

Safety Data Sheet



Aluminum oxide dispersed in water (50-70% by mass)

Version: 1.0

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1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Aluminium oxide, Alumina

Additional trade names: Calcined alumina slurry

Brand: SupALOX Slurry

1.2 Use of the substance/ the preparation

Industrial use; High tech industrial applications; raw material for chemical processes.

1.3 Manufacturer / Supplier:

Company: AEM Canada Group Inc.
Street: 80 rue Louis Landry, Cap-Chat, Québec, Canada
Postal Code: G0J 1E0

Further information obtainable from:

Phone +1-418-566-6000 (Plant Director)

E-Mail: info@aemcanada.com

Information in case of emergency number: Canutec Tel (24hr) - +1-613-996-6666

Call national emergency services number in event of emergency.

2. Hazards identification

2.1 Classification

Not hazardous

2.2 Information concerning particular human and environmental hazards:

Does not pose any health hazard under normal conditions of use and as delivered.

Local concentration of dried material may cause mechanical irritation of the eyes, skin and respiratory tract.

3. Composition/ information on ingredients

3.1 Chemical characterisation:

Aluminium oxide content of 50-70% by weight in water

3.2 Ingredients:

CAS #	EC #	Component	Concentration %	Classification	GHS Phrase
1344-28-1	215-691-6	Aluminium oxide (non-fibrous)	50-70	Not Hazardous	--- ---

3.3 Additional information:

Usually supplied to customers in pails, drums or IBCs. Main impurities iron oxide, sodium oxide, silicon dioxide and calcium oxide at the ppm level. Contact AEM for more information.

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4. First aid measures

4.1 General information:

First aid personnel:

- **After inhalation:** In case of inhalation remove to ventilated area and keep calm. In case of ongoing discomfort consult a physician
- **After skin contact:** Wash skin with soap and water.
- **After eye contact:** If material comes into contact with eyes, flush thoroughly with water. In case of ongoing discomfort consult a physician
- **After swallowing:** Wash mouth with water.

4.2 Notes to physician:

Treat symptomatically

5. Firefighting measures

5.1 Suitable extinguishing agents:

Use extinguishing agents appropriate for surrounding materials.

5.2 For safety reasons unsuitable extinguishing agents:

None

5.3 Special hazards caused by the substance, its products of combustion or resulting gases:

None.

5.4 Protective equipment:

Fire fighters should wear approved personal protective equipment for the surrounding fired material,

5.5 Additional hints:

None

6. Accidental release measures

6.1 Person-related safety precautions:

See protection measures listed in section 8.

6.2 Environmental protection measures:

Avoid dispersal of spilled material and runoff. Avoid creating dusty conditions and prevent wind dispersal. Collect material for recycling if possible.

6.3 Measures for cleaning:

Use vacuum cleaner if possible.

6.4 Additional hints:

See section 13

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7. Handling and storage

7.1 Handling:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid creating dusty conditions. Avoid inhalation and skin and eye contact

Wear appropriate personal protective equipment. Do not add wet alumina to electrolysis cells

7.2 Storage

Requirements to be met by storerooms and receptacles:

Store in dry area,

Do not store with chlorine trifluoride, hot chlorinated rubber, acids and oxidizers.

Additional hints:

None

8. Exposure controls/ personal protection

8.1 Exposure limits

Occupational exposure limits (air): generally same as for nuisance dust. Applies to the dried aluminium oxide only.

Germany

10*/1.25** mg/m³ (*inhalable dust; ** respirable dust)

UK

10*/4** mg/m³ (*inhalable dust; ** respirable dust)

USA

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

ACGIH 1 mg/m³ Respirable

8.2 Exposure controls:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid work practises which generate dust. Avoid inhalation and particles entering the eyes.

8.3 Personal protective equipment:

Respiratory equipment: not required under recommended conditions of use. In case dust is generated, use personal protective equipment, dust filter P2 or if fine particles P3.

Use protective goggles and gloves when handling the substance and appropriate work clothes.

8.4 Environmental exposure control:

Avoid creating dusty conditions and prevent wind dispersal and dust emissions.

9. Physical and chemical properties

9.1 General information:

Physical state:	slurry
Colour:	grey
Odour:	odourless
pH- value:	4-5

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Melting point/Melting range:	not relevant
Boiling Point/Boiling range:	90-100 °C
Flash point:	not relevant
Flammability:	not relevant
Explosive properties:	not relevant
Density at 20°C:	1.6-2.1 g/cm ³
Auto-ignition Temperature:	not relevant
Solubility in water (20 °C):	insoluble
Other physical–chemical properties:	not relevant

10. Stability and reactivity

10.1 Stability: The product is stable under ordinary conditions of use and storage.

10.2 Instability Temperature: Not available.

10.3 Incompatibility with various substances: Reactive with oxidizing agents and acids.

10.4 Corrosivity: Non-corrosive.

10.5 Special Remarks on Reactivity: Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame. Ethylene oxide may polymerize violently when in contact with highly catalytic surfaces such as pure Aluminum Oxide. Reacts with hot chlorinated rubber.

10.6 Polymerization: Will not occur

11. Toxicological informations

11.1 Toxicokinetics, metabolism and distribution:

Oral uptake < 0.1%, nearly insoluble in lung fluids, most absorbed aluminium oxide is rapidly excreted through urine, main deposit in body is in bone structure.

11.2 Acute effects (acute toxicity, irritation and corrosivity):

No acute effects

11.2.1 Acute toxicity (aluminium oxide):

LD50 (oral):	> 5000mg/kg bwt (rats)
LD50 (dermal):	No effect
LC50 (inhalation):	> 5 mg/l(rats)

11.2.2 Specific symptoms in animal tests:

After swallowing:	None
After skin contact:	None
After inhalation:	None

11.2.3 Irritation and Corrosive effects:

Irritant effects on skin:	No effects
Irritant effect on eyes:	No effects apart from mechanical irritation.

11.3 Sensitisation:

After skin contact:	None
After inhalation:	None
Remarks:	

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11.4 Toxicity after repeated intake (sub-acute, sub chronic, chronic):

Sub-acute oral Toxicity: None, Calculated DNEL 6,2 mg/kg bwt/day
Sub-acute inhalation Toxicity: None- see occupational exposure limits, calculated DNEL:15,6 mg/m³ respirable.

11.5 CMR-effects (carcinogenic, mutagenic and reproductive effects)

Carcinogenicity: None
Mutagenicity: None
Reproductive toxicity: None
Assessment of CMR properties: Not classified for CMR

Product components not listed under IARC/NTP/ACGIH (ingredient carcinogenicity)

11.6 Practical experience:

Observations relevant for classification: none
Other observations: none

12. Ecological information

12.1 Ecotoxicity:

Product/ingredient name	Test	Result	Species	Exposure
Aluminium oxide	Fish - OECD TG 203	>100 mg/l	Salmo trutta	pH 8
Aluminium oxide	Daphnia - OECD TG 202	>100mg/l	Daphnia Magna	pH 8
Aluminium oxide	Algae - OECD TG 201	>100mg/l	Selenastrum Capricornutum	pH 8

12.2 Mobility: Not known

12.3 Persistence: Not relevant

12.4 Biological degradability: Not degradable

12.5 Bioaccumulative potential: Not bio accumulative

12.6 Long term ecotoxicity: Not classified for ecotoxicity.

12.7 Results of PBT assessment: Not relevant for metals

12.8 Other adverse effects: None

12.9 Final assessment:

No acute or chronic classification is appropriate for Al metal massive based on nontoxic results below the Ecotoxicity Reference Value (ERV) of tests with aluminium metal, oxide and hydroxide at loadings of 100 mg/L at pH 8-8.5 (maximum solubility of Al expected).

All alumina in soil or the aquatic environment comes from natural sources. Local sources have an insignificant contribution and impact on environment

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13. Disposal considerations

13.1 Disposal / Waste (Product):

Dispose of wastes and residues in accordance with local waste regulations

13.2 Packaging:

Not relevant

14. Transport information

14.1 UN number or ID number

Not subject to transport regulations

14.2 UN proper shipping name

Not assigned

14.3 Transport hazard class(es)

None

14.4 Packing group

Not assigned

14.5 Environmental hazards

non-environmentally hazardous according to the dangerous goods regulations

14.6 Information for each of the UN Model Regulations Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Not subject to ADR, RID and ADN.

14.7 International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

14.8 International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

15. Regulatory information

Inventory	Status
AICS (Australia)	Substance listed on inventory
DSL (Canada)	Substance listed on inventory
IECSC (China)	Substance listed on inventory
ECSI (EU)	Substance listed on inventory
REACH (EU)	Substance listed on inventory
CSCL-ENCS (Japan)	Substance listed on inventory
KECI (KR)	Substance listed on inventory
INSQ (Mexico)	Substance listed on inventory
NZIoC (New Zealand)	Substance listed on inventory
PICCS (Philippines)	Substance listed on inventory
CICR (Turkey)	Substance listed on inventory
TCSI (Taiwan)	Substance listed on inventory
TSCA (USA)	Substance listed on inventory

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16. Other information

In dealing with chemicals, national laws and regulations must be observed and applied in the respective territory.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Recommended limitations of use by manufacturer:
For industrial use and as component in consumer products.

Version history:

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Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration (US)
ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Transport of Dangerous Goods by Rail)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
IATA-DGR:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO:	International Civil Aviation Organization
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
Bwt	Bodyweight
PNEC	Potential No Effect Concentration
DNEL	Derived No Effect Level
DOC	Dissolved Organic Compounds