

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ALUMINUM SULPHATE 48%

AL300-48

SECTION 01: PRODUCT INFORMATION AND COMPANY INFORMATION

MANUFACTURER: Same as above
PREPARED BY: Production Department
VERSION DATE: 12-May-16
TELEPHONE NO.: (519) 451-1614
EMERGENCY PHONE NO.: (613) 996-6666
CHEMICAL FAMILY: Aluminum Salt
MOLECULAR WEIGHT: Not Applicable
SYNONYMS: Papermaker's alum, dialuminum trisulphate, aluminum sulfate, alum, aluminum sulfate tetradecahydrate.
CHEMICAL FORMULA: $\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$ (in water)
MATERIAL USE: Please Refer to technical literature

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Conc. Approx. %	C.A.S. #	LD/50 (RTE/SPEC)	LC/50 (RTE/SPEC)	TLV
WATER	45-55	7732-18-5	N.Av.	N.Av.	N.Av.
Sulphuric Acid, Aluminum Salt	45-55	10043-01-3	1930 mg/kg (Rat)	N.Av.	N.Av.
Sulphuric Acid	<1	7661-93-9	2140 mg/kg (Rat/Oral)	347 ppm	N.Av.

SECTION 03: HAZARD IDENTIFICATION

ROUTE OF ENTRY

Eyes: Causes eye irritation. May result in mild to moderate irritation to eyes.

Skin: Mild to moderate irritation can occur. Aluminum is very poorly absorbed through the skin and toxic effects would not be expected following short-term skin contact. Prolonged or repeated contact may cause discomfort and local redness. Prolonged or repeated contact may cause defatting and drying of the skin.

Inhalation: Inhalation of vapours or mists of the product may be irritating to the respiratory system. May irritate mouth, nose, and throat.

Ingestion: May cause irritation of the lining of the stomach. May irritate the gastrointestinal tract and cause nausea, vomiting and purging. Acute exposure can cause incoordination, muscle spasms and kidney effects.

SECTION 04: FIRSTAID

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Inhalation, Acute: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Notes to physician: Treatment based on sound judgment of physician and individual reactions of patient.

SECTION 05: FIRE EXPLOSION HAZARD AND FIRE FIGHTING MEASURES

FLAMMABLE?	No
IF YES, UNDER WHICH CONDITIONS?	
FLASH POINT (TCC) (C):	Not Available
FLAMMABLE LIMITS:	LEL(% BY VOL.): Not Available UEL(% BY VOL.): Not Available
AUTO IGNITION TEMPERATURE (C)	Not Available
EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire. Fire fighters should wear full protective clothing, including self-contained breathing equipment.
SPECIAL PROCEDURES:	Reacts with metals to generate flammable hydrogen gas.
HAZARDOUS COMBUSTION PRODUCTS:	Not Available
UNUSUAL FIRE AND EXPLOSION HAZARDS	Not Available
SENSITIVITY TO STATIC DISCHARGE	Not Available
SENSITIVITY TO MECHANICAL IMPACT:	Not Available

SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Personal Precautionary Measures: Wear appropriate protective equipment.
Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed.
Procedure for Clean Up: Eliminate all ignition sources. Ventilate area. Absorb with an inert dry material and place in an appropriate waste disposal container. Neutralize with lime slurry, limestone, or soda ash. Use clean non-sparking tools to collect absorbed material.

SECTION 07: HANDLING AND STORAGE

Handling Procedures and Storage Requirements

Handling: Aluminum sulfate in solution has acidic pH. Use corrosion-resistant transfer equipment when transferring acid. Keep the containers closed when not in use. Empty containers may contain hazardous product residues. Aluminum sulfate may attack some materials of construction.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep away from direct sunlight. Protect against physical damage. Place away from incompatible materials. Store in accordance with good industrial practices. Outdoor storage tanks should be suitably diked or otherwise provided with an adequate means of secondary containment. Appropriate secondary containment measures should be taken to prevent spills or leaks from indoor storage tanks and tank-car or tank-truck inloading stations from entering sewers or other channels that discharge directly to a water body or a municipal sewage system.

SECTION 08: PERSONAL PROTECTIVE EQUIPMENT / EXPOSURE CONTROLS

GLOVES/TYPE:	Rubber gloves. PVC gloves. Vinyl gloves.
RESPIRATOR/TYPE:	A NIOSH/MSHA approved air-purifying respirator equipped with acid gas/fume, mist cartridges for concentrations up to 20 mg/m ³ . An air-supplied respirator if concentrations are higher or unknown.
EYE/TYPE:	Chemical goggles; also wear a face shield if splashing hazard exists.
OTHER/TYPE:	Ensure that eyewash stations and safety showers are proximal to the work-station location.
ENGINEERING CONTROL	Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/APPEARANCE:	Liquid		
ODOUR:	Odourless	ODOUR THRESHOLD:	Negligible
VAPOUR PRESSURE (mm Hg @ 20C):	N. App.	VAPOUR DENSITY (Air=1):	N. App.
EVAPORATION RATE (Ether = 1):	N. App.	SPECIFIC GRAVITY:	1.335
BOILING POINT (C):	101 °C	FREEZING POINT (C)	-16 °C
Ph (% SOLUTION):	1.9 - 2.5	% VOLATILE (WT):	N. App.
SOLUBILITY IN WATER (% W/W)	Complete		

SECTION 10: STABILITY AND REACTIVITY

CHEMICALLY STABLE? YES

IF NO, UNDER WHICH CONDITIONS? High temperatures.

INCOMPATIBILITY WITH OTHER SUBSTANCES YES

IF YES, WITH WHICH ONES: Strong bases. Sodium hydroxide. Reaction may be violent.

SPECIAL REACTIVITY AND UNDER WHAT CONDITIONS Additional Information: Can be very corrosive to most metals including cast iron, steel and aluminum. The corrosivity depends on factors such as concentration, temperature and impurities.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfuric acid vapors may be released upon heating and sulfur dioxide and sulfur trioxide may be released upon decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL N.A.V.

LC 50 OF MATERIAL, SPECIES AND ROUTE See Sec 2

LD 50 OF MATERIAL, SPECIES AND ROUTE See Sec 2

CARCINOGENICITY OF MATERIAL N.A.V.

REPRODUCTIVE EFFECTS: N.A.V.

IRRITANCY OF MATERIAL N.A.V.

SENSITIZING CAPABILITY OF MATERIAL N.A.V.

SYNERGISTIC MATERIALS N.A.V.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY May be harmful to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION Class 8, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (aluminum sulfate)

UN NUMBER: 3264

PACKING GROUP: III

Special Provisions for Transport

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION D2B, E
D2B TOXIC MATERIALS
E CORROSIVE MATERIAL

SECTION 16: OTHER INFORMATION

ABBREVIATIONS USED: N.Av. = Not Available
N.App. / N.Ap. = Not Applicable

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SOURCES: Supplier MSDS

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LAST PAGE

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