

MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc
 7 Mulliken Way
 Newburyport, MA 01950-4098 U.S.A.
 www.strem.com

Strem Customer Service (978) 499-1600
 CHEMTREC (Emergency Only) (800) 424-9300
 Poison Center (800) 562-8236

Section 1: Product Identification	
Chemical Name:	Trimethylaluminum, min. 98%, 93-1360, contained in 50ml Swagelok® cylinder (96-1070) for CVD/ALD
Product Number:	98-4003
CAS Registry Number:	75-24-1
Formula:	(CH ₃) ₃ Al
EINECS Number:	200-853-0
Chemical Family:	metal alkyl
Synonym:	Trimethylalane

Section 2: Composition and Information on Ingredients				
Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	75-24-1	100%	2mg/m ³ (as Al-	no data

Section 3: Hazards Identification	
Emergency Overview:	Extremely flammable liquid. Will ignite spontaneously on contact with air. Contact with skin may result in severe chemical burns.
Primary Routes of Exposure:	Eyes, skin and inhalation
Eye Contact:	Material is a severe corrosive of the eyes.
Skin Contact:	Contact with the skin will result in severe chemical burns as the material may spontaneously ignite.
Inhalation:	Combustion products may be irritating to respiratory tract.
Ingestion:	Ingestion is an unlikely mode of entry as the material is pyrophoric and has a noxious odor.
Acute Health Affects:	Corrosive to skin, eyes, and respiratory tract.
Chronic Health Affects:	No information available on long term exposure to this material.
NTP:	No
IARC:	No
OSHA:	No

SECTION 4: First Aid Measures	
Eye Exposure:	Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.
Skin Exposure:	Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
Inhalation:	Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.
Ingestion:	Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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SECTION 5: Fire Fighting Measures

Flash Point: 1.4°F
Autoignition Temperature: pyrophoric
Explosion Limits: no data
Extinguishing Medium: dry chemical or foam
Special Fire Fighting Procedures: If this product is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.
Hazardous Combustion and Decomposition Products: carbon monoxide, carbon dioxide, aluminum oxide, and organic fumes.
Unusual Fire or Explosion Hazards: Pyrophoric material. Will spontaneously ignite if exposed to air.

SECTION 6: Accidental Release Measures

Spill and Leak Procedures: If spilled, the product will ignite. All personnel must be immediately evacuated and the area sealed off. The material may ignite releasing toxic and corrosive fumes. Ventilation should be available. If entry into the area is required, personnel should be fitted with a self-contained breathing apparatus.

SECTION 7: Handling and Storage

Handling and Storage: Material must be stored in a steel container under and inert atmosphere of nitrogen or argon. Store at room temperature. Keep away from heat.

SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved safety glasses. When handling this substance wear a face shield as added protection.
Skin Protection: Wear protective clothing and gloves. Consult with glove manufacturer to determine the proper type of glove.
Ventilation: It is imperative that this product is handled in an efficient fume hood.
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.
Ventilation: It is imperative that this product is handled in an efficient fume hood.
Additional Protection: No additional protection required.

SECTION 9: Physical and Chemical Properties

Color and Form: colorless liquid
Molecular Weight: 72.09
Melting Point: 15.4°
Boiling Point: 20°C /8 mm
Vapor Pressure: 9mm (20°C)
Specific Gravity: 0.752 (20°C)
Odor: none
Solubility in Water: reacts violently with water

SECTION 10: Stability and Reactivity

Stability: Pyrophoric. Reacts violently with water.
Hazardous Polymerization: no hazardous polymerization
Conditions to Avoid: contact with air, water and alcohols
Incompatibility: Water, alcohols, carbonyl compounds, mineral acids, metal salts, metals and chlorinated hydrocarbons.
Decomposition Products: Carbon dioxide, carbon monoxide, organic fumes and aluminum oxide.

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SECTION 11: Toxicological Information

RTECS Data: No specific information available on this product.
Carcinogenic Effects: no data
Mutagenic Effects: no data
Tetratogenic Effects: no data

SECTION 12: Ecological Information

Ecological Information: No information available.

SECTION 13: Disposal Considerations

Disposal: Dispose of this material according to local, state and federal regulations.

SECTION 14: Transportation

Shipping Name (CFR): Organometallic substance, Liquid, Pyrophoric, Water-reactive
Hazard Class (CFR): 4.2
Additional Hazard Class (CFR): 4.3
Packaging Group (CFR): I
UN ID Number (CFR): UN# 3394
Shipping Name (IATA): Forbidden
Hazard Class (IATA): NA
Additional Hazard Class (IATA): NA
Packaging Group (IATA): NA
UN ID Number (IATA): UN# 3394

SECTION 15: Regulatory Information

TSCA: Listed in the TSCA inventory
SARA (Title 313): Not reportable under SARA Title 313.
Second Ingredient: none
Third Ingredient: none

SECTION 16: Other Information

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.
Preparation Date: 4/21/2011
Revision Date: 4/25/2014

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