

Material Safety Data Sheet

WHMIS	Protective Clothing	TDG Road/Rail
		

Section I - Product Identification and Uses

Common/Trade Name	EAF DUST	MSDS # 9964
Synonyms	EAF baghouse dust, Electric Arc Furnace Dust, EAF Drop Out Box Material	
Chemical Name	Not applicable	
Chemical Formula	Not applicable	
Chemical Family	Not applicable	
Supplier	DOFASCO INC. P.O. BOX 2460 HAMILTON, ON. CANADA L8N 3J5 (905) 548-7200 EXT. 2595	
Material Uses	Waste material extracted from EAF fume collection system.	

Section IA - First Aid Measures

Eye Contact	Flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention if irritation persists.
Skin Contact	Wash with soap and water for 15 minutes. Seek medical attention if irritation persists. Launder contaminated clothing before re-use.
Inhalation	Remove affected person to fresh air. Seek medical attention if symptoms persist.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

Section II - Composition and Information on Ingredients

Name	CAS#	% by Weight	TLV/PEL	LC ₅₀ /LD ₅₀
1. IRON OXIDE	1332-37-2	20-35	TWA: 5 (mg/mg ³) from ONT. MOL	Not available
2. ZINC OXIDE	1314-13-2	5-40	TWA: 2 (mg/mg ³) from ACGIH (TLV) STEL: 10 (mg/mg ³) from ACGIH (TLV)	ORAL (LD50): Acute 7950 mg/kg[Rat] 7950 mg/kg [Mouse]
3. CALCIUM OXIDE	1305-78-8	5-25	TWA: 2 (mg/mg ³) from ACGIH (TLV) TWAEV: 2 (mg/mg ³) from ONT.MOL (TLV)	Not available
4. MAGNESIUM OXIDE	1309-48-4	5-10	TWA: 10 (mg/mg ³) from ACGIH (TLV) TWAEV: 10 (mg/mg ³) from ONT.MOL (TLV)	ORAL (LD50): Acute: 810 mg/kg [Mouse]
5. MANGANESE	7439-96-5	1-5	TWA: 0.2 (mg/mg ³) from ACGIH (TLV)	Not available
6. ALUMINA	1344-28-1	1-5	TWA 10(mg/mg ³) from ACGIH (TLV)	Not available
7. AMORPHOUS SILICA	7631-86-9	2-7	TWA 10 (mg/mg ³) from ACGIH (TLV)	ORAL (LD50): Acute: 7300 mg/kg [Rat]
8. LEAD	7439-92-1	0.1-1	TWA 0.05(mg/mg ³) from ACGIH (TLV)	
9. CHROMIUM	7440-47-3	0.1-1	TWA: 0.5 (mg/mg ³) from ACGIH (TLV) Cr III Compounds TWA 0.05(mg/mg ³) from ACGIH (TLV) Water-soluble Cr VI TWA 0.01(mg/mg ³) from ACGIH (TLV) Insoluble Cr VI	ORAL (LD50): Acute: 27.5 mg/kg [Rat] 71 mg/kg [Human/30 min]

Section III - Toxicological Properties

Routes of entry	Eye contact. Inhalation. Ingestion. Skin contact.
TLV	Refer to information listed above.
Toxicity for animals	None established for this product.
Chronic effects on humans	<p>CARGINOGENIC EFFECTS: Classified A3 (Confirmed Animal Carcinogen) by ACGIH (LEAD). Classified A1 (Confirmed Human Carcinogen) by ACGIH (HEXAVALENT CHROMIUM).</p> <p>MUTAGENIC EFFECTS: None known.</p> <p>TERATOGENIC EFFECTS: Classified SUSPECTED for Human (LEAD).</p> <p>DEVELOPMENTAL TOXICITY: Classified Reproductive System/Toxic/Female (PROVEN) (LEAD).</p> <p>Chronic inhalation overexposure to metal fume (iron oxide fume) may cause a benign pneumoconiosis (i.e. siderosis) with few or no symptoms. Lead is a lung, kidney and nervous system toxin. Calcium oxide can produce respiratory tract irritation, nasal septum irritation, dermatitis and eye irritation. Long term overexposure to manganese has been associated with neurological effects. Repeated inhalation overexposure of EAF dust can produce varying degrees of respiratory irritation.</p>
Acute effects on humans	Overexposure by inhalation may cause upper respiratory irritation. Abrasive irritation of skin and eyes. Inhalation overexposure to manganese fume has been reported to cause "metal fume fever" characterized by fever and chills (flu-like symptoms).

Section IV - Physical Data

Physical State and Appearance	Solid (Metal chunks and dust)	Vapor Pressure	Not available
pH	Not available	Evaporation Rate	Not available
Odor Threshold	Not available	Viscosity	Not available
Volatility	Not available	Water/Oil Dist. Coeff.	Not available
Melting/Sublimation Point	Not available	Critical temperature	Not available
Boiling/Condensation Point	Not available	Instability temperature	Not available
Specific Gravity	Not available	Conditions of instability	No additional remark
Vapor Density	Not available	Solubility	Not available
Dispersion Properties	Not available	Odor	Not available
		Color	Brownish-red

Section V – Fire and Explosion Data

The product is	Non-flammable
Auto-ignition temperature	Not applicable
Fire degradation products	Oxides of the parent material
Flash Points	Not applicable
Flammable Limits	Not applicable
Fire Extinguishing Procedures	Use extinguishing media suitable for surrounding materials. Use SCBA during fire fighting
Flammability	Not applicable
Risks of explosion	Risks of explosion of the product in presence of mechanical impact. Not available. Risks of explosion of the product in presence of static discharge. Not available.

Section VI – Reactivity Data

Stability	The product is stable.
Hazardous Decomp. Products	Not available
Degradability	Not available
Products of Degradation	Not available
Corrosivity	No specific information is available in our database regarding the Corrosivity of this product in presence of various materials.
Reactivity	Reactive with acids, calcium hypochlorite, water

Section VII – Preventive Measures	
Waste Information	Dispose of in accordance with local, provincial and federal regulations.
Storage	Prevent stored material from becoming wet.
Precaution	DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid dust generation during handling. Will generate heat in contact with water; take precautions against splashing and spattering.
Small spill and leak	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Use appropriate personal protective equipment during clean-up.
Large spill and leak	No additional information.

Section VIII – Protective Measures	
Protective Clothing	Safety glasses with side shields. Wear cotton or leather faced gloves. Use MSHA/NIOSH approved respiratory protection.
Engineering Controls	Use mechanical ventilation if dust is generated during handling.



Section IX – Classification	
TDG Road/Rail	TDG CLASS 9: Hazardous waste Waste Class #: 143H (Steelmaking plant residues) Shipping name: Environmentally Hazardous Substance Solid n.o.s. (EAF Dust) Pin#: UN3077 PG: III
Maritime Transportation	Not available
WHMIS	WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC)
Federal and Provincial Regulations	CEPA DSL: IRON OXIDE; ZINC OXIDE; CALCIUM OXIDE; MANGANESE; MAGNESIUM OXIDE; LEAD



Section X – Other Information	
References	Hawley, G.G. The Condensed Chemical Dictionary, 11e ed., New York, N.Y., Van Nostrand Reinold, 1987. INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC). NIOSH Pocket Guide to Chemical Hazards
The information on the MSDS is verified based on the supplier MSDS. Dofasco Business Units may use the material differently depending on their manufacturing processes. If the use of this material is other than that specified by the supplier, additional precautions may be required. Concerned employees should contact their Business Unit Health and Safety Co-ordinator for more information and advice.	
Effective Date: April 23, 2007	
CANUTEC: (613) 996-6666	
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