

## Section 1: Product and Company Identification

**Product Identifier:** Manganese Dioxide Clays

**Product Names:** Hudson Clay, Ontko Clay, Heath Mn, Night, Starry Night

**Product uses:** Pottery, sculpture, other

**Manufacturer:**

Industrial Mineral Company  
7268 Frasinetti Road  
Sacramento, California 95828

**Emergency Telephone Number:** 916-383-2811 or 911

**Telephone Number for Information:** 916-383-2811

## Section 2: Hazards Identification



Carcinogen (silica)

**OSHA/HCS status:** This mixture in dry form is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Classification of the substance of mixture:** OSHA –Carcinogenicity (inhalation) - Category 1A and Specific organ toxicity (Repeated Exposure) (Respiratory tract through inhalation) – Category 1

**Exposure limits for Crystalline Silica:** The current American Conference of Government Industrial Hygienist Threshold limit value for crystalline silica is: 0.1 mg/m<sup>3</sup>

**Signal Word:** Danger

**Hazard Statement** Cancer Hazard. Contains quartz (crystalline silica) which may cause cancer. Risk of cancer depends upon duration and level of exposure to the dust. Not an acute hazard. Prolonged inhalation of dust may cause lung injury. Inhalation of high concentrations of dust may cause mechanical irritation and discomfort of the respiratory tract. Repeated exposure may have chronic effects. When cleaning up dry dust NIOSH or MSHA approved particulate filter respirators should be used.

\*Clay in moist form poses no health risk. Inhalation of dry clay dust should be avoided

**Precautionary Statement:** Avoid generating dust, do not breath dust if generated.

## Section 3: Composition Information

Substances/Mixtures: Mixture – A trade secret claim is made for this group of mixtures.

Chemical Name		CAS Number	%
Crystalline Silica	SiO <sub>2</sub>	14808-60-7	1-31
Amorphous Silica	SiO <sub>2</sub>	7631-86-9	4-25
Crystobalite	SiO <sub>2</sub>	14464-46-1	0-23
Kaolinite	Al <sub>2</sub> O <sub>3</sub> •2SiO <sub>2</sub> •2H <sub>2</sub> O	1332-58-7	14-.53

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Alumina Oxide	Al <sub>2</sub> O <sub>3</sub>	1344-28-1	0-35
Barium Carbonate	BaCO <sub>3</sub>	513-77-9	0-1.2
Calcium Carbonate	CaCO <sub>3</sub>	1317-65-3	0-4
Iron Oxide Dust	Fe <sub>x</sub> O <sub>y</sub>	1309-37-1	0-4
Titanium Dioxide	TiO <sub>2</sub>	13463-67-7	0-3
Mullite	Al <sub>2</sub> O <sub>3</sub> •2SO <sub>2</sub>	1302-93-8	0-19
Manganese Compounds and Fume	MnO <sub>2</sub>	7439-96-5	1-5

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## Section 4: First-Aid Measures

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**Eye Contact:** If eye contact occurs, rinse immediately with plenty of water. Remove contacts, continue to rinse. If irritation persists, seek medical attention

**Skin Contact:** Wash thoroughly with water. If irritation persists, seek medical attention

**Inhalation:** Move victim to fresh air in well ventilated area. If coughing or irritation persists, seek medical attention

**Ingestion:** Rinse mouth. Do Not Induce Vomiting. Unlikely to be toxic by ingestion. Consult physician and/or obtain competent medical assistance

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## Section 5 Fire Fighting Measures

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**General Fire Hazards:** Not flammable

**Extinguishing Media:** Use appropriate extinguishing media for surrounding fire

**Special Fire Fighting Procedure:** None

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## Section 6: Accidental Release Measures

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**Clean-up Methods:** For dry dusts use a vacuum or wet material gently before cleaning to limit dust. When dry sweeping use NIOSH approved respirators when dust levels exceed exposure limits

**Personal Precautions and Personal Protective Equipment:** Wear appropriate protective equipment and clothing during clean-up. If dusty conditions exist use approved respirators.

**Environmental Precautions:** None known

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## Section 7: Handling and Storage

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**Handling Procedures:** Minimize dust generation by keeping clay moist. Use good industrial hygiene practices. Use proper lifting techniques to avoid injury.

**Safe Storage:** Protect from temperature extremes

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## Section 8: Exposure Controls/Personal Protection

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### Airborne Exposure Limits:

#### Quartz component limit

OSHA PEL: TWA 10 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 30 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 0.1 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 0.3 mg/m<sup>3</sup> (total dust)  
ACGIH TLV: TWA 0.025 mg/m<sup>3</sup> (respirable)

#### Amorphous Silica

OSHA PEL: TWA 10 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 80 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 3 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 6 mg/m<sup>3</sup> (total dust)

#### Crystobalite Component Limit

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 0.05 mg/m<sup>3</sup> (respirable)  
ACGIH TLV: TWA 0.05 mg/m<sup>3</sup> (respirable)

#### Kaolinite Component Limit

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 2 mg/m<sup>3</sup> (respirable)  
ACGIH TLV: TWA 2 mg/m<sup>3</sup> (respirable)

#### Manganese Compounds and Fume component limit

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 0.2 mg/m<sup>3</sup> (respirable)  
CAL OSHA STEL: TWA 3 mg/m<sup>3</sup> (respirable)  
ACGIH TLV: TWA 0.2 mg/m<sup>3</sup> (respirable)

#### Alumina Oxide Component Limits

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 10 mg/m<sup>3</sup> (total dust)  
ACGIH TLV: TWA 10 mg/m<sup>3</sup> (respirable)

#### Cellulose Component Limits

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 10 mg/m<sup>3</sup> (total dust)

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ACGIH TLV: Not established

## Calcium Carbonate Component Limits

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 10 mg/m<sup>3</sup> (total dust)  
ACGIH TLV: Not established

## Iron Oxide Dust Component Limits

OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
OSHA PEL : TWA 15 mg/m<sup>3</sup> (total dust)  
CAL OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
ACGIH TLV: TWA 5 mg/m<sup>3</sup> (respirable)

## Titanium Dioxide component Limits

OSHA PEL: TWA 15 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 5 mg/m<sup>3</sup> (respirable)  
CAL OSHA PEL: TWA 15 mg/m<sup>3</sup> (total dust)  
ACGIH TLV: TWA 10 mg/m<sup>3</sup> (respirable)

**Engineering Measures:** Clay in moist form does not pose a health risk nor an inhalation risk. Dry clay can form dust by cleaning or working. Use local exhaust ventilation or other controls to maintain exposure below applicable occupational exposure limits.

## Personal Protective Equipment (PPE):

**Respiratory:** Avoid actions that cause dust exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators should be used. Respirator and/or filter cartridge selection should be based on the ANSI Standard Z88.2.

**Eyes:** When working around activities where dust can contact the eyes, wear safety glasses or goggles to avoid eye irritation or injury. Wearing contacts without sealing goggles is not recommended. When dry sawing clay face shields should also be used

**Skin and Body:** Protective Clothing is not essential, wear gloves if allergic reaction or abrasion is experienced.

**Hygienic Practices:** Avoid creating/breathing dust. Food, beverages and other consumables should not be in the working area. Wash thoroughly before eating, drinking, applying cosmetics, or smoking.

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## Section 9: Physical and Chemical Properties

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<b>Appearance:</b> Moist Clay Brick <b>Physical state:</b> Moist Clay <b>pH:</b> 6-8 <b>Melting/Freezing Point:</b> no data available <b>Evaporation Rate:</b> NA	<b>Odor:</b> earthy <b>Odor threshold:</b> No data Available <b>Flashpoint:</b> NA <b>Boiling Point:</b> NA <b>Flammability:</b> Not Flammable
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<b>Vapor Pressure (mm HG):</b> No data available <b>Specific Gravity:</b> <3.5 <b>Solubility in water at 100 C:</b> 0 (approximately) <b>Decomposition temperature:</b> no data available <b>Viscosity:</b> NA	<b>Vapor Density:</b> NA <b>Specific Gravity:</b> No data available <b>Partition coefficient:</b> No data available <b>Auto-ignition temperature:</b> NA
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## Section 10: Stability and Reactivity

**Reactivity:** No dangerous reactions are known under normal conditions of use

**Chemical Stability:** Stable

**Possibility of Hazardous Reactions and Conditions to Avoid:** None known

**Incompatibility:** None Known

## Section 11: Toxicological Information

### Possible Health Effects:

**Target Organs:** Skin, Eyes, and Respiratory system

**Exposure Routes:** Inhalation, skin or eye contact

### Symptoms:

**Short Term:** Shortness of breath and/or coughing associated with dust inhalation.

**Long Term Exposure (Chronic):** Steady and prolonged exposure to dust concentrations high than LTV without approved respirator could cause silicosis, a chronic disease of the lungs marked by acute fibrosis, may cause cancer based on animal data.

### Effects of Silicosis

Bronchitis/chronic obstructive Pulmonary Disorder  
 Increased susceptibility to Tuberculosis  
 Scleroderma  
 Possible Renal

### Symptoms of Silicosis

Shortness of breath, fever fatigue, loss of appetite, chest pain, dry non-productive cough, respiratory failure, death.

OSHA, IARC, and NTP Carcinogen Classifications				
Chemicals with recognized Carcinogen Potential	CAS#	OSHA	IARC	NTP
Quartz (Crystalline Silica)	14808-60-7	Yes	Yes – Group 1	Yes
Amorphous Silica	7631-86-9	No	No Group 3	No
Crystobalite	14464-46-1	No	Yes Group 1	No
Iron Oxide Dust	1309-37-1	No	No Group 3	No

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Titanium Dioxide	13463-67-7	No	Yes Group 2b	No
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## Section 12: Ecological Information

**Eco toxicity:** None Known  
**Biochemical oxygen demand (BOD5):** None known  
**Chemical oxygen demand (COD):** None known  
**Products of Biodegradation:** None known  
**Toxicity of the products of biodegradation:** None known  
**Bioaccumulation Potential:** None known  
**Potential to move from soil to groundwater:** None Know  
**Other adverse effects:** None known

## Section 13: Disposal Considerations

**Personal Protection:** Refer to section 8 for proper PPE when disposing of waste material  
**Appropriate disposal containers:** No special requirements  
**Appropriate disposal methods:** Disposal of this product should comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements.  
**Physical and chemical properties that may affect disposal:** Dust should be minimized in disposal by either transporting in seal containers or wetting dust before transport  
**Sewage disposal:** do not dispose of into sewage systems, material will settle out of water and clog pipes.  
**Special precautions for landfills or incineration activities:** None

## Section 14: Transport Information

Regulatory Information	UN Number	UN Proper Shipping Name	Transport Hazard Class	Packing Group Number	Bulk Transport Guidance	Special Precautions
DOT Classification	Not Regulated	-	-	-	-	-
TDG Classification	Not Regulated	-	-	-	-	-
ADR/RID 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 chemicals are listed in the TSCA Chemical Substance Inventory

**California Prop. 65 WARNING:** This product contains a chemical known to the State of California to cause cancer. (Prop. 65 – California Health and Safety Code Section 2549 Et Seq)

**SARA/Title III (Emergency Planning & Community Right-to-Know Act)** This mixture contains no substances at or above the reporting threshold under section 313, based on available data.

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## Section 16: Other Information

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Make sure the clays are fired in a well vented kiln, not recommended for raku.

### Definitions

**ASTM** – American System of Testing and Materials

**OSHA** – Occupational Safety & Health Administration

**IARC** – International Agency for Research on Cancer

**NTP** – National Toxicogmail.com

**HCS** – Hazardous Communication Standard

**CAS** – Chemical Abstract Service

**ACGIH** – American Conference of Governmental Industrial Hygienists

**CAL-OSHA** – California Occupational Safety & Health Administration

**OSHA PEL** – OSHA Permissible Exposure Levels

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

**TLV** – Threshold Limit Value

**TWA** – Time Weighted Average

**TLV-TWA** – Time weighted average Threshold limit value

**TLV-STEL** – Short-term exposure limit Threshold limit value

**TLV-C** – Ceiling Limit – absolute limit that should not be exceeded at any time

Revisions: Existing MSDS revised to new GHS format. Revision Date 10/14/2015

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