
Section 3. HAZARDS IDENTIFICATION (Continued)

PRIMARY ROUTES OF ENTRY: Inhalation of dust. Eye and skin contact. Ingestion of dust.

TARGET ORGANS: Eyes, skin, mucous membranes, lungs, kidney, liver, and blood.

MEDICAL CONDITIONS: Individuals with pre-existing conditions of emphysema or asthma may experience respiratory irritation from breathing dust. Skin conditions or dermatitis may be aggravated by contact with this material.
(AGGRAVATED BY EXPOSURE)

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Contact with eyes may cause irritation resulting in conjunctivitis.

SKIN CONTACT: Prolonged contact may result in minor irritation, mild reddening, or skin rash depending on the sulfur trioxide content. SO₃ reacts vigorously with water (or sweat) to form hydrosulfurous acid.

INGESTION: Ingestion of this product may cause diarrhea or irritation of the mucous membranes of the mouth, throat, esophagus and stomach.

INHALATION: Dust may cause respiratory irritation or fibrosing alveolitis (growth of fibrous tissue in the lung).

ACUTE/CHRONIC: Short-term exposure can produce dermatitis (skin inflammation), horny growths on the skin, conjunctivitis, and diarrhea. Long-term exposure to fly ash in extremely dusty environments (above the OSHA PEL) may result in pathology of the nerves in the extremities, blood-forming effects such as anemia, gastrointestinal irritation/colic, and cancer of the skin, liver, and lungs.

CARCINOGENICITY: NTP: No IARC: Yes (SO₃) OSHA: No

Section 4. FIRST AID MEASURES

EYE CONTACT: In case of contact, flush eyes for 15 minutes. Seek medical aid to ensure foreign matter is removed.

SKIN CONTACT: Avoid skin contact with fly ash. Wash skin thoroughly after exposure ceases.

INHALATION: Move victim to a dust-free environment. Support breathing as necessary.

INGESTION: Do not induce vomiting. Consult a physician.

Section 5. FIRE FIGHTING MEASURES

FLASH POINT: None.

EXTINGUISHING MEDIA: None required.

LOWER FLAMMABLE LIMIT: None.

FIRE-FIGHTING INSTRUCTIONS: None required.

AUTO-IGNITION TEMPERATURE: None.

FIRE & EXPLOSION HAZARDS: None.

DECOMPOSITION PRODUCTS: None.

NFPA RATINGS: Health = 1 Flammability = 0 Reactivity = 0 Special Hazard = None
Scale: 0 = Normal material 1 = Slightly hazardous 2 = Hazardous 3 = Extremely dangerous 4 = Deadly

Section 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED: Dispose of as conventional waste suitable for a municipal landfill.

Section 7. HANDLING AND STORAGE

HANDLING: No special requirements.

STORAGE: No special requirement; material is chemically and thermally stable.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Use safety goggles if handling dry powder.

SKIN PROTECTION: Use coveralls and gloves to avoid skin contact with coal ash.

RESPIRATORY PROTECTION: Use a NIOSH-approved, high-efficiency, air-purifying respirator for dusty environments that exceed 10 mg/m³ total dust.

ENGINEERING CONTROLS: Local exhaust or general dilution ventilation.

WORK PRACTICES: Do not "blow down" with compressed air or dry sweep. Use only a HEPA-filtered vacuum. Use wet methods or sweeping compound to minimize dust generation.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not applicable.

SOLUBILITY IN WATER: Moderate.

VAPOR PRESSURE: Not applicable.

SPECIFIC GRAVITY (Apparent density): 2.2 - 2.8 g/cm³

VAPOR DENSITY: Not applicable.

pH: Varies from acidic to basic dependent upon coal source.

%VOLATILE BY WEIGHT: 0

FREEZING POINT: Not applicable.

APPEARANCE AND ODOR: **Fly ash** consists of minute glass spheres with some crystalline matter and varying amounts of unburned carbon. It ranges in color from light tan or light gray to almost black depending on the proportions of carbon and iron. **Bottom ash** is a granular material similar to fine concrete aggregate (concrete sand). It ranges in color from a medium brown or medium gray to almost black. **Boiler slag** is granular and angular with particle size similar to bottom ash. Slag is shiny black in color and its form resembles crushed coal or black glass. No odor.

Section 10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: None.

DECOMPOSITION PRODUCTS: None.

INCOMPATIBILITY: None.

HAZARDOUS POLYMERIZATION: Will not occur.

CHEMICAL STABILITY: Stable under normal temperature and pressures.

Section 11. TOXICOLOGICAL INFORMATION

ON PRODUCT: Minor skin irritation (prolonged contact), conjunctivitis, and diarrhea.

ON INGREDIENTS:

ROUTE OF ADMINISTRATION

Chemical Name	ROUTE OF ADMINISTRATION		
	Oral	Dermal (LD50)	Inhalation (TCLo)
Crystalline silica, fused	Not available	Not available	197 mg/m ³ (rat)
Aluminum oxide	Not available	Not available	Not available
Iron oxide	Not available	Not available	500 ug/m ³ (rat)
Titanium dioxide	Not available	300 ug/3D-Mild	250 ug/m ³ (rat)
Calcium oxide	Not available	Not available	Not available
Potassium hydroxide	273 mg/kg	1 mg/24H rinse-Mod.	Not available
Sulfur trioxide	Not available	Not available	30 mg/m ³ (human)

Section 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Testing on ash ponds consistently show the effluent to not be acutely toxic in 100% effluent for Ceriodaphnia dubia (water flea) and Pimephales promelas (fathead minnow).

Environmental Fate: Nearly all ash is inert upon release to the environment and would be deposited in the sediment. Less than 1% of ash would be dissolved in the water column.

Environmental Toxicity: When handled and disposed of properly, coal ash does not present an environmental threat.

Section 13. DISPOSAL CONSIDERATIONS

RCRA STATUS: This material is not a RCRA listed hazardous waste nor does it exhibit any hazardous waste characteristics.

DISPOSAL: Dispose of in a manner consistent with federal, state, or local laws and regulations.

Section 14. TRANSPORT INFORMATION

D.O.T. CLASSIFICATION: Not applicable; not a D.O.T. hazardous material.

Section 15. REGULATORY INFORMATION

TSCA: Not applicable.

CERCLA: Contains no known hazardous substances.

SARA TITLE III:

Section 302 Extremely Hazardous Substances: None at or above de minimis concentrations.

Section 311/312 Health and Physical Hazards: Delayed (chronic) health hazard from long-term inhalation of dust.

Section 313 Toxic Chemicals: None at or above de minimis concentrations.

Section 16. OTHER INFORMATION

HMIS RATINGS: Health = 1 Flammability = 0 Reactivity = 0 Personal Protection = B = Safety glasses + gloves
Hazard rating scale: 0 = Minimal 1 = Slight 3 = Serious
2 = Moderate 4 = Severe

While this information and recommendations set forth herein are believed to be accurate as of the date hereof, CINERGY CORPORATION MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

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