

Fly Ash

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015
Date of issue: 07/28/2016 Revision date: 07/28/2016 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : Fly Ash
Product code : 68131-74-8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Concrete additive

1.3. Details of the supplier of the safety data sheet

Manufacturer

ATCO Power - Sheerness Generating Station
Sheerness Station
20 km south of Hanna on Highway #36
Alberta, Canada
T 403-854-5154
mark.fredericks@atcopower.com

Supplier

Add the name, address, and telephone number of the manufacturer or importer who operates in the US.

1.4. Emergency telephone number

Emergency number : 403-854-5181

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Skin Irrit. 2
Eye Dam. 1
Carc. 1A
STOT RE 1

2.2. Label elements

GHS labeling

Hazard pictograms (GHS) :



GHS05

GHS08

Signal word (GHS) :

Danger

Hazard statements (GHS) :

Causes skin irritation. Causes serious eye damage. May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS) :

Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS)

Not applicable.

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

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Name	Product identifier	%*
Diatomaceous earth	(CAS No) 61790-53-2	40 - 70
Aluminum oxide	(CAS No) 1344-28-1	10 - 30
Calcium oxide	(CAS No) 1305-78-8	5 - 10
Quartz	(CAS No) 14808-60-7	3 - 7
Iron oxide	(CAS No) 1309-37-1	3 - 7
Sodium monoxide	(CAS No) 12401-86-4	1 - 3
Potassium oxide	(CAS No) 12136-45-7	1 - 3

*The concentration of hazardous chemicals varies due to the nature of the production process,

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin.
- Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Treat for surrounding material.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

- For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Moisten spilled material with water. Vacuum or sweep material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. Avoid generating dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc., is not recommended. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed and dry.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diatomaceous earth (61790-53-2)		
ACGIH	Not applicable.	
OSHA	OSHA TWA (mg/m ³)	(80)/(% SiO ₂) mg/m ³
	OSHA TWA (mppcf)	20 mppcf
Aluminum oxide (1344-28-1)		
ACGIH	Not applicable.	
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Calcium oxide (1305-78-8)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
IDLH	US IDLH (mg/m ³)	25 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³
Quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
OSHA	OSHA TWA (mg/m ³)	(30)/(%SiO ₂ + 2) mg/m ³ (total dust)
	OSHA TWA (mppcf)	(250)/(%SiO ₂ + 5) mppcf (respirable fraction)
	OSHA TWA (mg/m ³)	(10)/(%SiO ₂ + 2) mg/m ³ (respirable fraction)
IDLH	US IDLH (mg/m ³)	50 mg/m ³ (respirable dust)
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ (respirable dust)
Iron oxide (1309-37-1)		
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³ (fume)
		15 mg/m ³ (total dust)
		5 mg/m ³ (respirable fraction)
IDLH	US IDLH (mg/m ³)	2500 mg/m ³ (dust and fume)
NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³ (dust and fume)
Sodium monoxide (12401-86-4)		
ACGIH	Not applicable.	
OSHA	Not applicable.	
Potassium oxide (12136-45-7)		
ACGIH	Not applicable.	

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Potassium oxide (12136-45-7)

OSHA	Not applicable.
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8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	: Wear suitable gloves.
Eye protection	: Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder
Color	: Light beige or grey
Odor	: Odorless
Odor threshold	: No data available
pH	: Alkaline
Melting point	: > 1000 °C (1832 °F)
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 1.5 - 3
Relative vapor density at 20 °C	: No data available
Solubility	: Insoluble in water
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

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10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Fly Ash	
LD50 oral rat	> 2000 mg/kg (Calculated Acute Toxicity Estimate)
LD50 dermal rat	No data available
LC50 inhalation rat	No data available

Aluminum oxide (1344-28-1)	
LD50 oral rat	> 5000 mg/kg

Calcium oxide (1305-78-8)	
LD50 oral rat	500 mg/kg

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg

Iron oxide (1309-37-1)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitization : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : May cause cancer.

Diatomaceous earth (61790-53-2)	
IARC group	3 - Not classifiable

Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens

Iron oxide (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure. (Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.)
Aspiration hazard : Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation : May cause respiratory tract irritation.
Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin.
Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Fly Ash

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Fly Ash

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except:

Sodium monoxide	CAS No 12401-86-4
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Aluminum oxide (1344-28-1)

Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting	1.0 % (fibrous forms)
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15.3. US State regulations

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State or local regulations	This product contains a chemical known to the State of California to cause cancer.
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SECTION 16: Other information

Date of issue : 07/28/2016

Revision date : 07/28/2016

Other information : None.

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