

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Name: Olivine Powder

Product Number: All applicable American Elements product codes, e.g. MGFE-SIAT-02-P , MGFE-SIAT-03-P , MGFE-SIAT-04-P , MGFE-SIAT-05-P

CAS #: 1317-71-1

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
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Emergency telephone number:

+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

GHS / Hazcom 2012 Classification:

Physical: Not Hazardous

Health: Skin Sensitizer Category 1

Carcinogen Category 1

Environmental: Not Hazardous

GHS / Hazcom 2012 Label:



DANGER

Statements of Hazards Prevention

May cause an allergic skin reaction. Obtain special instructions before use.

May cause cancer. Do not handle until all safety precautions have been read and understood.

If on skin: wash with plenty of soap and water Avoid breathing dust.

If skin irritation or rash occurs: Get medical advice. Contaminated work clothing must not be allowed out of the workplace.

Wash contaminated clothing before reuse.

If exposed or concerned: Get medical advice. Wear protective gloves and safety glasses or goggles.

Disposal: Dispose of contents or containers in accordance with local and national regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Percentage

Olivine >99.3%

CAS: 7440-47-3

Chromium Compounds

0.2-1.0%

CAS: 7440-02-0

Nickel Compounds

0.2-0.4%

SECTION 4. FIRST AID MEASURES

Gross Inhalation: Remove victim to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, have qualified personnel administer oxygen. Get prompt medical attention.

Skin contact: Thoroughly wash exposed skin with plenty of soap and water if exposed. Wash skin before breaks and at the end of the shift. Seek medical attention if a rash develops.

Eye Contact: Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally. If irritation persists or for imbedded foreign body, get immediate medical attention.

Ingestion: If large amounts are swallowed, get immediate medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed: Excessive inhalation of dust may cause mucous membrane and respiratory irritation and lung injury with symptoms of shortness of breath and reduced pulmonary function. May cause an allergic skin reaction. May cause cancer.

Indication of Immediate Medical Attention and Special Treatment Needed: None required.

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: This product will not burn, but is compatible with all extinguishing media. Use any media that is appropriate for the surrounding fire.

Specific Hazards Arising from the Chemical:

Unusual Fire and Explosion Hazards: Not flammable or combustible. Dry powders may accumulate static charge in handling, which can be a source of ignition for flammable atmospheres.

Hazardous Combustion Products: None.

Special Protective Equipment and Precautions for Fire-Fighters: None required with respect to this product. Firefighters should always wear self-contained breathing apparatus for fires indoor or in confined areas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate protective equipment.

Environmental Precautions: Report spills and releases as required to appropriate authorities.

Methods and Material for Containment / Cleanup: If uncontaminated, collect using dustless method (HEPA vacuum or wet method) and place in appropriate container for use. If contaminated: a) use appropriate method for the nature of contamination, and b) consider possible toxic or fire hazards

associated with the contaminating substances. Collect for appropriate disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid breathing dust. Use normal precautions against bag breakage or spills of bulk material. Avoid creation of respirable dust. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area.

Use adequate ventilation and dust collection. Maintain, use, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Launder clothing that has become dusty. Empty container (bags, bulk containers, storage tanks, etc.) retain product residue and must be handled in accordance with the provisions of this Safety Data Sheet.

WARN and TRAIN employees in accordance with state and federal regulations.

WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS AND USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARDS AND OSHA PRECAUTIONS AND ANY OTHER APPLICABLE REGULATORY PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.

Dust can accumulate electrostatic charges due to friction from transfer and mixing operations and cause an electrical spark (ignition source), which can ignite flammable liquids and atmospheres. Provide adequate precautions when adding this product to flammable and combustible mixtures like paints and coating, such as electrical grounding and bonding, inert atmosphere or non-sparking tools. However, bonding and grounds may not eliminate the hazard for static accumulation.

Conditions for Safe Storage, Including any Incompatibilities: Store in a dry location.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Definitions:

MSHA - Mine Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

REL - the NIOSH Recommended Exposure Limit

TLV - American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value

TWA - Time-Weighted Average

Olivine: PEL – 5 mg/m³ TWA (respirable fraction), 15 mg/m³ TWA (total dust) as Particulates not Otherwise Regulated

TLV – None established (refer to ACGIH guidance for Particulates (insoluble or poorly soluble) Not Otherwise Specified)

MGS – 10 mg/m³ TWA as Nuisance Particulates

Nickle Compounds: PEL – 0.5 mg/m³ TWA

TLV – 0.5 mg/m³ TWA

MSHA – 0.5 mg/m³ TWA

Appropriate Engineering Controls: Use local exhaust as required to maintain exposures as far as possible below applicable occupational exposure limits. See also ACGIH “Industrial Ventilation – A Manual for Recommended Practice” (current edition). Control of exposure to dust must be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general or local exhaust ventilation and substitution of less toxic materials.)

Personal Protective Equipment:

Respiratory Protection: When effective engineering controls are not feasible, or while they are being

implemented, appropriate respiratory protection must be used. Use appropriate respiratory protection for respirable based on consideration of airborne workplace concentrations and duration of exposure arising from intended end use. Refer to the most recent government and local standards.

Gloves: Protective gloves recommended.

Eye Protection: Safety glasses or goggles recommended.

Other Protective Equipment / Clothing: As appropriate for the work environment. Dusty clothing should be laundered before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form:

Solid

Appearance:

Light green to gray-green sand-size granules

Viscosity:

Not Applicable

Odor:

Odorless

pH:

Not Applicable

Odor Threshold:

Not Applicable

Boiling Point / Range:

Not Applicable

Vapor Density:

Not Applicable

Melting Point / Freezing Point:

2550 - 3092°F / 1398.8°C - 1700°C

Evaporation Rate:

Not Applicable

Flammability (solid, gas):

Fully oxidized, will not burn

Partition coefficient (noctanol / water):

Not Applicable

Decomposition Temperature:

Not Applicable

Vapor Pressure:

Not Applicable

Flash Point:

Not Applicable

Relative Density:

2.3 -3.6

Lower Explosion Limit:

Not Applicable

Solubilities:

Insoluble Water

Upper Explosion Limit:

Not Applicable

Autoignition Temperature:

Will not burn

SECTION 10. STABILITY AND REACTIVITY

Reactivity: This product is not reactive under normal conditions of storage and use. Chemical Stability:

This product is stable at normal temperatures.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible Materials: None known.

Hazardous Decomposition Products: None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Potential Health Effects:

Inhalation: Inhalation of dust may cause irritation of the nose, throat and respiratory passages.

Skin Contact: Product may cause an allergic skin reaction.

Eye Contact: Contact may cause mechanical irritation and possible injury.

Ingestion: No adverse effects expected for normal, incidental ingestion.

Chronic Health Effects: Prolonged overexposure to any nuisance dust may cause lung injury.

Symptoms include cough, shortness of breath, and reduced pulmonary function. This product contains small amounts of nickel and chromium compounds. Hexavalent chromium has not been detected in this product (detection limit 0.1%). Overexposure to nickel and chromium compounds may cause respiratory and skin sensitization.

Signs and Symptoms of Exposure: Overexposure to nuisance dusts may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing and shortness of breath.

Acute Toxicity Values: No acute toxicity data is available for product.

Skin Sensitization: Nickel compounds have been shown to cause skin sensitization in animals and humans.

Repeated Dose Toxicity: Prolonged overexposure to any nuisance dust may cause lung injury.

Symptoms include cough, shortness of breath, and reduced pulmonary function. This product contains small amounts of nickel and chromium compounds. Hexavalent chromium has not been detected in this product (detection limit 0.1%). Overexposure to nickel and chromium compounds may cause respiratory and skin sensitization.

Carcinogenicity: Nickel compounds are classified by IARC as "carcinogenic to humans" (Group 1) and by NTP as "known to be human carcinogens". None of the other components are listed as carcinogens or suspected carcinogens by IARC, NTP, or OSHA.

Developmental / Reproductive Toxicity: No specific data is available; however, there is no evidence that this product has any effect on reproduction.

Genetic Toxicity: No specific data is available; however, there is no evidence that this product is a germ cell mutagen.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity: No ecotoxicity data is available.

Persistence and Degradability: Olivine, nickel compounds and chromium compounds are not biodegradable.

Bio accumulative Potential: Not expected to bio accumulate.

Mobility in Soil: N/A

Results of PBT and vPvB Assessment: None required.

Other Adverse Effects: None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Olivine is not classified as a hazardous waste under US EPA RCRA regulations. If uncontaminated, dispose as an inert, non-metallic mineral. If contaminated, dispose in accordance with all applicable local, state/provincial and federal regulations in light of the contamination present. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated for transportation under IATA/ICAO, IMDG, US DOT, EU ADR, or Canadian TDG Regulations.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: None

SECTION 15. REGULATORY INFORMATION

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Chronic Health

SARA 313: This product contains the following chemicals subject to annual release reporting requirements under the SARA Section 313 (40 CFR 372): Nickel Compounds 0.1-0.34% chromium compounds 0.1-0.5%.

CERCLA Section 103 Reportable Quantity: None

California Proposition 65: This product contains nickel compounds which are known to the State of California to cause cancer.

Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory or exempt from premanufacture notification requirements.

European Inventory of Commercial Chemical Substances: All of the components of this product are listed on the EINECS Inventory or exempt from notification requirements.

EU REACH Status: This substance is exempt from REACH registration.

Canadian Environmental Protection Act: All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

Canadian WHMIS Classification: Class D, Division 2, Subdivision A (Very Toxic Material causing other Toxic Effects).

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
