Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **ALUMINUM SULFATE**

Synonyms: Alum; Aluminum Trisulfate

CAS No: 10043-01-3

Molecular Formula: $Al_2(SO_4)_3$

RTK Substance No: 0068

Description: Odorless, white or colorless, crystalline solid

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health **0 - Fire** **0 - Reactivity** **DOT#:** UN 3077 **ERG Guide #:** 171 **Hazard Class:** 9 (Environmentally Hazardous Material)	CORROSIVE when in a *water solution*. Extinguish fire using an agent suitable for type of surrounding fire. **Aluminum Sulfate** itself does not burn. DO NOT USE WATER directly on **Aluminum Sulfate** as heat and toxic *Sulfuric Acid* may form. POISONOUS GASES ARE PRODUCED IN FIRE, including *Aluminum Oxides* and *Sulfur Oxides*.	**Aluminum Sulfate** will react with WATER; MOISTURE; STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); AMMONIA; and AMINES. **Aluminum Sulfate** is corrosive to METALS in the presence of WATER and MOISTURE.

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Collect powdered material in the most convenient and safe manner and place into sealed containers for disposal.

DO NOT wash into sewer.

For water spills, neutralize with *Agricultural Lime*, *Crushed Limestone* or *Sodium Bicarbonate*.

Aluminum Sulfate may be hazardous to the environment, especially to fish.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Nonflammable
Vapor Pressure:	0 mm Hg at 68ºF (20ºC)
Specific Gravity:	2.71 (water = 1)
Water Solubility:	Soluble
Boiling Point:	>2,912ºF (1,600ºC)
Melting Point:	1,292ºF (700ºC)
Molecular Weight:	342.1

EXPOSURE LIMITS

NIOSH: 2 mg/m^3, 10-hr TWA (as *Aluminum*, *soluble salts*)

ACGIH: 1 mg/m^3, 8-hr TWA (as *Aluminum metal*, *respirable fraction*)

The Protective Action Criteria values are:

PAC-1 = 38 mg/m^3 PAC-3 = 380 mg/m^3

PAC-2 = 64 mg/m^3

PROTECTIVE EQUIPMENT

Gloves: Natural Rubber and Nitrile

Coveralls: Tyvek®

Respirator: >2 mg/m^3 - full facepiece APR with High efficiency filter
>19 mg/m^3 - SCBA

HEALTH EFFECTS

Eyes: Irritation

Skin: Irritation with rash and burning feeling

Inhalation: Nose, throat and lung irritation, with coughing, wheezing and shortness of breath

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of water. Seek medical attention.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility.