

MATERIAL SAFETY DATA SHEET

Rolling Mill Scale

MSDS Date: 03/12/2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Rolling Mill Scale
INFORMATION TELEPHONE NUMBER: 1-800-477-3484
24-HOUR EMERGENCY TELEPHONE NUMBER: (906) 235-1543
SUPPLIER: Saucon Resources

SECTION 2: INGREDIENTS COMPOSITION/INFORMATION

Components	CAS Number	Weight percent
Total Iron (TFe)		67 – 73 %
Iron Oxide (FeO)		93 - 99 %
Silica Dioxide (SiO ₂)		0.20 – 1.00 %
Manganese (Mn)		0.30 – 0.60 %
Calcium Oxide (CaO)		0.10 – 0.75 %
Potassium (K)		<0.01 %
Sulfur (S)		0.001 – 0.005 %
Carbon (C)		<0.20 %
Total Oil		0.10 -0.50 %

SECTION 3: HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Dust particles may cause mechanical irritation injury.

SKIN: Dust or powder may irritate the skin.

INGESTION: Not anticipated under normal working conditions.

INHALATION: High concentrations of air-borne dusts may be irritating to mucous membranes of the nose and upper respiratory tract.

MEDICAL CONDITIONS GENERALLY AGGREGATED BY EXPOSURE: Dust may aggravate pre-existing eye, skin, throat, and lung conditions..

CARCINOGENICITY

OSHA: No NTP: No IARC: No

SECTION 4: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: Non-Flammable

FLASH POINT: Not Applicable

AUTOIGNITION TEMPERATURE: Not Applicable

NFPA HAZARD CLASSIFICATION

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

EXTINGUISHING MEDIA: Not Applicable

SPECIAL FIRE FIGHTING PROCEDURES: Not Applicable – material not combustible.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not Applicable – material not combustible.

HAZARDOUS DECOMPOSITION PRODUCTS: No hazardous decomposition products.

SECTION 5: HANDLING AND STORAGE

HANDLING AND STORAGE: Good housekeeping techniques such as vacuuming should be used to remove dust accumulations and to prevent the generation of airborne dust. Avoid the use of compressed air for removing settled dust; avoiding inhalation of dust and contact with eyes.

OTHER PROCEDURES: None

SECTION 6: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Mechanical general and/or local exhaust ventilation.

RESPIRATORY PROTECTION: NIOSH approved particulate respirators. Appropriate respirator selection depends upon type and magnitude of exposure.

EYE PROTECTION: Safety glasses with side shields.

SKIN PROTECTION: Protective clothing and work gloves.

OTHER PROTECTIVE EQUIPMENT: None

WORK HYGIENIC PRACTICES: Particulates to minimize dust generation.

SECTION 7: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Dark gray to black

ODOR: Not Applicable – Odorless

PHYSICAL STATE: Fine to Coarse Solid Particles

pH AS SUPPLIED: 7.6

BOILING POINT: Not Applicable

MELTING POINT: Over 2200 degrees Fahrenheit

FREEZING POINT: Not Applicable

VAPOR PRESSURE (mmHg): Not Applicable

VAPOR DENSITY (AIR = 1): Not Applicable

SPECIFIC GRAVITY (H₂O = 1): 6.23 g/cm³

BULK DENSITY: 120 – 140 LB/FT³

EVAPORATION RATE: Not Applicable

SOLUBILITY IN WATER: Not Applicable – Insoluble

PERCENT SOLIDS BY WEIGHT: >98%

PERCENT VOLATILE: <0.5%

SECTION 8: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): None

INCOMPATIBILITY (MATERIAL TO AVOID): None

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None

SECTION 9: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with applicable state and federal regulations.

RCRA HAZARD CLASS: Not Applicable

SECTION 10: REGULATORY INFORMATION

TSCA: All ingredients are listed on the TSCA inventory or are exempt.

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200: Proper precautions should be taken to avoid any health hazard. A health hazard may occur if limits for air contaminants exceed PEL limits as per 29 CFR 1910.1000. Proper engineering controls and ventilation should be used to prevent air contaminants from exceeding PEL limits.

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

PHYSICAL DATA

<u>Physical State:</u>	Iron Oxide	<u>Bulk Density:</u> 120 - 140 lbs/ft ³ <u>Specific Gravity:</u> 6.23 g/cm ³
<u>Appearance and Odor:</u>	Dark Gray, Odorless	<u>Vapor Pressure:</u> N/A
<u>Boiling Point:</u>	N/A	<u>Vapor Density:</u> N/A
<u>Melting Point:</u>	Over 2300°F	<u>Evaporation Rate:</u> N/A
<u>pH:</u>	7.6	

FIRE AND EXPLOSION HAZARD DATA

<u>Flash Point:</u>	N/A	<u>Lower Explosive Limit:</u> N/A
<u>Auto Ignition Temperature:</u>	N/A	<u>Upper Explosive Limit:</u> N/A
<u>Fire Hazard:</u>	Non Flammable	<u>Explosion Hazard:</u> N/A
<u>Extinguishing Media</u>		
<u>Special Fire Fighting Hazards:</u>	N/A	
<u>Procedures:</u>	N/A	

REACTIVITY DATA

<u>Stability:</u>	Stable
<u>Incompatibilities (Materials to Avoid):</u>	Strong mineral acids eg. HCl, H ₂ SO ₄ , HNO ₃ .
<u>Hazardous Thermal Decomposition Products:</u>	None Detected
<u>Polymerization:</u>	Will not occur

HEALTH HAZARD DATA

Proper precautions should be taken to avoid any health hazard. A health hazard may occur if limits for air contaminants exceed PEL limits as per 29 CFR 1910.1000. Proper engineering controls and ventilation should be used to prevent air contaminants from exceeding PEL limits. (For information on potentially hazardous elements refer to page 3.)

<u>Usual Route(s) of Entry:</u>	Inhalation
<u>Medical Condition Possibly Aggravated:</u>	Chronic diseases or disorders of the respiratory system.

FIRST AID AND MEDICAL EMERGENCY PROCEDURES

<u>Eye Contact:</u>	Gently flush with water, consult a physician immediately.
<u>Skin Contact:</u>	Not anticipated to pose an acute or significant skin contact hazard.
<u>Inhalation:</u>	Not anticipated to pose an acute or significant inhalation hazard.
<u>Ingestion:</u>	Not considered to be an ingestion hazard.

OCCUPATIONAL EXPOSURE CONTROL MEASURES

Engineering Controls (Ventilation, etc.): Ventilation should be sufficient to maintain dust levels below applicable exposure limit.

Work Practices (Handling and Storage, etc.): Avoid creating airborne dust by dust suppression methods.

Eye Protection: Safety glasses, goggles or NIOSH approved hood or respirator is recommended when dust levels are excessive.

Skin Protection: Gloves and long-sleeved clothing are recommended when dust levels are excessive.

Respiratory Protection: When engineering controls are not sufficient to lower dust levels below the applicable exposure limit, use a NIOSH-approved respiratory for dusts and mists within the use limits of the respirator.

Additional Miscellaneous information: If material is being used for abrasive air blasting, proper protective clothing, eye protection and respirators should be used in accordance with OSHA regulations. If air blasting is being performed in a confined area, proper ventilation should be used in accordance with OSHA regulations.