SAFETY DATA SHEET

Mill Scale

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Mill Scale
GENERAL USE: Mill Scale is used as an ingredient in the production of cement, metallurgical products, counter-weights and iron fertilizers.
PRODUCT DESCRIPTION: Steelmaking mill scale is composed predominantly of oxides of iron with trace amounts of other metals and inorganic salts. The precise composition changes with feedstock and steel manufacturing procedures. Depending upon the source and handling practices, oil & grease may be present in small quantities.

MANUFACTURER
Harsco Metals
300 Seven Fields Blvd.
Suite 300
Seven Fields, PA 16046
Emergency Contact: Aggregate Sales Manager
Customer Service: 724-741-6600
E-Mail: pmazzarella@harsco.com

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS
Health:
Not Classified.
Environmental:
Not Classified.
Physical:
Not Classified.

GHS LABEL
HAZARD STATEMENTS
PRECAUTIONARY STATEMENTS
Prevention:
Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash hands thoroughly after handling.

Disposal:
Dispose of unused material in accordance with local/regional/national regulations.

EMERGENCY OVERVIEW
IMMEDIATE CONCERNS: Harsco Mill Scale is a granular metallic product consisting of the scale removed from carbon steel. Short-term exposures are not likely to cause serious harm.

POTENTIAL HEALTH EFFECTS
EYES: Exposure to dust may cause mechanical or chemical irritation, tearing, redness and pain. Dust contains calcium oxide that may cause severe irritation or permanent damage to the tissues of the eye.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>&lt; 73</td>
<td>7439-89-6</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>&lt; 4</td>
<td>1305-78-8</td>
</tr>
<tr>
<td>Silica, Amorphous</td>
<td>&lt; 4</td>
<td>60676-86-0</td>
</tr>
<tr>
<td>Manganese Oxide</td>
<td>&lt; 2</td>
<td>1317-35-7</td>
</tr>
<tr>
<td>Silica, Crystalline</td>
<td>0 - 1</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>0 - 2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**EYES:** If contact with eyes occurs, flush with water for 15 minutes, occasionally lifting upper and lower lids. Consult a physician.

**SKIN:** Wash skin surfaces that have been in contact with the material. Apply a skin lotion if redness persists.

**INGESTION:** Rinse mouth thoroughly if ingested. Do not induce vomiting. If discomfort continues, consult a physician.

**INHALATION:** Move to fresh air. If discomfort continues, consult a physician.

**NOTES TO PHYSICIAN:** Treat symptomatically.

**COMMENTS:** Show this Safety Data Sheet to physician in attendance.

5. FIRE FIGHTING MEASURES

**FLAMMABLE CLASS:** This product is non-combustible.

**GENERAL HAZARD:** None known

**EXTINGUISHING MEDIA:** Use fire-extinguishing media appropriate for surrounding materials.

**FIRE FIGHTING PROCEDURES:** Move product containers from fire area if it can be done without risk. Cool containers by flooding with water until heat is dissipated.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known

6. ACCIDENTAL RELEASE MEASURES

**LARGE SPILL:** Avoid runoff into storm sewers and ditches. Collect spillage using appropriate equipment. Dispose of collected materials in accordance with Federal, State and local regulations.

**GENERAL PROCEDURES:** Pick up spilled material using appropriate methods to minimize dusting.

**RELEASE NOTES:** In the unused form, the material is non-hazardous as defined in state and federal regulations.

7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Normal temperature and pressure do not affect material. Avoid runoff into storm sewers and ditches.

**HANDLING:** If stored in a stockpile under dry and windy conditions, apply water to avoid dust formation.
## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA PEL</td>
</tr>
<tr>
<td>Iron</td>
<td>TWA</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>TWA</td>
</tr>
<tr>
<td>Silica, Amorphous</td>
<td>TWA</td>
</tr>
<tr>
<td>Manganese Oxide</td>
<td>STEL</td>
</tr>
<tr>
<td>Silica, Crystalline</td>
<td>TWA</td>
</tr>
</tbody>
</table>

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields. Use tight fitting goggles if dust is generated.

**RESPIRATORY:** None required if material is wet. If dry, ventilate to maintain air quality below OSHA and ACGIH standards. If adequate ventilation is not available, use a NIOSH-approved N95 dust mask or a respirator with particulate filters to prevent inhalation of dusts.

**PROTECTIVE CLOTHING:** Use normal work clothing. Wear gloves to prevent direct skin contact.

**WORK HYGIENIC PRACTICES:** Wash hands after handling. Routinely wash work clothing and protective equipment. Handle in accordance with good industrial hygiene and safety practice.

**COMMENTS:** Proper and safe use of the material is solely the purchaser's responsibility. The manufacturer extends no warranties and makes no representations as to the suitability of the product for the purchaser's intended purpose or the consequences of purchaser's actions.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** None

**SOLUBILITY IN WATER:** Low solubility in water.

**DENSITY:** Approximately 155 lbs/cu ft.

**COMMENTS:** For additional information contact manufacturer.
10. STABILITY AND REACTIVITY

STABILITY: This product is stable and non-reactive under normal conditions of use, storage and transport.

POSSIBILITY OF HAZARDOUS REACTIONS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None known

INCOMPATIBLE MATERIALS: Strong acids.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: May cause eye irritation.

SKIN EFFECTS: May cause skin irritation.

CARCINOGENICITY

Notes: May contain metal compounds at trace levels that have been classified as carcinogens.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

ECOTOXICOLOGICAL INFORMATION: This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

BIOACCUMULATION/ACCUMULATION: This product is not bioaccumulating.

DISTRIBUTION: Not Available

AQUATIC TOXICITY (ACUTE): None known

CHEMICAL FATE INFORMATION: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose in accordance with all applicable regulations.

GENERAL COMMENTS: TCLP testing of unused product indicates that it is not hazardous waste by characteristic.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

OTHER SHIPPING INFORMATION: Unused product is not regulated as a hazardous material by DOT.

COMMENTS: Unused product is not regulated as dangerous goods by the International Air Transport Association (IATA), International Maritime Dangerous Goods (IMDG) or Transport Canada (TDG).
15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Hazardous Chemical.
FIRE: No  PRESSURE GENERATING: No  REACTIVITY: No  ACUTE: No  CHRONIC: Yes

313 REPORTABLE INGREDIENTS: Manganese.

302/304 EMERGENCY PLANNING
EMERGENCY PLAN: None

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)
CERCLA RQ: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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CLEAN AIR ACT
40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: None

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: None

CALIFORNIA PROPOSITION 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

RCRA STATUS: Not regulated.

OSHA HAZARD COMM. RULE: Regulated.

16. OTHER INFORMATION

Date Prepared: 11/11/2015

HMIS RATING

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>B</td>
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NFPA CODES

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