

SECTION I: PRODUCT INFORMATION

Product Name: Dark Raw Sienna
 Chemical Family: Inorganic pigment
 Product Uses: Pigment
 Revision Date: December 21, 2012

SECTION II: COMPOSITION

Component	CAS #	%	LD ₅₀ (gm/kg) Oral	LD ₅₀ (gm/kg) Skin	LC ₅₀ ppm Inhalation
Iron Oxide (Fe ₂ O ₃)	1309-37-1	87 – 90	>10,000	not known	not known
Crystalline Silica (SiO ₂)	14808-60-7	0.2 – 0.4	not known	not known	not known
Non-hazardous	Not Available	8 – 11	not known	not known	not known
Magnesium silicate (Talc)	14807-96-6	2 – 3	not known	not known	not known
Magnesite (MgCO ₃)	546-93-0	1.5 – 2	not known	not known	not known
Kaolin	1332-58-7	0.5 – 1	not known	not known	not known

SECTION III: PHYSICAL DATA

Odour & Appearance: Odourless yellow 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 – *Fe₂O₃ only*
 Density: 3.2
 Water Solubility: Insoluble
 Viscosity: Not applicable – solid substance
 pH: 7.0
 Molecular Weight: Not available

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: None
 Stability: Stable; will not polymerize
 Decomposes in Presence of: Red hot carbon (Fe₂O₃)
 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: Chronic inhalation of kaolin may cause a particular type of pneumoconiosis called kaolinosis; pure kaolin is apparently not fibrogenic and does not induce debilitating silicosis; however, if it is contaminated with crystalline silica it may produce severe lung effects, including emphysema and pulmonary fibrosis due to the contaminating silica. 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. Prolonged exposure to

Sensitizing:	magnesium silicate by inhalation may cause talc pneumoconiosis (talcosis), which affects the lungs
Carcinogen/Tumorigen:	Not a sensitizer in humans or animals Iron oxide is not considered a tumorigen or a carcinogen in humans or animals. Crystalline silica is considered to be a human carcinogen
Reproductive Effect:	No known effect in humans or animals
Mutagen:	No known effect on humans or animals
Synergistic With:	Not known
LD ₅₀ (oral):	Above 10,000
LD ₅₀ (skin):	Not known
LC ₅₀ (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 ³ (fumes)	10 mg/m ³ (fumes)	5 mg/m ³ (fumes)
	Magnesium silicate (Talc)	2mg/m ³ (respirable)	20 mppcf < 1% quartz	2 mg/m ³ (respirable)
	Magnesite	10mg/m ³ (total)	15 mg/m ³ (total) 5 mg/m ³ (respirable)	10 mg/m ³ (total) 5 mg/m ³ (respirable)
	Kaolin	2mg/m ³ (fumes)	15 mg/m ³ (total) 5 mg/m ³ (respirable)	10 mg/m ³ (total) 5 mg/m ³ (respirable)
	Crystalline Silica	0.05mg/m ³ (respirable) 0.025 mg/m ³ (SiO)	not known	0.05 mg/m ³ (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 – *always protect the eyes*

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.

CAUTION: Rescuer must not endanger himself! 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

Canada TDG:

U.S.A. 49 CFR:

Marine Pollutant:

PIN UN-not regulated for transport

PIN UN- not regulated for transport

Not a marine pollutant

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.