



MATERIAL SAFETY DATA SHEET

for
Class F Fly Ash from
Bituminous Coal

This document has been prepared to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.
Revision Date: May 2007

SECTION I GENERAL INFORMATION

The SEFA Group
217 Cedar Road
Lexington, SC 29073

Emergency Information (803) 520-9000
General Information (803) 520-9000

SECTION II PRODUCT COMPOSITION AND MAJOR CONSTITUENTS

Components	Formula/CAS	Typical Percentage	OSHA PEL (mg/m ³)	ACGIH TVL (mg/m ³)
Silica, Amorphous	SiO ₂ / 7631-86-9	41.0 - 58.0%	6	10
Silica, Crystalline	SiO ₂ + 2 148-086-97	3.0 - 7.0%	.1	.1
Aluminum Oxide	Al ₂ O ₃ / 1344-28-1	18.1 - 28.6%	15	10
Iron Oxide	Fe ₂ O ₃ 1309-37-1	3.9 - 26.0%	10	5
Calcium Oxide	CaO 1305-78-8	0.8 - 6.0%	5	2
Magnesium Oxide	MgO 7439-96-5	0.7 - 1.4%	10	10
Titanium Oxide	TiO ₂ 13463-67-7	1.0 - 1.9%	10	10

SECTION III PHYSICAL & CHEMICAL CHARACTERISTICS

Appearance & Odor	Fine gray dust with no apparent odor		
Boiling Point	N/A	Evaporation Rate	N/A
Vapor Pressure	N/A	Melting Point	>2500° F
Vapor Density	N/A	Solubility in Water	Insoluble
Specific Gravity	2.0 - 3.0		

SECTION IV FIRE & EXPLOSION DATA

Flash Point	Non-flammable & non-explosive
Extinguishing Method	N/A
Unusual Fire & Explosion Hazards	N/A

SECTION V REACTIVITY DATA

Stability	Stable	Hazardous Decomposition or By-Products	None
Incompatibility	None	Conditions to Avoid	None

MSDS for Class F Fly Ash from Bituminous Coal

SECTION VI HEALTH HAZARDS

Exposure Routes	Inhalation, Skin Contact, Eye Contact
Acute Health Hazards	Possible irritation of eyes, skin & respiratory system.
Chronic Health Hazards	Prolonged or repeated exposure to excessive levels of crystalline silica may cause silicosis, a fibrosis of the lungs.
Signs & Symptoms of Exposure	Irritation of eyes, skin & mucous membranes of the respiratory system.
Note	Respirable crystalline silica has been classified by the International Agency for Research on Center (IARC) as a probable human carcinogen.
<u>Emergency & First Aid Procedures</u>	
Skin	Brush away ash particles. Flush effected area, preferably using soap & water.
Eyes	Do not rub. Flush effected area with water for at least 15 minutes.
Ingestion	Rinse mouth with water. Seek medical attention if necessary.
Inhalation	Remove person to fresh air. Clear nasal passages. If effected person is not breathing, contact emergency medical services and begin standard life support techniques.

SECTION VII PRECAUTIONS FOR SAFE HANDLING & USE

In Case of Spill	Wet ash with water mist to help reduce airborne concentrations before removal. Remove spilled material with shovel or vacuum, or wash down with water. Do not use compressed air. Fly ash is not considered a hazardous waste under EPA's Resource Conservation and Recovery Act (RCRA). Coal fly ash may be disposed of by adding the material to cement mixtures, asphalt additives and as agricultural soil modifiers.
Waste Disposal	Cover material to prevent airborne dust and dispose of in a landfill according to federal, state and local regulations for non-hazardous waste.
Storage & Handling Precautions	Avoid conditions which result in dusting and in uncontrolled runoff of rainwater from storage areas. Avoid inhalation of dust.

SECTION VIII CONTROL MEASURES

Respiratory Protection	NIOSH-approved respirator if exposures approach TLV/PEL.
Protective Gloves	Work or chemical gloves should be used to reduce skin irritation of dust when workers must directly handle the material.
Eye Protection	Goggles or safety glasses should be worn. Eye station should be readily accessible.
Other Protective Equipment	Protective clothing should be worn as necessary for individuals with sensitive skin to prevent direct skin contact.
Work/Hygienic Practices	Wash hands and face after handling fly ash and before smoking or consuming food or beverages, apply cosmetics or using toilet facilities. Local exhaust systems should be employed in confined spaces.

SECTION IX SPECIAL PRECAUTIONS

Handling & Storage	Store in a dry place.
Other	Avoid creating dust. Practice good hand-washing techniques, washing prior to eating and drinking.