

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET - Complies with ANSI Z400.1 Draft Standard for the Preparation of Material Safety Data Sheets, Copyright 1991, Chemical Manufacturers Association. May be used to comply with U.S. Department of Labor OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standards must be consulted for specific requirements.

Date : 09/19/2003

Green Diamond Sand Products

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Green Diamond

CHEMICAL NAME: Nickel Slag

COMPANY IDENTIFICATION

Green Diamond Sand Products
P.O. Box D, 6th & E Street
Riddle, OR 97469

EMERGENCY / TECHNICAL NUMBERS

(800) 547-4021

(541) 874-3111

CHEMTREC:

(800) 424-9300

PRODUCT INFORMATION: MSDS Requests and Product Information: (541) 874-3111

2. COMPOSITION / INFORMATION INGREDIENTS

<u>COMPONENTS</u>	<u>CAS No.</u>	<u>OSHA Exposure Limits (PEL)</u>	<u>ACGIH Recommended Limits (TLV)</u>	<u>Percent by Weight</u>
Silica (SiO ₂) as SiO ₃ ²⁻	112926-00-8	10 mg/m ³	10 mg/m ³	50.2 †
Magnesium Oxide (MgO)	1309-48-4	10 mg/m ³	10 mg/m ³	31.4
Iron Oxide (Fe ₂ O ₃)	1309-37-1	10 mg/m ³	10 mg/m ³ *	15.9
Aluminum Oxide (Al ₂ O ₃)	1344-28-1	10 mg/m ³	10 mg/m ³	1.6
Calcium Oxide (CaO)	1305-78-8	5 mg/m ³	2 mg/m ³	0.7
Nickel (Ni)	7440-02-0	1 mg/m ³	1 mg/m ³	<0.1 (incl. NiO)
Chromium Oxide (Cr ₂ O ₃)	1308-38-9	15 mg/m ³ *	10 mg/m ³ *	0.1

Trace Elements

and Compounds (Total)

n/a

n/a

n/a

1.5

† Respirable free silica (SiO₂) < 0.01%

* Regulated as for nuisance particulate (dust)

COMPOSITION COMMENTS: The silica in Green Diamond materials is precipitated silica in the form of silicates of Mg²⁺ and Fe³⁺ as MgSiO₃ (MgO·SiO₂) and FeSiO₃ (FeO·SiO₂).

Section 313 (Supplier Notification) of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372) stipulates that this product contains substances subject to the reporting requirements for toxic chemicals. Chemical Name: Nickel, CAS #7440-02-0, Percent by Weight: <0.1%. This information should be included in all MSDS's that are copied and distributed for this material.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: No specific health hazards. Avoid specified limits for compounds listed in Section 2. Use procedures as relevant for over-exposure to nuisance dust.

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE OF ENTRY: Nasal

EYE: Abrasion injuries possible if safety glasses are not worn.

SKIN: Abrasion injuries possible during blasting operations or similar exposure, with high velocity direct exposure to skin.

INGESTION: Toxic effects will not occur.

INHALATION: Nuisance dust during loading/unloading, processing and packaging.

CHRONIC EFFECTS: NIOSH/OSHA/MSHA approved particulate respirators should be used during blasting operations. Existing respiratory conditions may be aggravated by exposure.

4. FIRST AID MEASURES

No specialized medical treatment required. No toxic chemicals are present in this product. Health hazards are non-chemical.

SIGNS AND SYMPTOMS OF EXPOSURE

EYE: Irritation, redness

SKIN: Redness, tender to the touch

INGESTION: Unknown

INHALATION: Coughing, shortness of breath

FIRST AID PROCEDURES (likely only in extreme and unusual conditions)

EYE: Flush thoroughly with cool running water.

SKIN: Follow procedures appropriate to abrasion or trauma injuries.

INGESTION: Not likely. If swallowed, seek medical attention.

INHALATION: Follow procedures appropriate for over-exposure to nuisance dust.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Nonflammable

FLASH POINT / METHOD USED: N/A

AUTOIGNITION: None

FLAMMABILITY LIMITS (% by volume in air): LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: N/A

NFPA RATINGS: Health 0; Flammability 0; Reactivity 0; Protective Gear K.

FIRE FIGHTING INSTRUCTIONS: None

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: None

SPECIAL FIRE FIGHTING PROCEDURES: None

COMBUSTION PRODUCTS: None

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Respiratory protection: NIOSH/OSHA/MSHA approved particulate filter respirators for abrasive blast environments. Personal protection: NIOSH/OSHA approved garments and head gear during blasting operations. See Section 8.

CLEANUP MEASURES: Material should be swept or vacuumed into appropriate containers. Disposal should be in accordance with Federal, State, and local regulations.

7. HANDLING AND STORAGE

NORMAL STORAGE: General dry storage, ambient air temperature and pressure.

HANDLING: Follow good housekeeping practices to reduce airborne emissions. Use NIOSH/OSHA/MSHA approved particulate filter respirator and clothing in abrasive blast environments.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain dust exposures below PELs or TLVs during loading and unloading. Mechanical exhaust may be appropriate during processing. Special exhaust may be appropriate during normal abrasive blasting operations.

RESPIRATORY PROTECTION: Recommended if PELs or TLVs are exceeded. Use NIOSH/OSHA/MSHA approved respirators.

EYE AND FACE PROTECTION: Use safety glasses with side shields. If there is potential for exposure to particles which could cause mechanical injury to the eye, wear goggles.

SKIN AND HAND PROTECTION: Gloves as desired by user.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Green/grey granular solid

ODOR: Odorless

VAPOR PRESSURE (mm Hg): N/A

BOILING POINT: N/A

MELTING POINT: 2,650-2900°F

SPECIFIC GRAVITY (H₂O = 1): 3.0 to 3.3

FLASH POINT: None

VAPOR DENSITY (AIR = 1): N/A

EVAPORATION RATE (BUTYL ACETATE = 1): N/A

SOLUBILITY: Insoluble in water

pH: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY WITH OTHER MATERIALS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: None

IARC MONOGRAPHS: None

OSHA REGULATED: Yes, for compounds in Section 2, and nuisance dust.

NTP: No

HEAVY METALS: Meets TCLP

12. ECOLOGICAL INFORMATION

The Department of Fisheries and Oceans Canada Report No. 1692 of January 1991 classifies Green Diamond as (a) having moderate to low toxicity to fish, i.e. 96-h LC50 \geq 100mg/L, (test value was >66000mg/L); (b) not known to be persistent and not likely to accumulate in animal tissues.

13. DISPOSAL CONSIDERATIONS

Prior to its use, Green Diamond meets the TCLP (40 CFR 261.24a) criteria. If the grit remains uncontaminated per the Resource Recovery and Conservation Act (RCRA), then the material meets the definition of a solid waste and may be disposed of per local, state and federal regulations.

If the spent grit upon evaluation contains contaminants at levels above those specified under RCRA, then the waste is defined as hazardous and must be managed per federal or state regulations governing hazardous waste.

14. TRANSPORTATION INFORMATION

NAME OF CONTENTS: Abrasive Grit

CONSTITUENTS: No hazardous substances at regulated levels

UN/NA NUMBER: N/A

EMERGENCY RESPONSE NUMBER: (800) 547-4021

REPORTABLE QUANTITY: 11,952 tons

HAZARD CLASS: N/A

POISON INHALATION HAZARD: N/A

15. REGULATORY INFORMATION

The SARA Title III / CERCLA reportable quantity (RQ) for this product is 11,952 tons.

Originally prepared: 27 July 1995. Updated 1 July 2001.

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