

Common Name: **ALUMINUM HYDRIDE**

Synonyms: Alane; Aluminum Trihydride

CAS No: 7784-21-6

 Molecular Formula: AlH_3

RTK Substance No: 0060

Description: Colorless, white or gray powder which ignites spontaneously in air

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
1 - Health 3 - Fire 2-W - Reactivity DOT#: UN 2463 ERG Guide #: 138 Hazard Class: 4.3 (Water Reactive/ Dangerous when wet)	FLAMMABLE and REACTIVE. Use dry chemical, soda ash, lime, or sand as extinguishing agents. DO NOT USE WATER OR FOAM. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Aluminum Oxides</i> . CONTAINERS MAY EXPLODE IN FIRE. FIRE MAY RESTART AFTER IT HAS BEEN EXTINGUISHED.	Aluminum Hydride ignites spontaneously in AIR or OXYGEN. Aluminum Hydride reacts explosively with WATER and MOISTURE to form flammable <i>Hydrogen gas</i> . Aluminum Hydride reacts violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); and ETHERS with CARBON DIOXIDE as an impurity. Aluminum Hydride is not compatible with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and METAL SALTS.

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 deposit into sealed containers.

DO NOT USE WATER OR WET METHOD.

 Keep **Aluminum Hydride** out of confined spaces, such as sewers, because of the possibility of an explosion.

No information is available about environmental effects.

PHYSICAL PROPERTIES

Odor Threshold:	Unknown
Flash Point:	Flammable
Water Solubility:	Reactive
Boiling Point:	Decomposes
Melting Point:	302°F (150°C)
Molecular Weight:	30

EXPOSURE LIMITS
OSHA: 5 mg/m³, 8-hr TWA (*respirable Aluminum*) and 15 mg/m³, 8-hr TWA (total *Aluminum*)

NIOSH: 5 mg/m³, 10-hr TWA (*Aluminum, pyro powders*)

ACGIH: 1 mg/m³, 8-hr TWA (*Aluminum, respirable fraction*)

IDLH: None

PROTECTIVE EQUIPMENT

Gloves:	Nitrile and Natural Rubber
Coveralls:	DuPont Tyvek®
Respirator:	>1 mg/m ³ - Full facepiece APR with High efficiency filters >10 mg/m ³ - Supplied air

HEALTH EFFECTS

Eyes:	Irritation and burns
Skin:	Irritation and burns
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 15 minutes. Remove contact lenses if worn. Seek medical attention.
Quickly	remove contaminated clothing and wash contaminated skin with large amounts of soap and water.
Begin	artificial respiration if breathing has stopped and CPR if necessary.
Transfer	promptly to a medical facility.