SAFETY DATA SHEET

Aluminum Sulphate 48% Soln

SECTION 1: IDENTIFICATION

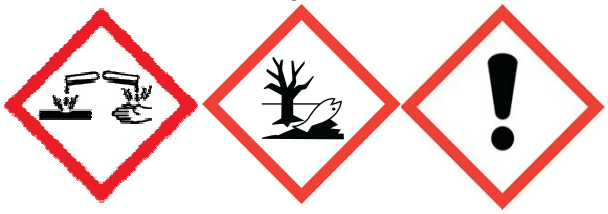
Product identifier used on a label:	**Aluminum Sulphate 48% Soln**
Product code:	1001
Recommended use of the chemical and restrictions on use:	Water treatment, coagulating agent in municipal and industrial water, additive in papermaking, fire retardant, dyes, mordant, foam boaster, pH control, manufacturing catalyst and printing of fabrics.
Chemical family:	Mixture.
Name, address and phone # of supplier:	Aqua Bond Inc. PO Box 63635, Woodside Square. Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
SKIN CORROSION/IRRITATION – Category 1
EYE DAMAGE/IRRITATION – Category 1
HAZARDOUS TO THE AQUATIC ENVIRONMENT – Category 3

Label elements:



Signal word: Danger

Hazard statements:
H290 May be corrosive to metals.
H314 Cause severe skin burns and eye damage.
H318 Causes serious eye damage.
H402 Harmful to aquatic life.

Precautionary statements:
P234: Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 If swallowed: rinse mouth. Do not induce vomiting.
P303+P361+P353 If on skin (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container according to all applicable regulations.

Other hazards: No additional hazards available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	**CAS Number**	**Concentration (%)**
Aluminum Sulphate	10043-01-3	46 - 50
Water	7732-18-5	Balance

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Do not give chemical antidote. Immediately call a POISON CENTER or doctor/physician. Call Poison Information Centre. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Rinse mouth. Do NOT induce vomiting.

Inhalation: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin contact: Wash immediately with lots of water (15 minutes). Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

Eye contact: Get medical attention immediately. Call a poison center or physician. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Chemical burns must be treated promptly by a physician.

Most important symptoms and effects, both acute and delayed:

Irritation to eyes, skin and respiratory tract.
Inhalation: Overexposure may cause irritation to the respiratory system.
Skin Contact: May cause redness, pain, serious skin burns and blisters.
Eye Contact: Redness, pain, blurred vision. Severe burns cause permanent damage to the cornea, iris or conjunctiva.
Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chromic Symptom: None expected under normal condition of use.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	
Suitable	Use extinguishing media appropriate for surrounding fire.
Unsuitable	Do not use a heavy water stream, it may spread the fire.
Special hazards arising from the substance:	Not considered flammable but may burn at high temperature. Product is not explosive. Hazardous reactions will not occur under normal conditions. Aluminum sulphate may react with some metals, to give flammable, potentially explosive hydrogen gas. Hydrogen gas can accumulate to explosive concentrations inside confined space.
Hazardous thermal decomposition products:	Aluminum oxide, sulphur dioxide, and/or sulphur trioxide at temperatures above 760°C or when dry aluminum sulphate is encompassed in a fire involved in other burning material.
Special protective actions for fire-fighters:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray or fog to keep fire-exposed containers cool. In case of major fire and large quantities evacuate area. Fight fire remotely due to risk of explosion.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up:	Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Take account of toxic/corrosive precipitation water. Take up liquid spill into absorbent material, e.g.: dry sand/earth or powdered limestone. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Small quantities of liquid spill: neutralize with acid solution. Wash away neutralized product with plentiful water. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to proper disposal company. Wash clothing and equipment after handling.
Special spill response procedures:	In case of transportation accident, contact CANUTEC at 1-613-996-6666.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Put on appropriate personal protective equipment. Avoid exposure -obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.
Conditions for safe storage:	Do not store below the following temperature: 15°C. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Suitable container material is stainless steel, nickel, polyethylene, polypropylene, glass, porcelain. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Incompatible materials:	Strong bases, sodium hypochlorite, chlorites, sulphites, aqua ammonia.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Exposure limits

Ingredient	**Exposure limits**
Aluminum Sulphate	Not available

Engineering controls:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Emergency eye wash stations and safety showers should be available in the immediate vicinity of any potential exposure.
Individual protection measures:	Eyes/face: Chemical splash goggles and face shield. Skin: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical. Personal protective equipment for the body should be corrosion proof. Respiratory: 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to amber or light green liquid.
Odour:	Not available.
Odour threshold:	Not available.
pH:	2 - 3
Melting point:	Not available.
Freezing point:	-15.56°C.
Initial boiling point and boiling range:	101°C
Flash point:	Not applicable.
Evaporation rate:	Not available.
Flammability:	Not available.
Upper and lower flammability limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Specific gravity:	1.31 @ 20°C
Partition coefficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at ambient temperature and under normal conditions of use. Aluminum sulphate may react with some metals, to give flammable, potentially explosive hydrogen gas. Hydrogen gas can accumulate to explosive concentrations inside confined spaces.
Chemical stability:	Stable at standard temperature and pressure.
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	Direct sunlight. Extreme temperatures. Ignition sources and incompatible materials
Incompatible materials:	Strong bases, sodium hypochlorite, chlorites, sulphites, aqua ammonia. Incompatible with strong oxidizing agents and most common metals with moisture.
Hazardous decomposition products:	Oxides of aluminum. The decomposition products are corrosive and hazardous to health.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure:	SKIN AND EYES: Causes severe skin burns and eye damage.
Potential health effects (acute):	INHALATION: Yes. INGESTION: Yes.

Delayed and immediate effects, chronic effects from short and long term exposure:	Not available.
Potential chronic health effects:	Not available.
Carcinogenicity:	Not available.
Mutagenicity:	Not available.
Teratogenicity:	Not available.
Developmental effects:	Not available.
Fertility effects:	Not available.
Sensitization:	Not available.
Toxicity:	LD50 and LC50 Not available

SECTION 12 ECOLOGICAL INFORMATION

Toxicity	Not classified
Persistence and degradability	Not available.
Bioaccumulative potential	Not available.
Mobility in soil:	Will likely be mobile in the environment due to water solubility

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

	TDG
UN Number:	UN3264
UN proper shipping name:	Corrosive Liquid, Acidic Inorganic N.O.S. (Aluminum Sulphate Solution)
Transport hazard class:	8
Packing group:	III

Environmental hazard:	Hazardous to aquatic environment; Category 3 .
Special precautions for user:	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: REGULATORY INFORMATION

United States

Toxic Substances Control Act (TSCA)	Listed.

Canada

Canadian Domestic Substances List (DSL):	Listed.

SECTION 16: OTHER INFORMATION

Revision date: March 7, 2023

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Disclaimer

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