

# Material Safety Data Sheet

## Aluminum Triethoxide

ACC# 33168

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Aluminum Triethoxide

**Catalog Numbers:** AC216610000, AC216610250, AC216611000

**Synonyms:** Aluminum Ethoxide; Ethanol, Aluminum Salt; Triethylaluminum.

**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
555-75-9	Aluminum Triethoxide	ca 100	209-105-8

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white crystals.

**Danger!** Corrosive. Causes eye and skin burns. Flammable solid. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Air sensitive. Moisture sensitive.

**Target Organs:** None.

#### Potential Health Effects

**Eye:** Causes eye burns.

**Skin:** Causes skin burns.

**Ingestion:** May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

**Inhalation:** Causes chemical burns to the respiratory tract.

**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable solid.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT get water inside containers. Do NOT use straight streams of water.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 2; Instability: 2; Special Hazard: -W-

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Place under an inert

atmosphere. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not ingest or inhale. Use with adequate ventilation. Handle under an inert atmosphere. Store protected from air. Do not allow contact with water. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Keep away from water. Flammables-area. Do not expose to air. Store protected from moisture. Store under an inert atmosphere.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Aluminum Triethoxide	2 mg/m <sup>3</sup> TWA (as Al) (listed under Aluminum, soluble salts).	2 mg/m <sup>3</sup> TWA (as Al) (listed under Aluminum, soluble salts).	none listed

**OSHA Vacated PELs:** Aluminum Triethoxide: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Appearance:** white

**Odor:** None reported.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 320 deg C @ 760.00mmHg

**Freezing/Melting Point:** 154.00 - 159.00 deg C

**Decomposition Temperature:** Not available.

**Solubility:** decomposes

**Specific Gravity/Density:** 1.142

**Molecular Formula:** C<sub>6</sub>H<sub>15</sub>O<sub>3</sub>Al

**Molecular Weight:** 162.17

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, moisture, exposure to air, excess heat, strong oxidants.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, aluminum oxide.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 555-75-9 unlisted.

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 555-75-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	FLAMMABLE SOLIDS, CORROSIVE, ORGANIC, N.O.S.	FLAMMABLE SOLID CORR ORGANIC NOS (ALUMINUM TRIETHOXIDE)
<b>Hazard Class:</b>	4.1	4.1(8)
<b>UN Number:</b>	UN2925	UN2925
<b>Packing Group:</b>	III	III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 555-75-9 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 555-75-9 can be found on the following state right to know lists: California, (listed as Aluminum, soluble salts), Pennsylvania, (listed as Aluminum, soluble salts), Minnesota, (listed as Aluminum, soluble salts).

#### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

##### Hazard Symbols:

F C

##### Risk Phrases:

R 11 Highly flammable.

R 14 Reacts violently with water.

R 34 Causes burns.

##### Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 8 Keep container dry.

S 9 Keep container in a well-ventilated place.

S 43A In case of fire, use dry chemical (never use water).

#### WGK (Water Danger/Protection)

CAS# 555-75-9: No information available.

**Canada - DSL/NDSL**

CAS# 555-75-9 is listed on Canada's NDSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B4.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 555-75-9 (listed as Aluminum, soluble salts) is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 12/04/1998

**Revision #3 Date:** 10/03/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*