

Safety Data Sheet
according to 1907/2006/EC, Article 31

Revision: 13.07.2010

Printing date 13.07.2010

1 Identification of substance**Product details****Trade name****Triethylaluminum****Stock number:**

43243

Manufacturer/Supplier:Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com**Informing department:**

Product safety department.

Emergency information:Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification****Hazard designation:**C Corrosive
F Highly flammable**Information pertaining to particular dangers for man and environment**R 14 Reacts violently with water.
R 17 Spontaneously flammable in air.
R 34 Causes burns.**GHS label elements****Danger**H250 - Catches fire spontaneously if exposed to air.
H260+EUH014 - In contact with water releases flammable gases which may ignite spontaneously. Reacts violently with water.**Danger**

H314 - Causes severe skin burns and eye damage.

Prevention:**Response:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

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

Storage:

P405 Store locked up.

Disposal:

P422 Store contents under inert gas.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients**Chemical characterization:****Designation: (CAS#)**

Triethylaluminum (CAS# 97-93-8)

Identification number(s):**EINECS Number:**

202-619-3

Index number:

013-004-00-2

4 First aid measures**General information**

Instantly remove any clothing soiled by the product.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**CO₂, sand, extinguishing powder. Do not use water.**For safety reasons unsuitable extinguishing agents**

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Reacts violently with water

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:**Measures for cleaning/collecting:**

Ensure adequate ventilation

Keep away from ignition sources

Do not allow material to be released to the environment without proper governmental permits.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Keep away from ignition sources.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Additional information:**7 Handling and storage****Handling****Information for safe handling:**

Handle under dry protective gas.

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:Keep ignition sources away - Do not smoke.
Substance/product is auto-flammable.**Storage****Requirements to be met by storerooms and containers:**

No special requirements.

Information about storage in one common storage facility:

Store away from water.

Store away from air.

Store away from oxidizing agents.

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Further information about storage conditions:

Store under dry inert gas.
Protect from humidity and keep away from water.
Avoid contact with air / oxygen.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

8 Exposure controls and personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace:

Aluminum alkyls
mg/m3
Belgium TWA 5
BC Canada TWA 2
Ireland TWA 2.5
Quebec Canada TWA 2
United Kingdom TWA 2
No data

Additional information:**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.

Breathing equipment:**Eye protection:**

Use breathing protection with high concentrations.

Safety glasses
Tightly sealed safety glasses.

Full face protection

Face protection

Body protection:

Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Liquid
Colour: Colourless
Smell: Characteristic

Change in condition

Melting point/Melting range: -50°C
Boiling point/Boiling range: 128-130°C ((50mm Hg))
Sublimation temperature / start: Not determined

Flash point: -18°C

Ignition temperature: Not determined

Decomposition temperature: Not determined

Self-inflammability: Spontaneously flammable in air.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not determined

Density at 20°C 0.835 g/cm³

Solubility in / Miscibility with Water: Reacts violently

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:****Materials to be avoided:**

No decomposition if used and stored according to specifications.

Water/moisture

Oxidizing agents

Oxygen

Air

Alcohols

Dangerous reactions:

Reacts violently with water

Spontaneously flammable in air.

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

Metal oxide

Inflammable gases/vapours

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Inhalative LC50/30M 10000 mg/m3 (Rat)

Primary irritant effect:**on the skin:**

Corrosive effect on skin and mucous membranes.

Irritant for skin and mucous membranes.

on the eye:

Strong corrosive effect.

Irritant effect.

Sensitization:

No sensitizing effect known.

Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

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12 Ecological information:

Additional ecological information:
General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:
Recommendation

Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)****ADR/RID-GGVS/E Class:**

4.2 (SW) Substances liable to spontaneous combustion.

Kemler Number:

X333

UN-Number:

3394

Packaging group:

I

Label

4.2+4.3

Designation of goods:

3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE (Triethylaluminum)

Limited quantities (LQ)

LQ0

Transport category

0

Tunnel restriction code

B/E

Maritime transport IMDG/GGVSea:**IMDG/GGVSea Class:**

4.2

UN Number:

3394

Label

4.2+4.3

Packaging group:

I

Marine pollutant:

No

Correct technical name:

ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE (Triethylaluminum)

Air transport ICAO-TI and IATA-DGR:**ICAO/IATA Class:**

4.2

UN/ID Number:

3394

Label

4.2+4.3

Packaging group:

I

Correct technical name:

ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE

UN "Model Regulation":

UN3394, ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE, 4.2 (4.3), I

15 Regulatory information**Designation according to EC guidelines:**

Code letter and hazard designation of product:



C Corrosive
F Highly flammable

Risk phrases:

14 Reacts violently with water.
17 Spontaneously flammable in air.
34 Causes burns.

Safety phrases:

16 Keep away from sources of ignition - No smoking.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.**Contact:** Zachariah Holt

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent