Material Safety Data Sheet

MATERIAL SAFETY DATA SHEET

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000011072/F/USA
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Fly Ash (Byproduct from Coal Burning at EastmanKodak Company)

Product Identification Number: ----

Manufacturer/Supplier: EASTMAN KODAK COMPANY and Subsidiaries

MSDS Prepared by: MSDS Prepared by: Health, Safety and Environment Organization, Eastman Kodak Company, Rochester, NY 14652-6267. InCanada, call: (416) 766-8233.

For Emergency Health, Safety & Environmental Information, call:
United States: (585) 722-5151
Canada: 1-800-363-1024
Brazil: Knet 2686333, or phone number 12-332-6955

KAN Number: 120828

Synonym(s): Fly Ash (Byproduct from Coal Burning at EastmanKodak Company), FLY ASH

Molecular Formula: Not available

Molecular Weight: Not available

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component - (CAS Registry No.)
35-40	Crystalline silica (014808-60-7)
20-30	Aluminum oxide (001344-28-1)
20-25	Ferro-ferric oxide, red (001309-37-1)
3-7	Calcium oxide (001305-78-8)
1-5	Titanium dioxide (013463-67-7)
1-5	Phosphorus pentoxide (001314-56-3)
1-5	Magnesium oxide (001309-48-4)
1-5	Sodium oxide (001313-59-3)
1-5	Potassium oxide (012136-45-7)
1-5	Sulfur trioxide (007446-11-9)

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3. HAZARDS IDENTIFICATION

CONTAINS: Crystalline silica (014808-60-7); Aluminum oxide (001344-28-1); Ferro-ferric oxide, red (001309-37-1); Titanium dioxide (013463-67-7); Calcium oxide (001305-78-8); Magnesium oxide (001309-48-4); Phosphorus pentoxide (001314-56-3); Sodium oxide (001313-59-3); Potassium oxide (012136-45-7); Sulfur trioxide (007446-11-9)
DANGER!
DUST OR VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT
CAUSES SKIN AND EYE BURNS
SUSPECT CANCER HAZARD - MAY CAUSE CANCER
CAN CAUSE DELAYED LUNG INJURY
HARMFUL IF INHALED OR SWALLOWED
THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED

Eastman Kodak Hazard Ratings: R-3, S-3, F-0, C-0 CARC

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4. FIRST-AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Do NOT induce vomiting. Give victim a glass of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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5. FIRE FIGHTING MEASURES

Extinguishing Media: Use appropriate agent for adjacent fire.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: None (noncombustible). (see also Hazardous Decomposition Products section)

Unusual Fire and Explosion Hazards: None

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6. ACCIDENTAL RELEASE MEASURES

Collect up and put in a suitable container. Avoid generation of dust. Clean surface thoroughly to remove residual contamination.

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7. HANDLING AND STORAGE

Personal Precautionary Measures: Do not breathe dust or vapor at concentrations greater than the exposure limits. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: No special precautionary measures should be needed under anticipated conditions of use.
Storage: Keep container closed.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

- Aluminum oxide: 10 mg/m3 TWA as Al metal dust; 5 mg/m3 TWA as Al pyro powders and welding fumes; 2 mg/m3 TWA as Al soluble salts and alkyls
- Calcium oxide: 2 mg/m3 TWA
- Crystalline silica (cristobalite): 0.05 mg/m3 TWA, respirable fraction of dust
- Titanium dioxide: 10 mg/m3 TWA
- Ferro-ferric oxide, red: 5 mg/m3 TWA as iron oxide dust and fume, 1 mg/m3 TWA as soluble iron salts

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Magnesium oxide: 10 mg/m3 TWA as magnesium oxide fume

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Aluminum oxide: 15 mg/m3 TWA as Al metal total dust; 5 mg/m3 TWA metal respirable fraction
Calcium oxide: 5 mg/m3 TWA
Crystalline silica (cristobalite): 0.05 mg/m3 TWA, respirable fraction of dust
Titanium dioxide: 15 mg/m3 TWA as total dust, fume, and respirable fraction
Ferro-ferric oxide, red: 10 mg/m3 as iron oxide fume
Magnesium oxide: 15 mg/m3 as total particulate

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

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Full-face positive-pressure air-supplied. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: If a full-face respirator is not worn, wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: Eye bath, washing facilities, safety shower

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Solid
Color: Not available
Odor: Not available
Specific Gravity (water = 1): Not available
Vapor Pressure: Negligible
Vapor Density (Air = 1): Not applicable
Volatile Fraction by Weight: Not applicable
Melting Point: Not available
Solubility in Water: Not available
pH: Not applicable
Flash Point: Not applicable, noncombustible solid

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10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: None with common materials and contaminants with which the material may reasonably come into contact.

Hazardous Decomposition Products: Oxides of iron

Hazardous Polymerization: Will not occur.

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General:

Contains: Aluminum oxide. Chronic inhalation of high dust concentrations can cause bronchitis, pulmonary fibrosis, and encephalopathy. Ingestion may cause nausea, vomiting, abdominal pains, and diarrhea.

Contains: Crystalline silica. Suspect cancer hazard. May cause cancer. Airborne particles of crystalline silica that are respirable may present a cancer hazard. Respirable size particles are generally defined as those less than 5 microns in diameter. Repeated or prolonged inhalation of respirable crystalline silica may cause silicosis, a lung disease.

Contains: Phosphorus pentoxide. The toxicological properties of this material have not been fully investigated and its handling and use may present additional hazards.

Contains: Sulfur trioxide. Reacts with water to form fuming sulfuric acid. International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapors containing sulfuric acid is carcinogenic to humans. to strong inorganic mists or vapors containing sulfuric acid is carcinogenic to humans. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals.

Contains: Ferro-ferric oxide, red. Inhalation of dust or fumes may cause siderosis, a benign pneumoconiosis, caused by deposition of iron oxide in the lungs.

Contains: Sodium oxide, potassium oxide. The toxicological properties of this material have not been investigated and its handling and use may be hazardous.

Inhalation: Harmful if inhaled. Airborne dust or vapor extremely irritating.

Eyes: Causes burns. Airborne dust or vapor extremely irritating.

Skin: Causes burns.

Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

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12. ECOLOGICAL INFORMATION

This section has not been completed.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

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14. TRANSPORT INFORMATION

United Nations

UN Number: None, not regulated

USA Department of Transportation (DOT) Hazardous Materials Classification:

DOT (USA) Status: Not regulated
DOT Hazardous Substance(RQ): No
Marine pollutant: No
For other transportation information, call the Kodak Worldwide Transportation Hazmat Hot Line: (585) 722-2400 between 8 a.m. and 5 p.m. (Eastern Standard Time), Monday through Friday.

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15. REGULATORY INFORMATION

Material(s) known to the State of California to cause cancer: Crystalline silica
Material(s) known to the State of California to cause adverse reproductive effects: None

Carcinogenicity Classification (components present at 0.1% or more):
International Agency for Research on Cancer (IARC): Crystalline silica (2A) - Probably carcinogenic to humans; Ferric oxide (3) - Not classifiable
American Conference of Governmental Industrial Hygienists (ACGIH): Aluminum oxide, Ferro-ferric oxide, red, Titanium dioxide (A4) - Not classifiable as a human carcinogen
National Toxicology Program (NTP) (crystalline silica): 2
Occupational Safety and Health Administration (OSHA): None

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: Aluminum compounds.

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16. OTHER INFORMATION

US/Canadian Label Statements:

CONTAINS: Crystalline silica (014808-60-7); Aluminum oxide (001344-28-1); Ferro-ferric oxide, red (001309-37-1); Titanium dioxide (013463-67-7); Calcium oxide (001305-78-8); Magnesium oxide (001309-48-4); Phosphorus pentoxide (001314-56-3); Sodium oxide (001313-59-3); Potassium oxide (012136-45-7); Sulfur trioxide (007446-11-9)
DANGER!
DUST OR VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT
CAUSES SKIN AND EYE BURNS
SUSPECT CANCER HAZARD - MAY CAUSE CANCER
CAN CAUSE DELAYED LUNG INJURY
HARMFUL IF INHALED OR SWALLOWED
THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED

Do not breathe dust or vapor.
Do not get in eyes, on skin, on clothing.
Use only with adequate ventilation.
Keep container closed.
Wash thoroughly after handling.
FIRST AID: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Keep out of reach of children.

Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood

Additional hazard precautions for containers greater than 1 gallon of liquid or 5 pounds of solid:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

IN CASE OF SPILL: Sweep or scoop up and remove.
