

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Iron Carbonate

Product Code: FE-CB-05

CAS Number: 563-71-3

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 Fax: +1 310-208-0351 Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview No unusual fire or spill hazard. Low health risk by inhalation. Iron carbonate : 563-71-3 : 60 - 100% Silica crystalline, quartz : 14808-60-7 : 5 - 10% Aluminum Oxide : 1344-28-1 : 1 - 5%

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name: Ferrous Carbonate Formula: FeCO3 Physical state : Solid. (Powder.) Odor : Odorless. Color : Light brown to reddish brown. Hazard status : This material is classified hazardous under OSHA regulations in the United States and the WHMIS Controlled Product Regulation in Canada. Emergency overview : WARNING ! CANCER HAZARD. CONTAINS MATERIAL WHICH CAN CAUSE CANCER. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, EYE, LENS OR CORNEA. Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion. Potential acute health effects Eyes : No known significant effects or critical hazards. Skin : No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Potential chronic health Effects : Carcinogenic effects: Classified 1 (Known to be human carcinogens.) by NTP, + (Proven.) by NIOSH [Silica crystalline, guartz]. Classified A2 (Suspected for humans.) by ACGIH, 2A (Probable for human.) by IARC [Silica crystalline, guartz]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Aluminum Oxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Magnesium oxide]. Mutagenic effects: Not available. Teratogenic effects: Not available. Medical conditions aggravated by overexposure : Repeated or prolonged exposure to the substance can produce target organ damage. See toxicological information (section 11)

SECTION 4. FIRST AID MEASURES

If inhaled:

Remove to fresh air. If breathing is labored or stopped, give artificial respiration. Get immediate medical attention.

In case of skin contact:

Wash area of skin with soap and water.

In case of eye contact:

Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops or persists.

After Ingestion

If victim is conscious and alert, give large quantities of water to induce vomiting. Seek medical attention immediately.

SECTION 5. FIREFIGHTING MEASURES

Fire

Not considered to be a fire hazard. Not flammable.

Explosion

Not considered to be an explosion hazard.

Extinguishing Media

This material is not combustible and is not anticipated to react with commercially employed extinguishing media. Use appropriate extinguishing media for surrounding fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill Procedures

Protect against identified hazards through use of prescribed personal protection equipment, proper work and hygiene practices. Limit foot and vehicular traffic to minimize mechanical agitation and

dispersion. Employ a vacuum, equipped with HEPA (High Efficiency Particulate Air) filter, for clean-up of the spill material. If no vacuum is available, use a broom and shovel to collect excess powder in the area. Recover uncontaminated material for use. Vacuum or sweep remaining material keeping dust to a minimum. Residual material should then be cleared, utilizing the process of wet sweeping, to avoid dust generation.

Containment Techniques

This is a solid material and will not travel far from the spill location unless mechanically agitated. Spill Response Equipment

The following equipment is recommended for spill response:

- vacuum, equipped with a HEPA filter
- broom, wet mop
- dustpan, shovel, or scoop
- bags, drums or sacks for collection

Personal Protective Equipment

All personnel should utilize the following protective equipment when performing spill response activities:

- gloves (rubber or leather)
- safety glasses or goggles
- respiratory equipment as recommended in Section 8

SECTION 7. HANDLING AND STORAGE

Storage

A moderately dry, well-ventilated area is considered adequate for handling and storage. Usual precautions for nuisance dust should be followed.

Handling

When handling this product, all personnel are directed to:

• Wear all specified elements of PPE, as directed by this document, or under location specific

requirements, whichever is more conservative.

Avoid creating dust, where possible.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Use with adequate ventilation to meet exposure limits listed in Section 2. **Respiratory Protection** Use NIOSH-approved dust respirator, if overexposure exists. Skin Protection Leather or rubber gloves. **Eye/Face Protection** Safety glasses, goggles or face shield are recommended. Work Hygiene Practices • To control potential exposures, avoid creating dust. • Do not eat, drink, smoke, or perform other hand-to-mouth activities in product use or handling area. • Wash thoroughly after handling this product. Iron carbonate ACGIH TLV (United States, 1/2005). TWA: 1 mg/m3 8 hour(s). Form: All forms NIOSH REL (United States, 12/2001). TWA: 1 mg/m3 10 hour(s). Form: Soluble OSHA PEL 1989 (United States, 3/1989). TWA: 1 mg/m3 8 hour(s). Form: Soluble

Silica crystalline, quartz ACGIH TLV (United States, 1/2005).

TWA: 0.05 mg/m3 8 hour(s). Form: Respirable fraction NIOSH REL (United States, 12/2001). TWA: 0.05 mg/m3 10 hour(s). Form: All forms. OSHA PEL 1989 (United States, 3/1989). TWA: 0.1 mg/m3 8 hour(s). Form: Respirable dust Aluminum Oxide ACGIH TLV (United States, 1/2005). TWA: 10 mg/m3 8 hour(s). Form: All forms. NIOSH REL (United States, 12/2001). TWA: 5 mg/m3 10 hour(s). Form: All forms. OSHA PEL (United States, 8/1997). TWA: 5 mg/m3 8 hour(s). Form: Respirable fraction TWA: 15 mg/m3 8 hour(s). Form: Total dust

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Physical State: Solid Color: Light brown Form: Powder Odor Odorless

SECTION 10. STABILITY AND REACTIVITY

Stability Stable under ordinary conditions of use and storage. Hazardous Decomposition Products None Hazardous Polymerization Products Will not occur. Incompatibilities None known. Conditions to Avoid None

SECTION 11. TOXICOLOGICAL INFORMATION

Eyes : No known significant effects or critical hazards. Skin : No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Acute Effects Potential chronic health effects Carcinogenic effects: Classified 1 (Known to be human carcinogens.) by NTP, + (Proven.) by NIOSH [Silica crystalline, quartz]. Classified A2 (Suspected for humans.) by ACGIH, 2A (Probable for human.) by IARC [Silica crystalline, quartz]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Aluminum Oxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Magnesium oxide]. Mutagenic effects: Not available. Teratogenic effects: Not available. Target organs : Contains material which causes damage to the following organs: lungs, upper respiratory tract, eye, lens or cornea.

SECTION 12. ECOLOGICAL INFORMATION

Environmental precautions : No known significant effects or critical hazards. Products of degradation : These products are carbon oxides and water. Some metallic oxides. Toxicity of the products of biodegradation : The products of degradation are more toxic than the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.

SECTION 14. TRANSPORT INFORMATION

U.S. DOT

Not regulated for domestic transport by land, rail or air. Enter the proper freight classification on the shipping documents, "MSDS Number" and "Product Name" for shipping purposes. Canadian TDG Hazard Class and PIN Not regulated

SECTION 15. REGULATORY INFORMATION

HCS Classification : Carcinogen Target organ effects

U.S. Federal regulations :

TSCA 6 proposed risk management: Lead

TSCA 8(b) inventory: All components listed.

TSCA 12(b) annual export notification: Lead

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Aluminum Oxide; Silica crystalline, quartz

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Aluminum

Oxide: Immediate (acute) health hazard; Silica crystalline, quartz: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: Copper; Lead; Arsenic; Cadmium

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

Form R - Reporting

Requirements : Aluminum Oxide 1344-28-1 1 – 5

Supplier notification : Aluminum Oxide 1344-28-1 1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations :

Pennsylvania RTK: Iron carbonate: (environmental hazard, generic environmental hazard); Aluminum Oxide: (environmental hazard, generic environmental hazard); Silica crystalline, quartz: (generic environmental hazard); Calcium Oxide: (generic

environmental hazard); Magnesium oxide: (generic environmental hazard); Manganese: (environmental hazard, generic environmental hazard); Copper: (environmental hazard, generic environmental hazard); Lead: (environmental hazard, generic environmental hazard); Arsenic: (environmental hazard, generic environmental hazard); Cadmium: (special hazard, environmental hazard, generic environmental hazard)

Massachusetts RTK: Aluminum Oxide; Silica crystalline, quartz; Calcium Oxide; Magnesium oxide; Manganese; Copper; Lead; Arsenic; Cadmium

New Jersey: Aluminum Oxide; Silica crystalline, quartz; Calcium Oxide; Magnesium oxide; Manganese; Copper; Lead; Arsenic; Cadmium WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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.