

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATIONProduct identifier: **ALUMINUM SULFATE SOLUTION**

Synonyms: Liquid Alum, Aluminum Sulfate Liquid

Intended use: Water treatment, flocculent, paper and pulp, dyes, printing fabric

Uses Advised Against: None known

Company Identification

DPC Industries, Inc.
DPC Enterprises, LP
DXI Industries, Inc.
DX Terminals
PO Box 24600
Houston, TX 77229-4600


Emergency

CHEMTREC (USA) (800) 424-9300

24 hour Emergency Telephone No. (281) 457-4888

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2. Hazard identification of the product

Physical hazards	May be corrosive to metals.	Category 1, H290
Health hazards	Serious eye damage.	Category 1, H318
Label elements Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.		
		
Signal Word	Danger	
Hazard Statements	Causes serious eye and skin damage. May be corrosive to metals.	
Precautionary Statements		
Prevention	Keep only in original container, P234. Wear protective gloves/protective clothing/eye protection/face protection, P280. Do not eat, drink or smoke when using this product. Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment.	
Response	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - Continue rinsing. If irritation persists, get immediate medical attention. Immediately call a POISON CENTER/doctor, P305 + P351 + P338 + P310. Absorb spillage to prevent material damage, P390.	
Storage	Store locked up. Store in corrosive resistant container with a resistant inner liner, P406.	
Disposal	Dispose of contents / container in accordance with local / national regulations.	
Hazard(s) not otherwise classified (HNOC)	Not known.	

3. Composition/information on ingredients

Substance classified with a health or environmental hazard.

Synonyms: Liquid Alum, Aluminum Sulfate Liquid

Ingredient	CAS Number	Weight %	GHS Classification
Aluminum Sulfate	10043-01-3	15 - 50	Eye Dam. 1; H318

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4. First aid measures

Description of first aid measures

General	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Never give anything by mouth to an unconscious person.
Inhalation	Move victim to fresh air; keep patient warm and at rest. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible, either onsite or at the nearest hospital.
Eyes	Irrigate copiously with clean fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses if present and easy to do - Continue rinsing. Seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Get medical attention if irritation persists.
Ingestion	If the person is conscious, have them drink water or milk. Do NOT induce vomiting. Seek immediate medical assistance.
Most important symptoms and effects, both acute and delayed	
Overview	Treat symptomatically.

5. Fire-fighting measures

Extinguishing media	Use extinguishing agent suitable for type of surrounding fire. Do not direct water at the heated metal.
Unsuitable extinguishing media	None known.
Special hazards arising from the substance or mixture	Decomposition products include Sulfur Oxide gas.
Advice for fire-fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Stay upwind and keep out of low areas. Avoid any skin contact. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. ERG Guide No. 154

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. Dike to prevent spill from spreading. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Environmental precautions	Do not allow spills to enter drains or watercourses. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
Methods and material for containment and cleaning up	Contain, dilute cautiously with water, and neutralize with soda ash or lime.

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7. Handling and storage

Precautions for safe handling	Handle containers carefully to prevent damage and spillage. See section 2 for further details. – [Prevention]
Conditions for safe storage, including any incompatibilities	Keep container tightly closed when not in use. Store in a cool, dry, well ventilated area, away from heat and incompatible materials; Section 10. Protect containers from physical damage. Incompatible materials: INCOMPATIBLE WITH ALKALIS AND WATER REACTIVE MATERIALS SUCH AS OLEUM. See section 2 for further details. – [Storage]

8. Exposure controls and personal protection

Occupational exposure limits

CAS No.	Material	Source	Value
10043-01-3	Aluminum sulfate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

Individual protection measures, such as personal protective equipment

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Wear safety glasses with side shields or safety goggles to protect the eyes. An eye wash station is suggested as a good workplace practice.
Skin	Handle with gloves. Gloves must be inspected prior to use. Chemical resistant clothing such as coveralls/apron boots should be worn. Gloves: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable, respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

9. Physical and chemical properties

Appearance	Amber or Light Green Liquid
Odor	None
Odor threshold	Not determined
pH	1 – 4
Melting point / freezing point (°C)	770°/-15°
Initial boiling point and boiling range (°C)	105° - 110°
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	1.31 - 1.35
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature (°C)	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
VOC %	Not Measured

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10. Stability and reactivity

Reactivity	Hazardous polymerization will not occur.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Reacts with metals.
Conditions to avoid	Corrosive to aluminum and mild steel. Avoid alkalis.
Incompatible materials	Alkalis and water reactive materials such as oleum.
Hazardous decomposition products	Decomposition products include sulfur oxide gas.

11. Toxicological information

Ingredient	Results	Species	Dose	Exposure
Aluminum Sulfate – (10043-01-3)	LD50 Oral	Rat	>5,000 mg/kg	-
	LD50 Oral	Mouse	6207 mg/kg	-
	LD50 Eyes	Rabbit	-	4hr

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Item	Hazard
Acute Toxicity (mouth)	Not Applicable
Acute Toxicity (skin)	Not Applicable
Acute Toxicity (inhalation)	Not Applicable
Skin corrosion/irritation	Not Applicable
Eye damage/irritation	Contact will cause serious eye damage.
Sensitization (respiratory)	Not Applicable
Sensitization (skin)	Not Applicable
Germ toxicity	Not Applicable
Carcinogenicity	Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity	Not Applicable
Specific target organ systemic toxicity (single exposure)	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Applicable
Aspiration hazard	Not Applicable

12. Ecological information

Aquatic Ecotoxicity

Ingredient	LC50/96 hr fish, mg/l	EC50/48 hr crustacea, mg/l	EC50/72hr algae, mg/l
Aluminium sulfate (10043-01-3)	186 mg/L Danio rerio	38.2 mg/L Daphnia magna	Not Available

Persistence and degradability	There is no data available on the preparation itself.
Bioaccumulative potential	Not Measured
Mobility in soil	No data available.
Results of PBT and vPVB assessment	This product contains no PBT/vPvB chemicals.
Other adverse effects	No data available.

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13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations. Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Waste from material	The waste determination should be made in discussion between the user and the waste disposal company.
Container Management	Empty containers or liners may retain some product residues. Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Aluminum Sulfate)
DOT Hazard Class	8
DOT Label:	8
UN / NA Number:	UN3264
DOT Packing Group:	III
CERCLA/DOT RQ:	5000-lbs
Environmental hazards:	IMDG: Marine Pollutant: No
Special precautions for user:	No further information

15. Regulatory information

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.	
US EPA Tier II Hazards:	Fire:	No
	Sudden Release of Pressure:	No
	Reactive:	No
	Immediate (Acute):	Yes
	Delayed (Chronic):	No
SARA 302 Extremely Hazardous Substance:		No
SARA 311/312 Chemicals :		Yes (5,000.00)
SARA 313 (TRI)		No
CAA Section 112 Hazardous Air Pollutant		No
CAA Section 112R Risk Management Plan		No
State Regulations:	N.J. RTK Substances (>1%)	Listed
	Penn RTK Substances (>1%)	Listed
	California Prop 65	Not listed

16. Other information

Revision Information: This is the first revision of this SDS format, changes from previous revision not applicable.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.