

# Material Safety Data Sheet

## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Miller Mining, Inc. P.O. Box 31289 Flagstaff, AZ 86003-1289	Emergency Telephone No.  (928) 526-5757
Trade Name: Cinder	MSDS Number: 1001
Chemical Name: Plagioclase, olivine, and augite	Synonyms: Volcanic basalt
Prepared By: E&H Solutions	Date of Issue/Revision: 3-21-02

## 2. INGREDIENTS

Component	%	CAS#	OSHA PEL (mg/M <sup>3</sup> )	ACGIH TLV (mg/M <sup>3</sup> )	Carcinogen
Plagioclase, Olivine, and Augite	80-90	NA	15 (Total dust) 5 (Respirable)	10	No
Silicon Dioxide (Amorphous)	<5	7621-86-9	15 (Total dust) 5 (Respirable)	2	No
<b>Trace Metals</b>					
Aluminum	1-5	7429-90-5	15 (Total dust) 5 (Respirable)	10 (Total dust) 3 (Respirable)	No
Calcium	1-5	7440-70-2			
Iron	1-5	7439-89-6			
Magnesium	1-5	7439-95-4			
Non-Hazardous Ingredients*	<1	NA	NA	NA	No

\* Ingredients considered non-hazardous pursuant to 29 CFR 1910.1200.

**MSDS: Cinder**

### **3. HAZARD IDENTIFICATION**

#### **Emergency Overview**

##### **Caution**

Inhalation of dust may be harmful. Avoid creating dust. If exposure to dust is anticipated, use NIOSH certified particulate respiratory protection.

Health Rating: 1

Flammability Rating: 0

Reactivity Rating: 0

#### **Potential Health Effects**

Eye: May cause irritation, redness and pain.

Skin Contact: Material is abrasive and can cause abrasions and cuts if handled without gloves.

Skin Absorption: No adverse health effects expected.

Ingestion: No adverse health effects expected.

Inhalation: Overwhelming exposure to dust may cause acute lung dysfunction. Exposure to dust may cause dryness and irritation to mucous membranes, nose, and throat. Coughing and irritation of throat are early symptoms of exposure.

##### **Chronic Exposure:**

Chronic exposure to the dust of naturally occurring minerals can cause pneumoconiosis (dusty lung) which results in shortness of breath, reduced lung function, and in severe cases death. Smoking can increase the risk of lung injury. Hypersensitive individuals may develop allergic dermatitis due to trace amounts of heavy metals such as chromium.

### **4. FIRST AID**

Inhalation: Remove to fresh air. If breathing is difficult give oxygen. Seek medical attention for any breathing difficulty.

Eyes: Immediately flush eyes with water for 15 minutes, lifting lower and upper eyelids occasionally. Seek prompt medical attention.

Skin: Wash exposed area with soap and water. Seek medical attention if irritation or rash develops.



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Ingestion: Give several glasses of water to dilute. If large amounts were swallowed seek medical attention.

**5. FIRE FIGHTING MEASURES**

Flashpoint: ND                      LEL: ND                      UEL: ND

Auto-ignition Temp: ND

Not considered to be a fire or explosion hazard.

Use water-spray, water-mist, carbon dioxide, dry chemical, or foam-type extinguishing media.

**6. ACCIDENTAL RELEASE MEASURES**

Contain spill - avoid creating dust. Wear appropriate personal protective equipment. Use hand tools to clean up spills. Vacuuming or wet sweeping may be used to avoid dust dispersal. Place in appropriate waste container and dispose.

**7. HANDLING AND STORAGE**

Isolate from incompatible substances. Assure systems used for handling, storage, and clean up do not allow dust to exceed the permissible exposure limits. Use adequate ventilation and dust collection. Practice good housekeeping. Do not allow dust to collect on walls, floors, sills ledges, machinery, or equipment. Maintain, clean and test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash clothing that has become dusty; do not breathe the dust from clothing. Observe all warnings and precautions listed for this product.

**8. EXPOSURE CONTROLS - PERSONAL PROTECTION**

Engineering Controls: Use with adequate ventilation. Use mechanical ventilation if dusting occurs to control exposure to levels below established limits.

Respiratory: Use NIOSH approved particulate respirator if exposure exceeds exposure limits.

Eye Protection: If dusting occurs use chemical goggles. Maintain eye wash fountain and quick drench facilities in work area.

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Protective Gloves/Clothes: Wear abrasion resistant gloves such as leather when handling. Wear clean body-covering clothing if exposed to dust.

General: Do not breathe dust. Do not eat or drink during use. Wash thoroughly after handling.

## 9. PHYSICAL & CHEMICAL PROPERTIES

Appearance & Physical State: Black Rock      Melt Point: ND

Vapor Density (Air = 1): NA

Octanol/Water Part. Coeff: NA

Vapor Pressure: NA

Evaporation Rate (BuOAc=1): NA

Odor: None

Specific Gravity/Bulk Density: 1.400 -  
1.900

% Volatile by Volume: 0

Boiling Point: ND

% Solubility (water): Not Est.

pH: NA

## 10. STABILITY AND REACTIVITY

Stability & Polymerization: Stable at ambient temperatures and atmospheric pressure. Hazardous polymerization will not occur.

Incompatibility (Conditions to Avoid): Avoid Dusting. Avoid powerful oxidizers such as fluorine, chlorine trifluorine, manganese trioxide, and oxygen difluoride..

Hazardous Decomposition Products: ND

## 11. TOXICOLOGY INFORMATION

No LD50/LC50 information found related to normal routes of exposure.

NTP Carcinogen: No

IARC Category: 3 (Amorphous Silica)

## 12. ECOLOGICAL INFORMATION

The ecological properties of this material have not been fully investigated.



### **13. DISPOSAL CONSIDERATIONS**

The raw material disposed of as a waste is non-hazardous with respect to RCRA (Resource Conservation and Recovery Act). Contamination of the product could make the waste hazardous. A waste determination based on the contaminants present should be made to determine if it is hazardous under RCRA.

### **14. TRANSPORTATION INFORMATION**

DOT Shipping Classification: Earth Products

Restrictions: None known

### **15. REGULATORY INFORMATION**

TSCA: All components are listed on the TSCA inventory.

CERCLA: Trace levels of chromium, cobalt, nickel, zinc, copper, manganese, aluminum, and vanadium present in this product are listed.

SARA: None listed

EHS: None listed.

HAPS: Trace levels of chromium, cobalt, manganese, nickel, and zinc compounds, present in this product, are listed Hazardous Air Pollutants. Avoid creating airborne dust when using product.

CWA: Trace levels of chromium, copper, manganese, nickel, and zinc present in trace amounts in this product, are listed.

### **16. OTHER INFORMATION**

Not Est. = Not Established; N.A. = Not Applicable; N.D. = Not Determined

The information above is believed to be accurate and represents the best information currently available. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages for any third party or for lost damages, howsoever arising, even if the company has been advised of the possibility of such damages.