

SAFETY DATA SHEET

FLY ASH

1. IDENTIFICATION

Company Identification**Corporate Address****Generator Address**

Kansas City Fly Ash
15100 E. Courtney-Atherton Road
Sugar Creek, MO 64058
816-257-3675 (8am to 4pm CST)

Kansas City Fly Ash
15100 E. Courtney-Atherton Road
Sugar Creek, MO 64058

24-Hour Emergency Telephone Number: 1-800-451-8346 (3E Hotline)

Synonyms: Coal ash, fly ash, coal fly ash
CAS Number: 68131-74-8

2. HAZARD IDENTIFICATION

GHS Symbol:



GHS Signal Word: Warning

GHS Hazard Statement:

GHS – Hazard Statement for Health Hazards

H315 – Causes skin irritation

H320 – Causes eye irritation

GHS Precautionary Statements – Prevention

P264 – Wash skin and contaminated clothing thoroughly after handling

P280 – Wear protective gloves/protective clothing/eye protection/face protection

GHS Precautionary Statements – Response

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 – If eye irritation persists: Get medical advice/attention.

P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.

P321 – Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

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SHEET FLY ASH**

P332 + P313 – If skin irritation occurs: Get medical advice/attention.
P362 – Take off contaminated clothing and wash before reuse.

HAZARD OVERVIEW

Color: gray to brown
Physical State: powder
Odor: Not available
Signal Word: Warning

MAJOR HEALTH HAZARDS: May be irritating to respiratory tract, skin, and eyes. May be harmful if large amounts are inhaled.

PRECAUTIONARY STATEMENTS: Avoid breathing dust. Wear protective gloves, protective clothing, and eye protection. Use personal protective equipment as required. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

POTENTIAL HEALTH EFFECTS:

Inhalation: May cause irritation.
Skin contact: May cause irritation.
Eye contact: May cause eye irritation.
Ingestion: Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Chronic Effects: Prolonged or repeated exposure may cause lung injury. Risk of injury depends on duration and level of exposure.

Medical Conditions Aggravated by Exposure: Respiratory disorders
See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS No.	Percentage
Silicon dioxide, SiO ₂	7631-86-9	42.3
Aluminum oxide, Al ₂ O ₃	1344-28-1	17.4
Iron oxide, Fe ₂ O ₃	1309-37-1	5.8
Calcium oxide, CaO	1305-78-8	22.9
Magnesium oxide, MgO	1309-48-4	4.9
Sodium oxide, Na ₂ O	1313-59-3	1.8
Potassium oxide, K ₂ O	12136-45-7	< 1.0
Titanium dioxide, TiO ₂	13463-67-7	1.4
Manganese dioxide, MnO ₂	1313-13-9	< 1.0
Phosphorus pentoxide, P ₂ O ₅	1314-56-3	1.0
Strontium oxide, SrO	1314-11-0	< 1.0
Barium oxide, BaO	1304-28-5	< 1.0
Sulfur trioxide, SO ₃	7446-11-9	< 1.0

NOTE: CONCENTRATIONS ARE APPROXIMATE AND MAY VARY WITH COAL SOURCE AND BOILER OPERATING CONDITIONS.

4. FIRST-AID MEASURES

- INHALATION:** If adverse effects occur, remove to uncontaminated area.
IF IRRITATION OCCURS, GET MEDICAL ATTENTION.
- SKIN CONTACT:** Wash contaminated areas with soap and water.
IF IRRITATION OCCURS, GET MEDICAL ATTENTION.
- EYE CONTACT:** Flush eyes with plenty of water for at least 15 minutes.
IF IRRITATION OCCURS, GET MEDICAL ATTENTION.
- INGESTION:** No hazard expected.
IF LARGE AMOUNTS ARE INGESTED, GET MEDICAL ATTENTION.

5. FIRE-FIGHTING MEASURES

General Fire Hazards

See Section 9 for Flammability Properties
Not flammable

Hazardous Combustion Products

None

Extinguishing Media

Use water

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear

6. ACCIDENTAL RELEASE MEASURES

Recovery and Neutralization

None

Materials and Methods for Clean-Up

Contain the spill or leak. Avoid generating dust.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Wear appropriate protective equipment and clothing during clean-up.

Environmental Precautions

This material is a water pollutant: prevent material from entering drains, sewers, ditches or waterways.

Prevention of Secondary Hazards

None

7. HANDLING AND STORAGE

Handling Procedures

Avoid contact with skin and eyes. Wear the appropriate eye protection against dust. Minimize dust generation and accumulation. Avoid breathing dust. Use good safety and industrial hygiene practices.

Storage Procedures

Keep containers closed when not in use. Store in ventilated area away from sources of heat, moisture, and incompatible materials.

Incompatibilities

Strong acids, boric oxide, boron trifluoride, phosphorus pentoxide, chlorates, chlorine trifluoride, chlorine, ammonium salts, and fluorine.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component Exposure Limits

Silicon dioxide (7631-86-9)

ACGIH: 10 mg/m³ TWA
OSHA: 2.3 mg/m³ TWA (<1% Crystalline silica)
NIOSH: 6 mg/m³ TWA

Aluminum oxide (1344-28-1)

ACGIH: 10 mg/m³ TWA
OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Iron oxide (Fe₂O₃) (1309-37-1)

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

Calcium oxide (1305-78-8)

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

Magnesium oxide (1309-48-4)

ACGIH: 10 mg/m³ TWA
OSHA: 15 mg/m³ TWA (total dust), 5 mg/m³ TWA (respirable fraction)

Titanium dioxide (13463-67-7)

ACGIH: 10 mg/m³ TWA
OSHA: 15 mg/m³ TWA

Manganese dioxide (1313-13-9)

ACGIH: 0.2 mg/m³ TWA
OSHA: 5 mg/m³ TWA

Engineering Measures

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Personal Protective Equipment: Respiratory

Avoid actions that cause extensive dust exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators may be used in the context of respiratory protection program meeting the requirements of the OSHA respiratory protection standard [29 CFR 1910.134] to control exposures when ventilation or other controls are inadequate. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

Personal Protective Equipment: Hands

Where prolonged exposure to products might occur, wear impervious gloves to eliminate skin contact.

Personal Protective Equipment: Eyes

When engaged in activities where ingredients could contact the eye, wear approved safety glasses or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with ingredients.

Personal Protective Equipment: Skin and Body

Normal work clothing (long sleeved shirts and long pants) is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Opaque fine powder

Physical State: Solid/Fine Powder

Vapor Pressure: Not Applicable

Boiling Point: Not Applicable

Solubility (H₂O): Mostly insoluble

Evaporation Rate: Not Applicable

Octanol/H₂O Coeff.: Not Determined

Flash Point Method: Not Determined

Burning Rate: Not Determined

Auto Ignition: Not Determined

Odor: Slight odor

pH: 11.9

Vapor Density: Not Applicable

Melting Point: > 1400°C

Specific Gravity: 2.4-3.4

VOC: Not Determined

Flash Point: Not Determined

Upper Explosion Limit: Not Determined

Lower Explosion Limit: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability

This is a stable material under recommended conditions of storage.

Conditions to Avoid

The fly ash, itself - particularly if moist or wet - or solutions that are or have been in contact with fly ash may be corrosive to metals.

Incompatible Products

Strong acids, boric oxide, boron trifluoride, phosphorus pentoxide, chlorates, chlorine trifluoride, chlorine, ammonium salts, and fluorine.

Hazardous Decomposition Products

Unlikely to evolve toxic gases when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicity Data

Silicon dioxide (7631-86-9)

Oral LD₅₀ Rat: >5000 mg/kg; Inhalation LC₅₀ Rat: >2.2 mg/L 1 hour; Dermal LD₅₀ Rabbit: >2000 mg/kg

Aluminum oxide (1344-28-1)

Oral LD₅₀ Rat: >5000 mg/kg

Iron oxide (Fe₂O₃) (1309-37-1)

Oral LD₅₀ Rat: >10000 mg/kg

Calcium oxide (1305-78-8)

Oral LD₅₀ Rat: 500 mg/kg

Phosphorus pentoxide (1314-56-3)

Inhalation LC₅₀ Guinea pig: 61 mg/m³ 1 hour

Manganese oxide (1317-35-7)

Ingestion LD₅₀ Rat: 9000 mg/kg

Skin

Slightly corrosive. Prolonged and repeated contact with powder or wetted form may result in skin rash, dermatitis and sensitization.

Eye

Slightly corrosive. Severe irritant upon contact with powder/dust. Over exposure may result in pain, redness, corneal burns, and ulceration with possible permanent damage.

Ingestion

Slightly corrosive. Ingestion may result in burns to the mouth and throat, with vomiting and abdominal pain. Due to product form, ingestion is not considered a likely exposure route.

Inhalation

Irritant – slightly corrosive. Over exposure at high levels may result in irritation of the nose and throat with coughing. Prolonged and repeated inhalation of respirable silica may result in lung injury.

Carcinogenicity

Silica, amorphous (7631-86-9)

IARC: Monograph 68 [1997]; Supplement 7 [1987] (Group 3 (not classifiable))

Other Toxicological Information

Repeated exposure to calcium oxide has shown to cause ulceration of the nasal septum, bronchitis and pneumonia. Chronic inhalation of silica quartz may cause autoimmune disease. Chronic exposure to an ingredient in this mixture has been reported to cause renal injury and adverse effects on visual acuity.

12. ECOLOGICAL INFORMATION

Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

DOT Information

Not Regulated

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 health hazard.

Section 313 Toxic Chemicals: Aluminum Oxide – only if in fibrous form.

16. OTHER INFORMATION

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: Safety glasses, gloves

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 1

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration.

Literature References

None

Other Information

The information provided herein was believed by KCP&L to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use.