

SECTION I: PRODUCT INFORMATION

Product Name: Medium Raw Sienna
 Chemical Family: Inorganic pigment
 Product Uses: Pigment
 Revision Date: August 27, 2013

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 | 9 – 13 | 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: 3.3
 Water Solubility: Insoluble
 Acid Solubility: Yes
 Viscosity: Not applicable – solid substance
 pH: 5.5
 Molecular Weight: 160g per mole (Fe₂O₃)

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 (Fe ₂ O ₃) |
| 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

Reproductive Effect:

No known effect in humans or animals

Mutagen:

No known effect on humans or animals

Synergistic With:

Not known

LD₅₀ (oral):

Above 10,000

LD₅₀ (skin):

Not known

LC₅₀ (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) |
| | 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: | PIN UN-not regulated for transport |
| U.S.A. 49 CFR: | PIN UN- not regulated for transport |
| Marine Pollutant: | 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



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