



# STEEL MAKING SLAG

## SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product identifier</b>	Steel Making Slag
Chemical Name	Mixture
CAS No.	Mixture
Trade Name(s)	Steel Slag, BOF Slag, Electric-Furnace Slag, Open-Hearth Slag
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
Identified Use(s)	Construction Material
Uses Advised Against	None.
<b>Details of the supplier of the safety data sheet</b>	
Company Identification	Dunn Construction Company, Inc. 3905 Messer Airport Hwy. Birmingham, AL 35222
Telephone	205-592-3866
<b>Emergency telephone number</b>	
Emergency Phone No.	Not classified as dangerous for supply/use. Please contact the supplier above during normal business hours.

### SECTION 2: HAZARDS IDENTIFICATION

<b>Classification of the substance or mixture</b>	
OSHA HCS (29 CFR 1910.1200) / GHS Classification	Not classified as dangerous for supply/use. Unlikely to be hazardous by inhalation unless present as a dust.
<b>Label elements</b>	
Hazard Symbol	None
Signal Word(s)	None
Hazard Statement(s)	None
Precautionary Statement(s)	None
<b>Other hazards</b>	Inhalable size dust particles may be released under certain conditions of handling. This dust may contain crystalline silica and/ manganese which can cause damage to organs (lungs, central nervous system) or cancer (respiratory system).
<b>Additional Information</b>	Control dust formation. Avoid breathing dust. As necessary, wear eye and/or respiratory protection (safety glasses and dust mask). Wash hands and exposed skin after use.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	% wt.	CAS No.
Slags, Steel Making	100	65996-71-6

Other Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below. Please see Section 8 of SDS for more details.

- Contains: Dust may contain >1% crystalline silica and/or manganese (inherent in the slag).

**Additional Information** - None

## SECTION 4: FIRST AID MEASURES



### Description of first aid measures

Inhalation	Not normally required. Move person to fresh air. Apply artificial respiration if necessary. If symptoms persist, obtain medical attention.
Skin Contact	Gently wash with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.
Ingestion	Not normally required. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.
<b>Most important symptoms and effects, both acute and delayed</b>	None known
<b>Indication of any immediate medical attention and special treatment needed</b>	None known

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

-Suitable Extinguishing Media	Non-combustible. As appropriate for surrounding fire.
-Unsuitable Extinguishing Media	None anticipated.

### Special hazards arising from the substance or mixture

None known

### Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	Not normally required.
<b>Environmental precautions</b>	Not normally required.
<b>Methods and material for containment and cleaning up</b>	Not normally required.
<b>Reference to other sections</b>	None
<b>Additional Information</b>	None.

## SECTION 7: HANDLING AND STORAGE

<b>Precautions for safe handling</b>	Inhalable size dust particles may be released under certain conditions of handling. Control dust formation. Avoid breathing dust. As necessary, wear eye and/or respiratory protection (safety glasses and dust mask).
<b>Conditions for safe storage, including any incompatibilities</b>	
-Storage temperature	Ambient temperatures.
-Incompatible materials	Strong oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

## Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA) *	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Crystalline Silica (respirable particulate)	-----	$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$	0.025 mg/m <sup>3</sup> ^	-----	-----	See below
Manganese (inorganic compounds)	-----	5 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup> <sup>(R)</sup> 0.1 mg/m <sup>3</sup> <sup>(I)</sup>	-----	-----	See below

<sup>(R)</sup> Respirable fraction; <sup>(I)</sup> Inhalable fraction; ^Suspected Human Carcinogen; \*Refer to OSHA 29 CFR 1910.1000 & 29 CFR 1926.55; 8hr TWA = 8 hour time-weighted average; STEL = Short Term Exposure Limit.

### Recommended monitoring method

NIOSH 0500 (Total Dust); NIOSH 7500 (Crystalline Silica)

### Exposure controls

#### Appropriate engineering controls

Use only outdoors or in a well-ventilated area.

#### Personal protection equipment

Eye/face protection



The following to be used as necessary: Safety Glasses

Skin protection (Hand protection/ Other)



The following to be used as necessary: Leather or thick textile gloves.

Respiratory protection



Inhalable size dust particles may be released under certain conditions of handling. Respiratory protection may be needed if occupational exposure limits are exceeded. Air-purifying respirator with combination organic vapor cartridge / particulate filter may be sufficient. Check with protective equipment manufacturer's data.

Thermal hazards

Use gloves with insulation for thermal protection, when needed.

### Environmental Exposure Controls

Not normally required.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Solid
Color.	gray
Odor	None
Odor Threshold (ppm)	Not applicable.
pH (Value)	Not available.
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	Not available.
Flash Point (°C)	Non-combustible
Evaporation Rate	Not available.
Flammability (solid, gas)	Non-combustible
Explosive Limit Ranges	Non-combustible
Vapor pressure (Pascal)	Not applicable.
Vapor Density (Air=1)	Not applicable.
Density (g/ml)	Not available.
Solubility (Water)	Insoluble
Solubility (Other)	Not known
Partition Coefficient (n-Octanol/water)	Not available.

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Auto Ignition Point (°C)	Non-combustible
Decomposition Temperature (°C)	Not available.
Kinematic Viscosity (cSt) @ 40°C	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
<b>Other information</b>	Not available.

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable.
<b>Possibility of hazardous reactions</b>	None known
<b>Conditions to avoid</b>	Incompatible materials
<b>Incompatible materials</b>	Acids and Oxidizers
<b>Hazardous decomposition product(s)</b>	None known

## SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes:** Inhalation, Skin Contact, Eye Contact

Crystalline Silica (quartz and cristobalite)

Acute toxicity	LD50 (rat): >5000 mg/kg bw LD50 (dermal): >2000 mg/kg bw LC50 (inhalation, fume): >94.4 mg/m <sup>3</sup> - Causes damage to organs: Lungs (silicosis)
Irritation/Corrosivity	Not to be expected
Sensitization	Not to be expected
Repeated dose toxicity	Causes damage to organs through prolonged or repeated exposure: Lungs (silicosis)
Carcinogenicity	May cause cancer. Lungs

NTP	IARC	ACGIH	OSHA
No.	Yes.	A2	Yes.

Mutagenicity	Not to be expected.
Reproductive toxicity	Not to be expected.

Manganese:

Acute toxicity	LD50 (rat): >5000 mg/kg bw LD50 (dermal): >2000 mg/kg bw LC50 (inhalation, dust): >5000 mg/m <sup>3</sup>
Irritation/Corrosivity	Not to be expected
Sensitization	Not to be expected
Repeated dose toxicity	Causes damage to organs through prolonged or repeated exposure: Central nervous system.
Carcinogenicity	Not to be expected.

NTP	IARC	ACGIH	OSHA
No.	No.	No.	No.

Mutagenicity	Not to be expected.
Reproductive toxicity	Not to be expected.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

Short term	LL50 (48 hour): >1000 mg/l (Fish) LL50 (48 hour): >1000 mg/L (Aquatic Invertebrates) EL50 (48 hour): >1000 mg/L (Aquatic Plants)
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Long Term	No data
<b>Persistence and degradability</b>	The substance is non biodegradable.
<b>Bioaccumulative potential</b>	The product has no potential for bioaccumulation.
<b>Mobility in soil</b>	The product has low mobility in soil.
<b>Results of PBT and vPvB assessment</b>	Not classified as PBT or vPvB.
<b>Other adverse effects</b>	None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>Waste treatment methods</b>	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.
<b>Additional Information</b>	None known.

## SECTION 14: TRANSPORT INFORMATION

**Ground or Water Domestic Voyage (DOT):** Not classified as dangerous for transport.

## SECTION 15: REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**TSCA (Toxic Substance Control Act) - Inventory Status:** All components listed or polymer exempt.

**RCRA Hazardous Waste Number (40 CFR 261.33):** None

**US RCRA Hazard Class:** Not applicable.

**Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):**

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	-----	-----	-----

**SARA 311/312 - Hazard Categories:** None

- Fire  
  Sudden Release  
  Reactivity  
  Immediate (acute)  
  Chronic (delayed)

**SARA 313 - Toxic Chemicals (40 CFR 372):**

Chemical Name	CAS No.	Typical %wt.
None	-----	-----

**SARA 302 - Extremely Hazardous Substances(40 CFR 355):**

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	-----	-----	-----

## SECTION 16: OTHER INFORMATION

**Additional Information**

**The following sections contain revisions or new statements:** 1-16.

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