C₆H₁₅Sb

Low Temperature decomposing Sb-Precursor for MOVPE

µTESb-TRIETHYLANTIMONY
1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

1.1 Identification of the product

Product name: Triethylantimony
Acronym: TESb

1.2 Manufacturer / Supplier Information

Dockweiler Chemicals GmbH
Emil-von-Behring-Str. 76, Postfach 1746, 35007 Marburg, Germany
T +49 6421 39 -6380 l F -6381

Contact for Information
Dockweiler Chemicals GmbH
T +49 6421 39 -6380 l F -6381

1.3 Emergency telephone no.: +49 178 433 74 34

In case of intoxication:
Giftnotrufzentrale - Munich
T +49 89 41 40 -2211 / -2240 l F +49 89 41 40 -2667
In case of burn: local hospital and/or specialist near at hand

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Flammable Liquids (Category 2)
Pyrophoric Liquids (Category 1)
Chronic Aquatic Toxicity (Category 1)
Serious Eye Damage (Category 1)

2.2 Label elements

Labelling according Regulation (EC)
No. 1272/2008
GHS-Classification

Pictogram:

Signal Word: DANGER

Hazard and Precautionary Statements:
H250: Catches fire spontaneously if exposed to air
H411: Toxic to aquatic life with long lasting effects
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P222: Do not allow contact with air
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P302+334: IF ON SKIN: Immerse in cool water/wrap in wet bandages
P370+378: In case of fire: Use waterspray, alcohol resistant foam, dry chemical powder, soda, sand, lime or carbon dioxide for extinction
P391: Collect spillage
P422: Store contents under Nitrogen or Argon.

www.dockchemicals.com
3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Acronym: TESb  
(purity 100% w/w)

CAS-No.: 617-85-6

EG-Index-No.: 051-003-00-9

EC-No.: 210-534-8

ELINCS-No.: n.r.

Molar mass (g/mol): 208.9

Molecular formula: C₆H₁₅Sb

Dangerous ingredients: none

4. FIRST AID MEASURES

Prompt medical attention is required in all cases of exposure to Triethylantimony and its products. Rescue personnel should be equipped with appropriate protective equipment (e.g. self-contained breathing apparatus) and must be aware of fire potential of Triethylantimony. Irritating to respiratory system, may cause delayed pulmonary oedema.

4.1 General advice

Consult a physician immediately.

Skin contact

Contact may cause severe burns. Fumes may cause irritation. Immediately flush affected areas with large quantities of water. Remove contaminated clothing if not stuck on skin. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Eyes

Contact may cause severe burns. Persons with potential exposures to Triethylantimony should not wear contact lenses. Flush contaminated eyes with large quantities of water for at least 15 minutes. Hold eyelids open to ensure complete flushing. Get medical attention if irritation develops and persists.

Inhalation

Move exposed personnel to an uncontaminated area wearing breathing apparatus. If breathing is difficult, give oxygen. If breathing has stopped, apply artificial respiration. Medical assistance should be sought immediately. Keep victim warm and quiet.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Waterspray, alcohol resistant foam, dry chemical powder, soda, sand, lime or CO₂. Never use Halones. Without risk stop flow of this compound to the fire. Without risk and if save to do so, move container(s) away from fire area.

5.2 Exposure Hazards

In a controlled fire any unreacted Triethylantimony may reignite when contact with air is renewed. Smoke may contain toxic oxides of Antimony and various Hydrocarbons.

5.3 Advice for firefighters

Self-contained breathing apparatus face shields and safety goggles, safety shoes and fire resistant gloves.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personnel Precautions

Evacuate area. Use appropriate protective equipment. Purge equipment with inert gas before attempting repairs. Ensure adequate ventilation. If leak is in container call one of the emergency numbers as appropriate (see section 1.)

6.2 Environmental Precautions

Try to stop release, if save to do so. For fire-fighting measures see section 5.

6.3 Methods for cleaning up

Contact Dockweiler Chemicals GmbH for specific advice.
7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Valve outlet seals must remain in place unless container is secured and valve
outlet piped to use point. Use a check valve or trap to prevent hazardous back
flow into the container. Any equipment used for Triethylantimony service must
be thoroughly cleaned and prepared to eliminate contamination and must be
maintained in a leak free state. All air and moisture in the system must be
eliminated before use.

7.2 Conditions for safe storage, including any incompatibilities
Protect container from physical damage. Do not allow temperatures to exceed
161°C / 321°F. Store away from flammable material.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Exposure Controls
OSHA or ACGIH: None established
OES and MEL: None established
Antimony compounds: TWA (8h 0.5 mg/m³)
Ensure adequate ventilation

8.2 Personal Protection
Self-contained breathing apparatus, fire resistant gloves, face shield and safety
goggles, safety shoes and fire resistant garments. Safety shower and eyewash.
In case of insufficient ventilation use suitable respiratory equipment (respirator
with filter A/p2).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Colour: colourless
State: liquid
Odour: unpleasant
pH-Value: n.a.
Viscosity: n.a.
Density (g/ccm; 20°C): 1.324
Boiling Point (1013 mbar): 161 °C / 321.8 °F
Melting Point: -29 °C / -20.2 °F
Flashpoint: pyrophoric compound
Auto-Ignition Temperature: pyrophoric compound
Vapor Pressure (20°C): 3.8 mbar
Vapor Pressure (25°C): 5.1 mbar
Vapor Pressure (30°C): 6.7 mbar
Solubility in Water (20°C): unsoluble
Solubility in aliphatic Hydrocarbons & alcohols (20°C): soluble

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid
Reacts pyrophorically in air.

10.2 Materials to avoid
Avoid oxidizers and overheating.

10.3 Hazardous Decomposition Products
Antimony Hydrides, Antimony Oxides, Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
No experimental data available.
Antimony Compounds:

Acute toxicity
Oral LD50: Harmful if swallowed
Inhalation LC50: Harmful by inhalation

Irritation
Skin
No data available. However product is
pyrophoric and burns may occur.

Eye
No data available. Burns may occur.
Exposure to vapors of product is expected to
cause eye irritation.

Respiratory
No data available

Genotoxicity
No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity
No experimental data available. Antimony
compounds: Fish
Toxic to aquatic organisms, may cause long-
term adverse effects in the aquatic
environment.
13. DISPOSAL CONSIDERATIONS
Regional and national regulations should be followed during waste disposal.
Contact Dockweiler Chemicals GmbH representatives for waste disposal of
unused quantities and regeneration of refilling containers.

14. TRANSPORT INFORMATION

ADR/RID 2015
GGVS/GGVE-class: 4.2
ADR/RID-class: 4.2
UN-no: 2845
Packaging group: I

IMDG ARNDT. 35-12
IMDG/GGVSee-class: 4.2
UN-no: 2845
Packaging group: I
EmS: F-G, S-M
Shipping Name: PYROPHORIC LIQUID, ORGANIC, N.O.S.
[Triethylantimony]
Special Provision: 274

ICAO/IATA 2015
ICAO/IATA-class: 4.2
UN-no: 2845
Packaging Group: I
PAX-PIN: FORBIDDEN
CAO-PIN: FORBIDDEN

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation [EC]
No. 1907/2006.

16. OTHER INFORMATION
DATE: 20.01.2016

Ensure operators understand the pyrophoric nature of this product. Before using
this product it is recommended that a risk assessment and safety study be carried
out. This product is on the Dual-Use Goods list (3C003b) and can only be exported
under a valid export license. The above mentioned information is believed to be
correct but does not purport to be all inclusive and shall be used only as a guide.
Dockweiler Chemicals GmbH shall not be held liable for any damage resulting
from handling or from contact with the above product.