



Material Safety Data Sheet

Triethylaluminium, 0.6M solution in heptane

MSDS# 10060

Section 1 - Chemical Product and Company Identification

MSDS Name: Triethylaluminium, 0.6M solution in heptane  
Catalog Numbers: AC381170000, AC381171000, AC381178000  
Synonyms: None known.

Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

Company Identification: (USA) Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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Risk Phrases: 14 17 34

CAS#: 97-93-8  
Chemical Name: Triethylaluminium  
%: 10%  
EINECS#: 202-619-3  
Hazard Symbols: C F

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Risk Phrases: 11 38 50/53 65 67

CAS#: 142-82-5  
Chemical Name: Heptane (n-)  
%: 90%  
EINECS#: 205-563-8  
Hazard Symbols: F N XN

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Text for R-phrases: see Section 16

Hazard Symbols:



Risk Phrases:

F C N



11 14/15 34 50/53 65 67



Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Aspiration hazard if swallowed. Can enter lungs and cause damage. Causes burns by all exposure routes. Flammable liquid and vapor. Breathing vapors may cause drowsiness and dizziness. Reacts violently with water liberating highly flammable gases. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Target Organs: Blood, kidneys, central nervous system, liver, lungs, respiratory system, gastrointestinal system, eyes, skin.

#### Potential Health Effects

Eye: Causes eye burns.

Skin: Causes skin burns. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. Aspiration hazard. Causes gastrointestinal tract burns. May cause lung damage.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes chemical burns to the respiratory tract. Inhalation of vapors may cause drowsiness and dizziness.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage. Chronic exposure may cause blood effects.

#### Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

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

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Water reactive. Material will react with water and may release a flammable and/or toxic gas. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: Use foam, dry chemical, or carbon dioxide. DO NOT USE WATER! Contact professional fire-fighters immediately.

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; Special Hazard: -W-

#### Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not get water inside containers. Do not let this chemical enter the environment.

#### Section 7 - Handling and Storage

Handling: Do not allow water to get into the container because of violent reaction. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not

ingest or inhale. Do not allow contact with water. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. Water free area. Store under nitrogen.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Triethylaluminum	none listed	2 mg/m3 TWA (as Al) (listed under Aluminum, soluble salts).	none listed
Heptane (n-)	400 ppm; 500 ppm STEL	85 ppm TWA; 350 mg/m3 TWA 750 ppm IDLH	500 ppm TWA; 2000 mg/m3 TWA

OSHA Vacated PELs: Triethylaluminum: 2 mg/m3 TWA (as Al, listed under Aluminum) (listed under Aluminum, soluble salts) Heptane (n-): 400 ppm TWA; 1600 mg/m3 TWA

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

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 prevent skin exposure.

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: Liquid

Color: clear, colorless

Odor: Not available

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Reacts

Specific Gravity/Density: 0.688

Molecular Formula: C6H15Al

Molecular Weight: 114.17

### Section 10 - Stability and Reactivity

Chemical Stability: Air sensitive. Reacts violently with water.

Conditions to Avoid: Incompatible materials, ignition sources, exposure to air, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, acids, alcohols, organic halides.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, aluminum fumes.

Hazardous Polymerization

Will not occur.

### Section 11 - Toxicological Information

RTECS#: CAS# 97-93-8: BD2050000  
CAS# 142-82-5: MI7700000  
RTECS:  
CAS# 97-93-8: Inhalation, rat: LC50 = 10 gm/m<sup>3</sup>/15M;  
LD50/LC50: .  
RTECS:  
CAS# 142-82-5: Inhalation, rat: LC50 = 103 gm/m<sup>3</sup>/4H;  
.  
Carcinogenicity: Triethylaluminum - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Heptane (n-) - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

Ecotoxicity: Fish: Goldfish: LC50 = 4.0 mg/L; 24 Hr.; Unspecified  
Fish: Mosquito Fish: LC50 = 4900 mg/L; 24 Hr.; Unspecified  
Fish: LC50 = 4900 mg/L; 24 Hr.; Unspecified  
Other: Do not empty into drains.

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT

Shipping Name: ALUMINUM ALKYL (Triethylaluminum, Heptane)

Hazard Class: 4.2

UN Number: UN3051

Packing Group: I

Canada TDG

Shipping Name: HEPTANES

Hazard Class: 3

UN Number: UN1206

Packing Group: II

### Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F C N

Risk Phrases:

R 11 Highly flammable.

R 14/15 Reacts violently with water liberating extremely flammable gases.

R 34 Causes burns.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 6A Keep under nitrogen.

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

S 24/25 Avoid contact with skin and eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where

possible).

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 97-93-8: 0

CAS# 142-82-5: 1

Canada

CAS# 97-93-8 is listed on Canada's DSL List

CAS# 142-82-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, B6, E, F

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.

CAS# 97-93-8 is not listed on Canada's Ingredient Disclosure List.

CAS# 142-82-5 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 97-93-8 is listed on the TSCA Inventory.

CAS# 142-82-5 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/20/2004

Revision #3 Date 7/20/2009

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 the company 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 the company has been advised of the possibility of such damages.

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