Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **ALUMINUM NITRATE**

Synonyms: Aluminum Trinitrate
CAS No: 13473-90-0
Molecular Formula: Al_3HNO_3
RTK Substance No: 0061
Description: Odorless, colorless to white solid

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health **0 - Fire** **0 - Reactivity** **DOT#:** UN 1438 **ERG Guide #:** 140 **Hazard Class:** 5.1 (Oxidizer)	**Aluminum Nitrate** is not combustible, but it is a STRONG OXIDIZER that enhances the combustion of other substances. Use water only. DO NOT USE CHEMICAL or CO_2 extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including *Aluminum Oxide* and *Nitrogen Oxides*. Use water spray to keep fire-exposed containers cool. **Aluminum Nitrate** may ignite combustibles (wood, paper and oil).	**Aluminum Nitrate** dissolves in WATER to form *Nitric Acid*. **Aluminum Nitrate** is not compatible with COMBUSTIBLE MATERIALS; STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); METALS; METAL SALTS; CYANIDES; THIOCYANATES; ORGANIC MATERIALS; and HALOGENATED HYDROCARBONS (such as METHYL CHLORIDE and TRICHLOROETHYLENE).

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and place into sealed containers for disposal.

DO NOT wash into sewer.

Neutralize water spills with Sodium Bicarbonate (soda ash).

Aluminum Nitrate is harmful to aquatic life at very low concentrations.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Noncombustible
Specific Gravity:	>1 (water = 1)
Water Solubility:	Soluble
Boiling Point:	302°F (150°C) (Decomposes)
Melting Point:	163°F (73°C)
Molecular Weight:	213

EXPOSURE LIMITS

OSHA: 5 mg/m^3 (as *respirable dust*), 8-hr TWA
NIOSH: 2 mg/m^3 (as *soluble salt*), 10-hr TWA
ACGIH: 1 mg/m^3 (as the *respirable fraction*)
(All the above are for *Aluminum*)

The Protective Action Criteria values are:
PAC-1 = 50 mg/m^3 PAC-2 = 350 mg/m^3
PAC-3 = 500 mg/m^3

PROTECTIVE EQUIPMENT

Gloves:	Nitrile and Natural Rubber
Coveralls:	Tyvek®
Respirator:	>1 mg/m^3 - full facepiece APR with *P100 filters* >50 mg/m^3 - SCBA

HEALTH EFFECTS

Eyes:	Severe irritation and burns
Skin:	Irritation
Inhalation:	Nose, throat and lung irritation with coughing, wheezing and/or shortness of breath

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention.

Remove contaminated clothing and wash contaminated skin with water.

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

Transfer promptly to a medical facility.