



[Tris\(dimethylamido\)aluminum\(III\)](#)

[Pricing >](#)

<b>Linear Formula</b>	[Al(N(CH <sub>3</sub> ) <sub>2</sub> ) <sub>3</sub> ] <sub>2</sub>
<b>Pubchem CID</b>	16688802
<b>MDL Number</b>	MFCD00269811
<b>EC No.</b>	626-275-2
<b>IUPAC Name</b>	N-[bis(dimethylamino) alumanyl]-N-methylmethanamine
<b>SMILES</b>	CN(C)[Al](N(C)C)N(C)C.CN(C)[Al](N(C)C)N(C)C
<b>Inchl Identifier</b>	InChI=1S/6C2H6N.2Al/c6*1-3-2;;/h6*1-2H3;;/q6*-1;2*+3
<b>Inchl Key</b>	JGZUJELGSMOJD-UHFFFAOYSA-N
<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H260-H314-H318
<b>Hazard Codes</b>	N/A
<b>Precautionary Statements</b>	P223-P231+P232-P260-P264-P280-P301+P330+P331-P303+P361+P353-P304+P340-P305+P338-P310-P321-P335+P334-P363-P370+P378-P402+P404-P405-P501
<b>Flash Point</b>	21.1 °C (closed cup)
<b>Risk Codes</b>	N/A
<b>Safety Statements</b>	N/A
<b>RTECS Number</b>	N/A
<b>Transport Information</b>	UN 3131 8(4.3)/PG I
<b>GHS Pictograms</b>	<a href="#">GHS02 Flame</a>  <a href="#">GHS05 Corrosive</a> 

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## SAFETY DATA SHEET

Date Accessed: 05/10/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #32093-39-3

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Substances and mixtures, which in contact with water, emit flammable gases (Category 1), H260

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H260 In contact with water releases flammable gases which may ignite spontaneously.

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231 + P232 Handle under inert gas. Protect from moisture.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.

P301 + P330 + P331 IF SWALLOWED: rinse mouth.

Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P321 Specific treatment (see supplemental first aid instructions on this label).

P335 + P334 Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P402 + P404 Store in a dry place. Store in a closed container.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS  
Reacts violently with water.

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 Substances  
Tris(dimethylamido)aluminum(III)  
Formula : C<sub>6</sub>H<sub>18</sub>AlN<sub>3</sub>  
Molecular Weight : 159.21 g/mol  
CAS-No. : 32093-39-3

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## **SECTION 4. FIRST AID MEASURES**

4.1 Description of first aid measures  
General advice  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
If inhaled  
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
In case of skin contact  
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.  
In case of eye contact  
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.  
If swallowed  
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
4.2 Most important symptoms and effects, both acute and delayed  
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11  
4.3 Indication of any immediate medical attention and

special treatment needed  
no data available

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## **SECTION 5. FIREFIGHTING MEASURES**

5.1 Extinguishing media  
Suitable extinguishing media  
Dry powder  
5.2 Special hazards arising from the substance or mixture  
Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Aluminum oxide  
5.3 Advice for firefighters  
Wear self contained breathing apparatus for fire fighting if necessary.  
5.4 Further information  
no data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.  
6.2 Environmental precautions  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  
6.3 Methods and materials for containment and cleaning up  
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing  
and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.  
6.4 Reference to other sections  
For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

7.1 Precautions for safe handling  
Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No

smoking.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Never allow product to get in contact with water during storage.

Air sensitive. Handle and store under inert gas.

Hydrolyses readily.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after

use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator

is the  
sole means of protection, use a full-face supplied air  
respirator. Use respirators and components tested  
and  
approved under appropriate government standards  
such as NIOSH (US) or CEN (EU).  
Control of environmental exposure  
Prevent further leakage or spillage if safe to do so. Do  
not let product enter drains.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: White to yellow or orange powder, crystals, or chunks
  - b) Odour no data available
  - c) Odour Threshold no data available
  - d) pH no data available
  - e) Melting point/freezing point  
Melting point/range: 82 - 84 °C (180 - 183 °F) - lit.
  - f) Initial boiling point and boiling range  
no data available
  - g) Flash point 21.1°C (70.0 °F) - closed cup
  - h) Evaporation rate no data available
  - i) Flammability (solid, gas) no data available
  - j) Upper/lower flammability or explosive limits  
no data available
  - k) Vapour pressure no data available
  - l) Vapour density no data available
  - m) Relative density 0.865 g/cm<sup>3</sup> at 25 °C (77 °F)
  - n) Water solubility no data available
  - o) Partition coefficient: octanol/water  
no data available
  - p) Auto-ignition temperature  
no data available
  - q) Decomposition temperature  
no data available
  - r) Viscosity no data available
  - s) Explosive properties no data available
  - t) Oxidizing properties no data available
- ### 9.2 Other safety information
- no data available
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## **SECTION 10. STABILITY AND REACTIVITY**

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions  
Reacts violently with water.  
10.4 Conditions to avoid  
Air Light. Do not allow water to enter container.  
Exposure to moisture.  
10.5 Incompatible materials  
Strong oxidizing agents  
10.6 Hazardous decomposition products  
Other decomposition products - no data available  
In the event of fire: see section 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects  
Acute toxicity  
no data available  
Inhalation: no data available  
Dermal: no data available  
no data available  
Skin corrosion/irritation  
no data available  
Serious eye damage/eye irritation  
no data available  
Respiratory or skin sensitisation  
no data available  
Germ cell mutagenicity  
no data available  
Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
Reproductive toxicity  
no data available  
no data available  
Specific target organ toxicity - single exposure  
no data available  
Specific target organ toxicity - repeated exposure  
no data available  
Aspiration hazard  
no data available  
Additional Information  
RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,  
Cough, Shortness of breath, Headache, Nausea

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## **SECTION 12. ECOLOGICAL INFORMATION**

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

no data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

### 13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a

licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a

combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)

UN number: 3131 Class: 4.3 (8) Packing group: I

Proper shipping name: Water-reactive solid, corrosive, n.o.s. (Tris(dimethylamido)aluminum(III))

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG



UN number: 3131 Class: 4.3 (8) Packing group: I  
EMS-No: F-G, S-L  
Proper shipping name: WATER-REACTIVE SOLID,  
CORROSIVE, N.O.S.  
(Tris(dimethylamido)aluminum(III))  
Marine pollutant: No  
IATA  
UN number: 3131 Class: 4.3 (8) Packing group: I  
Proper shipping name: Water-reactive solid,  
corrosive, n.o.s. (Tris(dimethylamido)aluminum(III))  
IATA Passenger: Not permitted for transport

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## **SECTION 15. REGULATORY INFORMATION**

### **SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### **SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### **SARA 311/312 Hazards**

Reactivity Hazard, Acute Health Hazard

### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

### **Pennsylvania Right To Know Components**

Tris(dimethylamido)aluminum(III)

CAS-No.

32093-39-3

### **Revision Date**

### **New Jersey Right To Know Components**

Tris(dimethylamido)aluminum(III)

CAS-No.

32093-39-3

### **Revision Date**

### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all

inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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