

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	<p>This compound reacts violently with water. Flammable material; avoid heat and sources of ignition. Corrosive to eyes and skin on contact. Toxic compound, do not ingest or inhale. Avoid all contact with this material. Store under argon.</p>	

Section I. Chemical Product and Company Identification

Chemical Name	Lithium Aluminum Hydride (Powder)		
Catalog Number	L0203	Supplier	TGI America 9211 N. Harborside St. Portland OR 1-800-423-8616
Synonym	Aluminate (1-), Tetrahydro-, lithium, (T-4)- (9Cl)		
Chemical Formula	LiAlH ₄		
CAS Number	16853-85-3	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Lithium Aluminum Hydride (Powder)	16853-85-3	Min. 98.0 (T)	Not available.	Mouse LD ₅₀ (oral) 85mg/kg Mouse LD ₅₀ (intraperitoneal) 7mg/kg Mammal LC ₅₀ (inhalation) 70mg/m ³

Section III. Hazards Identification

Acute Health Effects	<p>Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>
Chronic Health Effects	<p>CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Not available. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.</p>

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data			
Flammability	Flammable.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	Some metallic oxides.		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	DO NOT use water. Flammable solid. SMALL FIRE: Use DRY sand, special powders such as Lith-X, powdered limestone. LARGE FIRE: Use DRY sand, special powders such as Lith-X, powdered limestone. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures	
Spill Cleanup Instructions	Water-reactive Material. Flammable Material. Corrosive Material. Toxic Material. Store under Argon. Stop leak if without risk. DO NOT get water inside container. DO NOT touch spilled material. Cover with DRY earth, sand or other non-combustible material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage	
Handling and Storage Information	WATER-REACTIVE. FLAMMABLE. CORROSIVE. TOXIC. STORE UNDER ARGON. Keep locked up.. Keep under inert atmosphere. Keep container dry. DO NOT ingest. Do not breathe dust. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Always store away from incompatible compounds such as oxidizing agents, acids, moisture.

Section VIII. Exposure Controls/Personal Protection	
Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Face shield. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
	
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties			
Physical state @ 20°C	Solid. (White Crystals ~ Powder.)	Solubility	Soluble in Ether, Dioxane, Tetrahydrofuran.
Specific Gravity	0.92 (water=1)		
Molecular Weight	37.95	Partition Coefficient	Not available.
Boiling Point	Not available.	Vapor Pressure	Not applicable.
Melting Point	125°C (257°F) (Dec.)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Odorless.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data	
Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with strong oxidizing agents, acids, moisture, alcohols, carboxylic acids, peroxides, chlorinated solvents, halogens. The product REACTS violently with water to emit FLAMMABLE BUT NON TOXIC GASES.

Section XI. Toxicological Information

RTECS Number	BD0100000
Routes of Exposure	Eye Contact. Ingestion. Inhalation. Skin contact.
Toxicity Data	Mouse LD ₅₀ (oral) 85mg/kg Mouse LD ₅₀ (intraperitoneal) 7mg/kg Mammal LC ₅₀ (inhalation) 70mg/m ³
Chronic Toxic Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Not available. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Acute Toxic Effects	Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	CLASS 4.3: Dangerous when wet material.
PIN Number	UN1410
Proper Shipping Name	Lithium aluminum hydride
Packing Group (PG)	I
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-4: Flammable solid. CLASS B-6: Reactive and very flammable material. CLASS E: Corrosive solid. On DSL.
EINECS Number (EEC)	240-877-9
EEC Risk Statements	R10- Flammable. R14/15- Reacts violently with water, liberating highly flammable gases. R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R34- Causes burns.
Japanese Regulatory Data	ENCS No. 1-16

Section XVI. Other Information**Version 1.0****Validated on 2/1/2008.****Printed 2/1/2008.****Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.

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