

# Material Safety Data Sheet

## Green umber

**Product Code:** PS-MI0072

**Department:** iron oxides dry pigments

**C.A.S.:** 1309-37-1, 14807-96-6, 14808-60-7, 1332-58-7, 1333-86-4



### Section: 1 Identification

**Product :** natural iron oxide pigment

**company:** KAMA pigments  
7442 St-hubert montréal Québec, H2R 2N3  
phone : 514 272 2173 fax : 514 948 5253  
email : info@kamapigment.com

**recommended uses:** pigment for use in artists' colors, paints; coloring material not for use in tattoo inks, cosmetics any medical related applications.

### Section: 2 Hazard Identification

**(a)HAZARDS SUMMARY:**

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

**(b) HAZARDS – TOXICITY :**

**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. 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 magnesium silicate by inhalation may cause talc pneumoconiosis (talcosis), which affects the lungs.

**Sensitizing**

**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 and carbon black is considered a possible human carcinogen. Remaining components are neither tumorigens nor carcinogens in humans or animals

**Reproductive Effect**

**Mutagen**

no known effect in humans or animals  
no known effect on humans or animals

Synergistic With	not known
LD50 (oral)	above 10,000
LD50 (skin)	not known
LC50 (inhalation)	not known

## SGH Label Elements



### Signal Word

danger

### GHS Classification

Carcinogenicity -Cat.1  
 Carcinogenicity -Cat.1A  
 Carcinogenicity -Cat.2  
 Specific target organ toxicity -repeated exposure -Cat.1  
 Combustible dust -Cat.1

### Precautionary Statements

P201 - Obtain special instructions before use.  
 P202 - Do not handle until you read and understand all safety precautions.  
 P280 - Wear protective gloves / protective clothing / eye protection / face protection.  
 P281 - Use personal protective equipment as required.  
 P308 + P313 - IF exposed or concerned: Get medical advice. May form combustible dust concentrations in air

### Hazard Statements

H350 – May cause cancer

## Section: 3 Composition / Information on Ingredients

COMPONENTS	CAS #	%	LD50(mg/kg)		LC50 ppm
			ORAL	SKIN INHALATION	
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	1309-37-1	45 - 50	>10,000	not known	not known
Complex hydrocarbon	not available	13 – 14	not known	not known	not known
Magnesium silicate (talc)	14807-96-6	5 – 10	not known	not known	not known
Crystalline Silica (SiO <sub>2</sub> )	14808-60-7	2 – 2.5	not known	not known	not known
Kaolin	1332-58-7	1 – 3	not known	not known	not known
Carbon black	1333-86-4	1 – 2	>14,400	>3000	6750

## Section: 4 First-Aid Measures

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.

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## Section: 5 Fire-Fighting Measures

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

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## Section: 6 Accidental Release Measures

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

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## Section: 7 Handling And Storage

Avoid moisture. No other special storage requirements.

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## Section: 8 Exposure Control/Personal Protection

Exposure Values:	Component	ACGIH TLV	OSHA PEL	NIOSH
	Iron Oxide	5 mg/m3 (dust & fumes)	10 mg/m3 (dust & fumes)	5 mg/m3 (dust & fumes)
	Magnesium silicate (Talc)	2 mg/m3 (respirable)	20 mppcf, < 1% quartz	2 mg/m3 (respirable)
	Crystalline Silica	0.05 mg/m3 (respirable) 0.025 mg/m3 (SiO)	not known	0.05 mg/m3 (respirable)
	Kaolin	2 mg/m3 (fumes)	15 mg/m3 (total) 5 mg/m3 (respirable)	10 mg/m3 (total) 5 mg/m3 (respirable)
	Magnesite	10 mg/m3 (total)	15 mg/m3 (total) 5 mg/m3 (respirable)	10 mg/m3 (total) 5 mg/m3 (respirable)
	Carbon Black	3.5 mg/m3	3.5 mg/m3	3.5 mg/m3

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

NOTE: Crystalline silica is considered a human carcinogen. Engineering controls should be in place to eliminate or at least reduce dust formation. If dust formation occurs, ventilation should be installed to clear this at source.

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

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## Section: 9 Physical and Chemical Properties

Odour & Appearance	odourless brown powder
Odour Threshold	not known
Vapour Pressure	none – will not vapourise
Evaporation Rate (Butyl Acetate=1)	none – not volatile
Vapour Density (air = 1)	5.5 (theoretical only)
Boiling Range	not known
Melting Point	1565 °C / 2849 °F – Fe <sub>2</sub> O <sub>3</sub> only
Density	2.2
Water Solubility	2% – (MgO) & (CaO) are water soluble
– also soluble in	acid solutions
Viscosity	not applicable – solid substance
pH	7
Molecular Weight	not available

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## Section: 10 Stability And Reactivity

dangerously Reactive With	not known
Also Reactive With	CaO & MgO react with water & with acids, but only 2% of product
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

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## Section: 11 Toxicological Information

### Iron Oxide:

Immediately dangerous to Life or Health: 2500 mg/cu m (as Fe) /Iron oxide dust and fume, as Fe/  
OSHA Standards: Permissible Exposure Limit: Table Z-1 8-hr Time Weighted Avg: 10 mg/cu m. /Fume/  
NIOSH Recommendations: Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 5 mg/cu m. /Iron  
oxide dust and fume, as Fe/ NIOSH concluded that the documentation cited by OSHA was inadequate to  
support the proposed PEL (as an 8-hr TWA) of 10 mg/cu m for rouge. /Rouge/

### Threshold Limit Values:

8 hr Time Weighted Avg (TWA): 5 mg/cu m. /Iron oxide dust and fume (Fe<sub>2</sub>O<sub>3</sub>), as Fe/ Excursion Limit  
Recommendation: Excursions in worker exposure levels may exceed three times the TLV-TWA for no  
more than a total of 30 min during a work day, and under no circumstances should they exceed five times  
the TLV-TWA, provided that the TLV-TWA is not exceeded. Iron oxide dust and fume (Fe<sub>2</sub>O<sub>3</sub>), as Fe/ A4;  
Not classifiable as a human carcinogen. /Iron oxide dust and fume (Fe<sub>2</sub>O<sub>3</sub>), as Fe/ 2005 Notice of  
Intended Changes: These substances, with their corresponding values and notations, comprise those for  
which (1) a limit is proposed for the first time, (2) a change in the Adopted value is proposed, (3) retention  
as an NIC is proposed, or (4) withdrawal of the Documentation and adopted TLV is proposed. In each  
case, the proposals should be considered trial values during the period they are on the NIC. These  
proposals were ratified by the ACGIH Board of Directors and will remain on the NIC for approximately one  
year following this ratification. If, during the year, the Committee neither finds nor receives any  
substantive data that change its scientific opinion regarding an NIC TLV, the Committee may then  
approve its recommendation to the ACGIH Board of Directors for adoption. If the Committee finds or  
receives substantive data that change its scientific opinion regarding an NIC TLV, the Committee may  
change its recommendation to the ACGIH Board of Directors for the matter to be either retained on or  
withdrawn from the NIC. 8 hr Time Weighted Avg (TWA): 5 mg/cu m); respirable fraction; Notations: A4;  
Not classifiable as a human carcinogen; TLV Basis-Critical Effect(s):Pulmonary siderosis.

### Magnesite:

OSHA's former PEL for magnesite was 15 mg/m<sup>3</sup>, measured as total particulate; this was the Agency's  
generic limit for all dusts and particulates. The ACGIH has a TLV-TWA of 10 mg/m<sup>3</sup>, also measured as  
total particulate. The proposed PELs for magnesite were 8-hour TWAs of 10 mg/m<sup>3</sup> (total particulate) and  
5mg/m<sup>3</sup> (respirable fraction). In the final rule, however, OSHA is retaining its former total particulate limit  
of 15 mg/m<sup>3</sup> for magnesite. Magnesite occurs as a white powder.

Magnesite is considered by both OSHA and the ACGIH to be one of the dusts that "do not produce  
significant organic disease or toxic effect when exposures are kept under reasonable control" (ACGIH  
1986/Ex. 1-3). Exposure to excess levels of magnesite in the workplace causes skin or mucous

membrane irritation resulting either from contact with the magnesite itself or from the rigorous cleansing procedures necessary for removing the dust. NIOSH, the only commenter on this substance, has not substantively reviewed the effects of exposure to magnesite (Ex. 8-47, Table N4). OSHA is retaining its 8-hour TWA PEL of 15 mg/m<sup>3</sup> TWA for magnesite, measured as total particulate; the 5-mg/m<sup>3</sup> TWA limit for the respirable fraction is also being retained. The Agency concludes that these limits protect workers from the significant risk of skin, mucous membrane, and other physical irritation.

**Crystalline Silicone:**

NIOSH Recommendations: Recommended Exposure Limit: Silica, crystalline: 10 hr Time Weighted Avg: 0.05 mg/cum, respirable fraction. NIOSH considers crystalline silica to be a potential occupational carcinogen. Threshold Limit Values: 8 hr Time Weighted Avg (TWA): 0.05 mg/cu m, respirable fraction /Silica, Crystalline - Quartz/ A2; Suspected human carcinogen. /Silica, Crystalline - Quartz/ 8 hr Time Weighted Avg (TWA): 0.05 mg/cu m, respirable fraction /Silica, Crystalline - Cristobalite/ 8 hr Time Weighted Avg (TWA): 0.1 mg/cu m, respirable fraction, as quartz /Silica, Crystalline - Tripoli/ Excursion Limit Recommendation: Excursions in worker exposure levels may exceed three times the TLV-TWA for no more than a total of 30 min during a work day, and under no circumstances should they exceed five times the TLV-TWA, provided that the TLV-TWA is not exceeded. /Silica, Crystalline - Quartz, Cristobalite, Tridymite & Tripoli/ 2005 Notice of Intended Changes: These substances, with their corresponding values and notations, comprise those for which (1) a limit is proposed for the first time, (2) a change in the Adopted value is proposed, (3) retention as an NIC is proposed, or (4) withdrawal of the Documentation and adopted TLV is proposed. In each case, the proposals should be considered trial values during the period they are on the NIC. These proposals were ratified by the ACGIH Board of Directors and will remain on the NIC for approximately one year following this ratification. If, during the year, the Committee neither finds nor receives any substantive data that change its scientific opinion regarding an NIC TLV, the Committee may then approve its recommendation to the ACGIH Board of Directors for adoption. If the Committee finds or receives substantive data that change its scientific opinion regarding an NIC TLV, the Committee may change its recommendation to the ACGIH Board of Directors for the matter to be either retained on or withdrawn from the NIC. 8 hr Time Weighted Avg (TWA): 0.025 mg/cu m (respirable fraction); Notations: A2-Suspected human carcinogen; TLV Basis-Critical Effect(s): Silicosis, fibrosis. /alpha-Quartz and Cristobalite / 2005

## Section: 12 Ecological 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: 13 Disposal Considerations

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
Containers	Drums should be reused. Recondition & pressure test by licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): pressure test & recertify polyethylene bottle at 30 months. Replace at 60 months (5yrs). Inspect, pressure test & recertify steel containers every 5 years. Never cut, drill, weld or grind on or near this container, even if empty

## Section: 14 Transport 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	
Emergency Number	Newalta (800) 567-7455	

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## Section: 15 Regulatory Information

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.

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

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## Section: 16 Other Information

reference	manufacturer's material safety data sheet
prepared by	Kama pigments

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## Disclaimer:

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