

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT NAME: Ebony Grit **MSDS #:** 414-1

CHEMICAL NAME AND SYNONYMS: Granulated Copper Slag

MATERIAL IDENTIFICATION AND USE: This material is a shiny to dull black, granular aggregate for use **only** as a blasting media.

MANUFACTURER AND/OR SUPPLIER: OPTA MINERALS
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 Waterdown, Ontario
 L0R 2H0
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SECTION 2 – INGREDIENTS

Primarily composed of ferrosilicate material (Fayalite - Fe_2SiO_4) and metal oxides such as magnetite (Fe_2O_3), with other metals substituting for iron in the magnetite structure. The approximate element composition of this material is as follows:

INGREDIENT	%	CAS #	LD ₅₀	LC ₅₀
Iron Oxide Fe_2O_3	53 – 60	1309-37-1	>10000 mg/kg - Oral Rat	N/A
Silica Amorphous SiO_2	32 – 37	61790-53-2	3160 mg/kg – Oral Rat	N/A
Aluminium Oxide Al_2O_3	3 – 6	1344-28-1	>5000 mg/kg - Oral Rat	N/A
Calcium Oxide CaO	1 – 3	1305-78-8	500 mg/kg - Oral Rat	N/A
Magnesium Oxide MgO	1 – 2	1309-48-4	N/A	N/A
Zinc Zn	<1	1314-13-2	1400 mg/kg - Oral Rat	N/A
Silica, crystalline quartz	0.3	14808-60-7	500 mg/kg – Oral Rat	N/A
Arsenic As	<0.1	7440-38-2	763 mg/kg oral-rat	400 mg/m ³ /2H
Beryllium Be	<0.001	7440-41-7	N/A	N/A
Cadmium Cd	<0.001	7440-43-9	890 mg/kg Oral Mouse	229.9 mg/m ³ / 4 hour(s)
Lead Pb	<0.1	7439-92-1	5mg/kg. – Oral Rat	N/A

SECTION 3 – PHYSICAL DATA

PHYSICAL STATE: Solid

APPEARANCE: Black shiny

ODOR: No appreciable odour

ODOR THRESHOLD (ppm): Not applicable

SPECIFIC GRAVITY: Not applicable

SOLUBILITY (%): Insoluble

VAPOUR PRESSURE: Not applicable

VAPOUR DENSITY (AIR = 1): Not applicable

BOILING POINT: Not applicable

FREEZING POINT: Not applicable

MELTING POINT: Not applicable

pH: Not applicable

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

FLAMABILITY:	No
EXTINGUISHING MEDIA:	Not applicable
SPECIAL FIRE FIGHTING PROCEDURES:	Not applicable
UNUSUAL FIRE/EXPLOSION HAZARDS:	Not applicable
HAZARDOUS COMBUSTION PRODUCTS:	Not applicable
AUTO-IGNITION TEMPERATURE:	Not applicable
FLASH POINT:	Not applicable

The product will not burn or explode.

SECTION 5 – HEALTH HAZARD DATA

PRODUCT STABILITY:	Stable
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	Not applicable
INCOMPATIBILITY:	Not applicable
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:	Not applicable

EYE CONTACT: May cause irritation due to presence of "foreign object".

SKIN CONTACT: Possible skin irritation.

INHALATION: ACUTE: Exposure may cause irritation to nose, throat and lungs.
CHRONIC: Prolonged exposure may lead to the accumulation of heavy metals in the body.

Group 2A Carcinogen: *Probably carcinogenic to humans* – criteria for this category include limited evidence for carcinogenicity in humans and sufficient evidence in experimental animals, or sufficient animal evidence alone when the carcinogenic action is known to also operate in humans.

Group 2B Carcinogen: *Possibly carcinogenic to humans* - One set of criteria used in this category is when there is insufficient evidence for carcinogenicity in humans and limited or sufficient evidence in experimental animals.

INGESTION: May lead to absorption of heavy metals into body.

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT:	Flush the eye(s) with lukewarm water until the particles have been removed. If irritation persists, obtain medical attention.
SKIN CONTACT:	Wash with soap and water.
INHALATION:	Acute exposure: Remove to fresh air. If not breathing, give artificial respiration. Administer oxygen if breathing is difficult. Get medical attention.
INGESTION:	Rare in industry. Induce vomiting. IF UNCONSCIOUS, DO NOT INDUCE VOMITING OR GIVE ANY LIQUID. Seek medical attention.

SECTION 7 - REACTIVITY DATA

PRODUCT STABILITY:	Stable
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	Not applicable
INCOMPATIBILITY:	Not applicable
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:	Not applicable

SECTION 8 - SPILL OR LEAK PROCEDURES

CLEANUP:	No specific procedures required. Material can be collected and returned to process.
NEUTRALIZING CHEMICALS:	Not applicable
DISPOSAL:	Refer to specific federal, provincial (state) and local waste disposal legislation

SECTION 9 - PERSONAL PROTECTION

EYE PROTECTION:	Safety goggles or glasses, as required by nature of task(s) being performed.
SKIN PROTECTION:	As required by nature of work being performed.
RESPIRATORY PROTECTION:	Use an air-purifying respirator equipped with 100-type particulate filters (either N-, P-, or R- series) when occupational exposure limits are exceeded.
VENTILATION REQUIREMENTS:	Local exhaust ventilation preferred.
OTHER PROTECTIVE EQUIPMENT:	Not applicable

SECTION 10 – STORAGE AND HANDLING

STORAGE AND HANDLING: No special storage procedures required. Avoid dust generation when handling.

OTHER PRECAUTIONS: Follow good personal hygiene practices.

SECTION 11 – ADDITIONAL INFORMATION

The above information is believed to be accurate and represents the best information currently available to us. However, we make no warranty expressed or implied with respect to such information and we assume no liability resulting from its use.

WHMIS CLASSIFICATION: Class D, Division 2B - "Material causing other chronic effects"

TRANSPORTATION OF DANGEROUS GOODS (TDG) SHIPPING INFORMATION:
NOT REGULATED

REFERENCES:

1. Sax, Irving - "Dangerous Properties of Industrial Materials" - Sixth Edition.
2. "CRC Handbook of Chemistry and Physics" - 66th Edition.
3. A.C.G.I.H. - "Documentation of the Threshold Limit Values and Biological Exposure Indices" - Sixth Edition.
4. A.C.G.I.H. - "Threshold Limit Values (TLV's), 1998
5. Canadian Centre for Occupational Health and Safety (CCOHS) - CHEMINFO database.
6. Carson, B.L., Ellis, H.V., McCann, J.L. - "Toxicology and Biological Monitoring of Metals in Humans"

GLOSSARY:

A.C.G.I.H. - American Conference of Governmental Industrial Hygienists

TLV-TWA - Threshold Limit Value-Time Weighted Average: The time-weighted average concentration for a normal 8-hour workday or a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

OSHA - Occupational Safety and Health Administration

P.E.L. - Permissible Exposure Level

T.W.A.E.V. - Time-Weighted Average Exposure Value: The average of the airborne concentrations of a biological or chemical agent determined from air samples of the airborne concentrations to which a worker is exposed in a work day or a work week.

The MSDS was prepared from information provided by raw material suppliers to Opta Minerals.

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CONTACT: Operations Supervisor
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For non-emergency questions, please contact your sales person.
General inquiries may be directed to 905-689-6661.