

# Material Safety Data Sheet


**MPSI**

 Mineral and Pigment  
Solutions, Inc.

## Iron Oxide Pigments - Umbers -

C.A.S. Number: 12713-03-0 / MSDS C.A.S. Code: 0610

**PRODUCT/MATERIAL:** UMBERS  
**MANUFACTURER/DISTRIBUTOR:** MINERAL AND PIGMENT SOLUTIONS, INC.  
**ADDRESS:** 1000 COOLIDGE STREET  
 SOUTH PLAINFIELD, NJ 07080  
**EMERGENCY TELEPHONE NO:** (908) 561-6100

### SECTION I - PRODUCT IDENTIFICATION:

**TRADE NAME:** RAW AND BURNT UMBERS  
**SYNONYM:** UMBERS  
**CHEMICAL FAMILY:** METAL OXIDE SILICATE  
**FORMULA:** Fe<sub>2</sub>O<sub>3</sub>, H<sub>2</sub>O, MnO<sub>2</sub>, SiO<sub>2</sub>  
**CAS NUMBER:** 12713-03-0  
**HMIS:** HEALTH1  
 FLAMMABILITY 1  
 REACTIVITY 0

### SECTION II - HAZARDOUS INGREDIENTS:

INGREDIENT NAME	CAS NUMBER	PERCENT	EXPOSURE LIMITS
IRON OXIDE	1309-37-1	45 - 65	<b>ACGIH TLV:</b> 5 mg/M <sup>3</sup> TWA <b>OSHA STEL:</b> 10 ppm (Iron Oxide Fume as Fe)
SILICA - QUARTZ	14808-60-7	1 - 4	<b>ACGIH TLV:</b> 0.1 mg/M <sup>3</sup> TWA <b>OSHA PEL:</b> 10 mg/M <sup>3</sup> TWA (Respirable Dust)
MANGANESE OXIDE	1313-13-9	5 - 15	<b>ACGIH TLV:</b> 5 mg/M <sub>3</sub> TWA
ALUMINUM OXIDE	1344-28-1	2 - 12	<b>ACGIH TLV:</b> 10 mg/M <sup>3</sup> TWA

THERE ARE EXTREMELY SMALL, BUT DETECTABLE AMOUNTS OF SUBSTANCES REGULATED UNDER CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65).

**ARSENIC:** 210-330 ppm  
**BERYLLIUM:** 2-3 ppm  
**CADMIUM:** 1-2 ppm  
**CHROMIUM (VI):** 1-7 ppm

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## MATERIAL SAFETY DATA

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THESE LEVELS ARE "TYPICAL" QUANTITIES AND MAY CHANGE SLIGHTLY WITH DIFFERENT LOTS. THE TERM "LESS THAN" INDICATES THAT THE SUBSTANCE WAS DETECTED, BUT THE AMOUNT WAS LESS THAN THE QUANTIFIABLE LIMIT.

### SECTION III - PHYSICAL DATA:

**BOILING POINT (F):** NOT APPLICABLE  
**VAPOR PRESSURE (mmHg):** NOT APPLICABLE  
**VAPOR DENSITY:** NOT APPLICABLE  
**SOLUBILITY IN WATER:** INSOLUBLE  
**SPECIFIC GRAVITY:** 3.1 - 3.8  
**PERCENT VOLATILE BY WEIGHT:** 0  
**EVAPORATION RATE:** 0  
**APPEARANCE AND ODOR:** BROWN TO DARK BROWN POWDER. NO ODOR.

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

**FLASH POINT:** IF EXPOSED TO OPEN FLAME, UMBER WILL SMOLDER.  
**FLAMMABLE LIMITS:** LEL - NOT-APPLICABLE  
UEL - NOT-APPLICABLE  
**EXTINGUISHING MEDIA:** AS APPROPRIATE FOR SURROUNDING COMBUSTIBLES. WHEN EXPOSED TO AN OPEN FLAME, UMBER WILL SUPPORT OXIDATION, GENERATING HEAT. UMBER WILL NOT SELF-IGNITE, HOWEVER.  
**UNUSUAL FIRE OR EXPLOSION HAZARDS:** NONE  
**SPECIAL FIRE FIGHTING PROCEDURES:** FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS.

### SECTION V - HEALTH HAZARD DATA:

**THRESHOLD LIMIT VALUES:** SILICA - 10 mg/M<sup>3</sup>/%SiO<sub>2</sub> - 2  
OR 50 mppcf/%SiO<sub>2</sub> + 5 (OSHA);  
0.1 mg/M<sup>3</sup>, RESPIRABLE DUST  
(ACGIH); 0.3 mg/M<sup>3</sup> TOTAL DUST (ACGIH); 0.05 mg/M<sup>3</sup>  
RECOMMENDED PEL (NIOSH).  
**SUMMARY OF RISKS:** SKIN CONTACT MAY CAUSE MECHANICAL IRRITATION DUE TO THE ABRASION. EYE CONTACT WILL RESULT IN NO SPECIFIC EFFECTS OTHER THAN GENERAL PARTICULATE IRRITATION IN THE EYE. NOT ABSORBED BY THE BODY. EXCESSIVE EXPOSURE ABOVE THE TLV CAN GIVE MILD PULMONARY IRRITATION.  
**PRIMARY ENTRY ROUTE(S):** INHALATION, INGESTION  
**ACUTE EFFECTS:** INHALATION OF THE DUST MAY CAUSE MECHANICAL IRRITATION TO THE RESPIRATORY TRACT. SKIN AND EYE CONTACT MAY CAUSE A MECHANICAL ABRASION IRRITATION.  
**CHRONIC EFFECT(S):** LONG-TERM OVEREXPOSURE TO SILICA CAUSES SILICOSIS, A FORM OF PULMONARY FIBROSIS. CONTINUED EXPOSURE TO SILICA CAN LEAD TO CARDIOPULMONARY IMPAIRMENT.

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### EMERGENCY AND FIRST-AID

**EYE CONTACT:** FLUSH THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL HELP IF IRRITATION PERSISTS.

**SKIN CONTACT:** WASH FROM SKIN WITH MILD SOAP AND WATER.

**INHALATION:** REMOVE TO FRESH AIR. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY.

**INGESTION:** IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER TO INDUCE VOMITING. GET MEDICAL ATTENTION.

**CARCINOGENICITY:** CRYSTALLINE SILICA WHICH MAY BE PRESENT IN QUANTITIES GREATER THAN 0.1% HAS BEEN REVIEWED BY IARC. IARC HAS RECLASSIFIED CRYSTALLINE SILICA AS A CLASS 1 SUBSTANCE OR KNOWN CARCINOGEN. NTP HAS CLASSIFIED IT AS A SUBSTANCE REASONABLY ANTICIPATED TO BE A CARCINOGEN.

### SECTION VI - REACTIVITY DATA:

**INCOMPATIBILITY:** PRODUCT IS STABLE UNDER NORMAL CONDITIONS.  $MnO_2$  IS A POWERFUL OXIDIZER. IT MUST NOT BE HEATED OR RUBBED AGAINST EASILY OXIDIZABLE MATTER. SHOULD NOT BE COMBINED WITH FLAMMABLE MATERIALS.

**HAZARDOUS DECOMPOSITION PRODUCTS:** NONE  
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

### SECTION VII - SPILL OR LEAK PROCEDURES:

**STEPS TO TAKE IN CASE MATERIAL IS RELEASED OR SPILLED:** NOTIFY SAFETY PERSONNEL OF MAJOR RELEASED OR SPILLED SPILLS. PROVIDE VENTILATION. CLEANUP PERSONNEL NEED PROTECTION AGAINST EYE CONTACT AND INHALATION OF DUST. PICK UP SPILLS TAKING CARE TO AVOID RAISING DUST CLOUDS (VACUUM OR WET SWEEPING IS RECOMMENDED). PLACE IN CLOSED CONTAINER FOR DISPOSAL.

**WASTE DISPOSAL METHOD:** DISPOSE IN APPROVED LANDFILL. DISPOSAL MUST BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. PURSUANT TO 40 CFR PART 261 OF THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) REGULATIONS CURRENTLY IN EFFECT, DISCARDED UMBER WOULD NOT BE CLASSIFIED AS A HAZARDOUS WASTE.

### SECTION VIII - SPECIAL PROTECTION INFORMATION:

**EYE PROTECTION:** (USE MOST APPROPRIATE) SAFETY GLASSES, GOGGLES, FACE SHIELD.

**SKIN PROTECTION:** LEATHER OR RUBBER GLOVES.

**RESPIRATORY PROTECTION:** USE OF A NIOSH DUST RESPIRATOR IS RECOMMENDED TO CONTROL DUST BELOW EXPOSURE LIMITS.

### WORKPLACE CONSIDERATIONS:

**VENTILATION:** PROVIDE ADEQUATE EXHAUST VENTILATION TO MEET TLV REQUIREMENTS FOR THE DUST IN THE WORKPLACE. AN EXHAUST FILTER SYSTEM MAY BE REQUIRED TO AVOID

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ENVIRONMENTAL CONTAMINATION.

**SAFETY STATIONS:** AN EYE WASH STATION SHOULD BE AVAILABLE TO THE AREA OF USE.

**OTHER:** GOOD INDUSTRIAL HYGIENE PRACTICE REQUIRES THAT EMPLOYEE EXPOSURE BE MAINTAINED BELOW THE RECOMMENDED TLV. THIS IS PREFERABLY ACHIEVED THROUGH THE PROVISION OF ADEQUATE VENTILATION WHERE NECESSARY. WHERE DUST CANNOT BE CONTROLLED IN THIS WAY, PERSONAL RESPIRATORY PROTECTION SHOULD BE EMPLOYED.

### SECTION IX - REGULATORY INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372;

MANGANESE COMPOUND      CAS No. 1313-13-9      5 - 7%

### SECTION X - TRANSPORTATION INFORMATION:

**DOT CLASS:** NOT REGULATED.

### SECTION XI - OTHER INFORMATION:

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