

Safety Data Sheet

Material Name: Iron Silicate

Anaconda, MT



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Section 1 - IDENTIFICATION

Material Name:

Iron Silicate

Trade Name:

Black Diamond

Recommended Use

Abrasives, Roofing Granules and other aggregate uses.

Restrictions on Use

None known.

Manufacturer Information

US Minerals, Inc.
18635 West Creek Drive
Tinley Park, IL 60477

Phone: (800) 803-2803
Fax: 219-864-4675
Emergency # (800) 424-9300 (ChemTrec)

Section 2 - HAZARDS IDENTIFICATION

OSHA (29 CFR 1910.1200) Classification of Product

Health: Not Classified
Environmental: Not Classified
Physical: Not Classified

Emergency Overview

Black Diamond Iron Silicate (also called granulated copper slag) is not flammable, combustible or explosive; and poses no unusual hazard in the unused condition. Dust may irritate the upper respiratory tract, eyes, and skin. Prolonged or repeated exposure to high airborne concentrations may cause lung damage. Refer to Section 3 "Composition / Information on Ingredients" for a listing of components. Refer to Section 11 for health effects information. Appropriate care should be exercised in the storage and disposal of this product.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
1309-37-1	Iron oxide	45-60
60676-86-0	Amorphous Fused Silicon Dioxide	30-40
1305-78-8	Calcium oxide	1-7
1344-28-1	Aluminum oxide	2-7
7440-66-6	Zinc	2-4
7440-50-8	Copper	0-1
7439-96-5	Manganese	0-0.6
7440-38-2	Arsenic	0-0.5
7439-92-1	Lead	0-0.4
14808-60-7	Crystalline Silica as Quartz	0-0.6
14464-46-1	Crystalline Silica as Cristobalite	<0.01
7440-41-7	Beryllium	0-0.00005

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Section 4 - FIRST AID MEASURES

Inhalation

Remove to fresh air. Get medical attention if symptoms occur.

Skin

Product is not a skin sensitizer. Wash with water and soap. Remove contaminated clothing and footwear. Get medical advice if symptoms occur.

Eyes

Product is not an eye irritant. Do not rub eyes. Immediately wash eyes with plenty of water. Check for and remove any contact lenses. If irritation persists, get medical attention.

Ingestion

Wash mouth out. Do not induce vomiting. Give water to drink. Get medical attention if symptoms occur.

Notes to Physician:

Treat symptomatically.

Comments:

Show Safety Data Sheet to the physician in attendance.

Section 5 - FIRE FIGHTING MEASURES

Flammable Class:

Product is not combustible.

Suitable Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Hazardous Combustion Products

Combustion: oxides of metals; see Section 3.

Fire Fighting Measures

Use extinguishing agents appropriate for surrounding fire.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA).

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up

Collect spilled material in appropriate container for disposal. Avoid dispersal of dust into the air; i.e., air sweeping of surfaces with compressed air. If sweeping of a contaminated area is necessary, use a dust suppressant agent. Wet down area with water.

References to other sections

Section 1 for emergency contact information.

Section 8 for information on personal protective equipment.

Section 13 for Waste Disposal.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid inhalation of dust and contact with eyes and skin. Use work methods that minimize dust generation. Use with adequate ventilation. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection, as necessary.

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Conditions for Safe Storage, including any Incompatibilities

Store away from incompatible materials such as strong acids; e.g., hydrofluoric acid.

* * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

Component Exposure Limits

Crystalline Silica (CAS #14464-46-1)

ACGIH: 0.025 mg/m³ TWA (respirable fraction)
NIOSH: 0.05 mg/m³ TWA (respirable fraction)
OSHA: 0.05 mg/m³ TWA (respirable fraction)

Inorganic Arsenic (CAS #7440-38-2)

ACGIH: 0.01 mg/m³ TWA
NIOSH: 0.01 mg/m³ TWA
OSHA: 0.002 mg/m³ Ceiling (15 min)

Inorganic Lead (CAS #7439-92-1)

ACGIH: 0.01 mg/m³ TWA
NIOSH: 0.01 mg/m³ TWA
OSHA: 0.01 mg/m³ TWA

Iron oxide (CAS #1309-37-1)

ACGIH: 5 mg/m³ TWA (respirable fraction)
NIOSH: 5 mg/m³ TWA (as Fe, dust and fume)
OSHA: 10 mg/m³ TWA (fume); 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Amorphous Fused Silicon Dioxide (CAS # 60676-86-0)

NIOSH: 6 mg/m³ TWA
OSHA: 80 mg/m³ / % SiO₂ TWA

Calcium oxide (CAS #1305-78-8)

ACGIH: 2 mg/m³ TWA
NIOSH: 2 mg/m³ TWA
OSHA: 5 mg/m³ TWA

Aluminum oxide (CAS # 1344-28-1)

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Copper (CAS # 7440-50-8)

ACGIH: 0.2 mg/m³ TWA (fume); 1 mg/m³ TWA (dusts and mist)
NIOSH: 1 mg/m³ TWA (dust and mist); 0.1 mg/m³ TWA (fume)
OSHA: 0.1 mg/m³ TWA (fume); 1 mg/m³ TWA (dust and mist)

Appropriate Engineering Controls

Use local exhaust ventilation, process enclosures, or other engineering controls to maintain airborne levels below recommended exposure limits.

Personal Protective Equipment

Eyes/Face Protection

Wear safety glasses with side shields. Use tight fitting safety goggles (as appropriate) if dust is generated.

Skin Protection

Use protective gloves. Wear protective clothing, as appropriate.

Respiratory Protection

Select and use respiratory protective equipment in accordance with OSHA Standard 29 CFR 1910.134.

Work Hygiene Practices

Wash hands after handling the product. Routinely wash work clothing and protective equipment to remove contaminants.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Appearance:	Black, granular shiny solid
Color:	Black	Physical Form:	Solid
Odor:	No characteristic odor	Odor Threshold:	Not available
pH:	Not available	Melting Point:	Not available
Boiling Point:	Not applicable	Flash Point:	Non-flammable; non-explosive
Decomposition:	Not available	Evaporation Rate:	Not available
Flammability Class:	Non - Flammable	LEL:	Not available
UEL:	Not available	Vapor Pressure:	Not applicable
Vapor Density (air = 1):	Not applicable	Density:	Not available
Specific Gravity (water = 1):	Not available	Water Solubility:	Marginal
Log KOW:	Not available	Coeff. Water/Oil Dist:	Not available
Viscosity:	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of temperatures and pressure.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

None known.

Incompatible Materials

Strong acids; e.g., hydrofluoric acid.

Hazardous Decomposition

None known.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Inorganic Arsenic: Exposure to inorganic arsenic can produce dermatitis (skin inflammation), peripheral neuropathies (diseases of the nerves of the extremities), peripheral vascular diseases (diseases of the arteries and veins of the extremities), and cancer of the skin, liver, and lungs. Arsenic is classified as a Confirmed Human Carcinogen (Group IA) by International Agency for Research on Cancer (IARC).

Inorganic Lead: Effects of chronic exposure to inorganic lead may include neurological and behavior effects such as anxiety, weakness, headaches, tremors, depression, decreased libido, and other indicators of nervous system damage. Symptoms may be very subtle and not recognized as being due to lead exposure. Anemia, kidney damage, and reproductive effects in both men and women can also be cause by lead. Developing fetuses are at most risk of neurological and renal damage at low blood lead concentrations. Lead is classified as Possibly Carcinogenic to Humans (Group 2B) by IARC).

Respirable Crystalline Silica: Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease such as reduced pulmonary function may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations.
- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations.

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- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica.

Exposure to crystalline silica has also been linked to other diseases, including bronchitis, tuberculosis, chronic obstructive pulmonary disease (COPD), kidney disease, and lung cancer. Silica is classified as a human carcinogen (Group I) by the International Agency for Research on Cancer (IARC).

Information on Likely Routes of Exposure

Inhalation: Dust may cause mechanical irritation of upper respiratory.

Skin Contact: Dust may cause mechanical irritation of skin.

Eye Contact: Dust may cause mechanical irritation of eyes.

Immediate Effects

Dust may cause mechanical irritation of upper respiratory tract, eyes, and skin.

Delayed Effects

None known.

Medical Conditions Aggravated by Exposure

Respiratory, eye, or skin disorders.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Carcinogenicity (Component)

Crystalline Silica: Human carcinogen (Group I) by the International Agency for Research on Cancer (IARC).

Inorganic Arsenic: Confirmed Human Carcinogen (Group IA) by IARC.

Inorganic Lead: Possibly Carcinogenic to Humans (Group 2B) by IARC.

Iron Oxide: Not classifiable (Group 3) IARC.

Amorphous Fused Silicon Dioxide: Not classifiable (Group 3) IARC.

Mutagenic Data

No data available.

Reproductive Effects Data

No data available.

Tumorigenic Data

No data available.

Target Organ Toxicity

Irritation of nose and throat. Irritation of eyes and mucous membranes. May cause respiratory tract irritation.

Aspiration Hazard

No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Method

Dispose in accordance with all applicable regulations.

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Section 14 - TRANSPORT INFORMATION

US DOT Information

Shipping Name: Not Regulated.

IMDG Information

Shipping Name: Not Regulated.

Section 15 - REGULATORY INFORMATION

Components

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), and TSCA 12(b).

Aluminum oxide (CAS # 1344-28-1)

SARA 1.0 % de minimis concentration (fibrous forms)
313:

Zinc (CAS # 7440-66-6)

SARA 1.0 % de minimis concentration (dust or fume only)

313:

CERCLA: 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm).

Copper (CAS #7440-50-8)

SARA 1.0 % de minimis concentration

313:

CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm).

SARA 311/312 Hazardous Categories

Acute Health: Yes. Chronic Health: Yes. Fire: No. Pressure: No. Reactive: No.

Section 16 - OTHER INFORMATION

Web Sites with information about health effects from occupational exposure to the chemical substances contained in this product and associated engineering controls and personal protective equipment:

OSHA Website: <http://www.osha.gov>

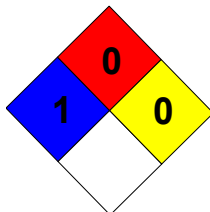
NIOSH Website: <http://www.cdc.gov/niosh>

ACGIH Website: <http://www.acgih.org>

ATSDR Website: <http://www.astdr.cdc.gov/toxprofiles>

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe



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Hazardous Material Identification System (HMIS) Classification

Health Hazard	1
Fire Hazard	0
Physical Hazard	0

Other Information

Disclaimer: Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

User's Responsibility

The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this Safety Data Sheet is available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

End of SDS