impact: No

**SECTION VI: HEALTH & ENVIRONMENTAL INFORMATION DATA**

Summary: inhalation of product dust may damage lung, possible carcinogen  
 Canada – WHMIS: D2A  
 U.S.A. – HMIS: Health – 1, Fire – 0, Reactivity – 0

**Effects, Acute Exposure**

Skin Contact: No effect  
 Skin Absorption: Nil  
 Eye Contact : Dust may be a mechanical irritant  
 Inhalation: Dust may be a mechanical irritant, causing coughing and/or sneezing  
 Ingestion: Not known; probably no effect – not a route of industrial exposure

**Effects, Chronic Exposure**

General: Prolonged exposure to dust in iron ore miners has resulted in iron oxide accumulation in lungs; a form of benign pneumoconiosis has been associated with high levels of exposure to iron oxide dust.  
 Sensitizing: Not a sensitizer in humans or animals  
 Carcinogen/Tumorigen: Iron oxide is not considered a tumorigen or a carcinogen in humans or animals. Crystalline silica is considered to be a human carcinogen. Remaining components are neither tumorigens nor carcinogens in humans or animals.  
 Reproductive Effect: No known effect in humans or animals  
 Mutagen: No known effect on humans or animals  
 Synergistic With: Not known

LD<sub>50</sub> (oral): Above 10,000  
 LD<sub>50</sub> (skin): Not known  
 LC<sub>50</sub> (inhalation): Not known

**Environmental Information**

Bioaccumulation: This product cannot bioaccumulate  
 Biodegradation: This product is relatively inert and will not biodegrade  
 Abiotic Degradation: This product is relatively inert and will not undergo abiotic degradation  
 Mobility in soil & water: This product is water insoluble and will not move in soil and water  
 Marine Toxicity: No data

**SECTION VII: SPILLS, LEAKS, & DISPOSAL PROCEDURES**

Leak Precaution: Not required – solid material  
 Handling Spill: Shovel carefully (do not create dust) or vacuum spilled material; sprinkle residue with dust-suppressing sweeping compound, sweep, shovel and store in closed containers for disposal  
 Waste Disposal: Do not flush to sewer, this product is not a hazardous waste; may be dumped in sanitary landfill unless local regulations forbid this

**SECTION VIII: PROTECTION EQUIPMENT**

Exposure Values:	Component	ACGIH TLV	OSHA PEL	NIOSH
	Iron Oxide	5mg/m <sup>3</sup> (fumes)	10 mg/m <sup>3</sup> (fumes)	5 mg/m <sup>3</sup> (fumes)
	Aluminum Oxide	10mg/m <sup>3</sup>	5mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	not known
	Crystalline Silica	0.05mg/m <sup>3</sup> (respirable) 0.025 mg/m <sup>3</sup> (SiO)	not known	0.05 mg/m <sup>3</sup> (respirable)

Ventilation: Mechanical ventilation may be required to maintain airborne dust below TWAEV; depending on handling procedures

Hands:	No special protective gloves required
Eyes:	Safety glasses with side shields – <i>always protect the eyes</i>
Clothing:	No special protective clothing required
Respirator:	NIOSH approved dust mask

## SECTION IX: FIRST AID

SKIN:	Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
EYES:	Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
INHALATION:	Remove from contaminated area promptly. <b>CAUTION: Rescuer must not endanger himself!</b> If breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION:	Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

## SECTION X: HANDLING & STORAGE REQUIREMENTS

- Avoid breathing product dust.
- Ventilation should be installed to clear any dust formed at source.
- Avoid unnecessary contact with skin and wash work clothes frequently.
- An eye bath should be available near the workplace.
- Avoid moisture.
- No other special storage requirements.

## SECTION XI: SHIPPING INFORMATION

<b>Canada TDG:</b>	<b>PIN UN-not regulated for transport</b>
<b>U.S.A. 49 CFR:</b>	<b>PIN UN- not regulated for transport</b>
<b>Marine Pollutant:</b>	<b>Not a marine pollutant</b>

## **SECTION XII: OTHER**

*This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.*

The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that its activities comply with all federal, provincial or local regulations. It is the buyer's/user's responsibility to determine the safety, toxicity, and suitability for their own use of the product described herein. Conditions of use are beyond Colors of Nature's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.