SAFETY DATA SHEET

Creation Date  22-Jun-2009  Revision Date  23-Jan-2018  Revision Number  3

1. Identification

Product Name  Trimethyltin chloride, 1M (25 wt.%) solution in hexanes
Cat No. :  AC427860000; AC427861000
Synonyms  No information available
Recommended Use  Laboratory chemicals.
Uses advised against  Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Fisher Scientific  Acros Organics
One Reagent Lane  One Reagent Lane
Fair Lawn, NJ 07410  Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
For information  US call: 001-800-ACROS-01 / Europe  call: +32 14 57 52 11
Emergency Number  US:001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC  Tel. No. US:001-800-424-9300 / Europe:001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids  Category 2
Acute oral toxicity  Category 2
Acute dermal toxicity  Category 1
Acute Inhalation Toxicity - Vapors  Category 1
Skin Corrosion/Irritation  Category 2
Serious Eye Damage/Eye Irritation  Category 2
Reproductive Toxicity  Category 2
Specific target organ toxicity (single exposure)  Category 3
Target Organs - Central nervous system (CNS).  
Specific target organ toxicity - (repeated exposure)  Category 1
Target Organs - Peripheral Nervous System (PNS), Liver, Kidney, spleen, Thymus, Central nervous system (CNS).
Aspiration Toxicity  Category 1

Label Elements

Signal Word
Danger
Hazard Statements
Highly flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
Suspected of damaging fertility
May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Fatal if swallowed, in contact with skin or if inhaled

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Take precautionary measures against static discharge
Response
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Skin
Immediately call a POISON CENTER or doctor/physician
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Fire
Explosion risk in case of fire
Fight fire with normal precautions from a reasonable distance
Evacuate area
Storage
Store locked up
Store in a closed container
Store in a well-ventilated place. Keep cool
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects
## 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>75</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>25</td>
</tr>
</tbody>
</table>

## 4. First-aid measures

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**
Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration. Risk of serious damage to the lungs (by aspiration).

**Ingestion**
Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

**Most important symptoms and effects**
Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Notes to Physician**
Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media**
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Unsuitable Extinguishing Media**
No information available

**Flash Point**
-23 °C / -9.4 °F

**Method**
No information available

**Autoignition Temperature**
No information available

**Explosion Limits**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Do not allow run-off from fire-fighting to enter drains or water courses.

**Hazardous Combustion Products**

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**
6. Accidental release measures

**Personal Precautions**
Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

**Methods for Containment and Clean Up**
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

**Handling**
Use only under a chemical fume hood. Wear personal protective equipment/face protection. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

**Storage**
Flammables area. Store under an inert atmosphere. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

8. Exposure controls / personal protection

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>TWA: 50 ppm</td>
<td>(Vacated) TWA: 50 ppm</td>
<td>IDLH: 1100 ppm</td>
<td>TWA: 50 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>(Vacated) TWA: 50 ppm</td>
<td>TWA: 50 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 1800 mg/m³</td>
<td>TWA: 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>TWA: 0.1 mg/m³</td>
<td>(Vacated) TWA: 0.1 mg/m³</td>
<td>TWA: 0.1 mg/m³</td>
<td>TWA: 0.1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL: 0.2 mg/m³</td>
<td>Skin</td>
<td>IDLH: 25 mg/m³</td>
<td>STEL: 0.2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 0.1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists  
OSHA - Occupational Safety and Health Administration  
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection**
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 and body protection**
Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if
exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State: Liquid
Appearance: Colorless
Odor: No information available
Odor Threshold: No information available
pH: No information available
Melting Point/Range: No data available
Boiling Point/Range: No information available
Flash Point: -23 °C / -9.4 °F
Evaporation Rate: No information available
Flammability (solid, gas): Not applicable
Flammability or explosive limits:
- Upper: No data available
- Lower: No data available
Vapor Pressure: No information available
Vapor Density: No information available
Specific Gravity: 0.797
Solubility: No information available
Partition coefficient; n-octanol/water: No data available
Autoignition Temperature: No information available
Decomposition Temperature: No information available
Viscosity: No information available
Molecular Formula: C₃H₉ClSn
Molecular Weight: 199.25

10. Stability and reactivity

Reactive Hazard: None known, based on information available
Stability: Moisture sensitive. Air sensitive.
Conditions to Avoid: Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Exposure to moist air or water.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂), Metal oxides, Hydrogen chloride gas
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Oral LD₅₀:
Category 2. ATE = 5 - 50 mg/kg.
Dermal LD₅₀:
Category 1. ATE < 50 mg/kg.
Vapor LC₅₀:
Category 1. ATE < 0.5 mg/l.

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>LD₅₀ = 25 g/kg ( Rat )</td>
<td>LD₅₀ = 3000 mg/kg ( Rabbit )</td>
<td>LC₅₀ = 48000 ppm ( Rat ) 4 h</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>LD₅₀ = 12600 µg/kg ( Rat )</td>
<td>LD₅₀ = 12.6 mg/kg ( Rat )</td>
<td>Not listed</td>
</tr>
</tbody>
</table>
Trimethyltin chloride, 1M (25 wt.%) solution in hexanes

Revision Date 23-Jan-2018

Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation

Irritating to eyes and skin. Vapors may cause drowsiness and dizziness

Sensitization

No information available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
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<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
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<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
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<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects

No information available

Reproductive Effects

Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT - single exposure

Central nervous system (CNS)

STOT - repeated exposure

Peripheral Nervous System (PNS) Liver Kidney spleen Thymus Central nervous system (CNS)

Aspiration hazard

Category 1

Symptoms / effects, both acute and delayed

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information

No information available

Other Adverse Effects

The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Not listed</td>
<td>LC50: 2.1 - 2.98 mg/L, 96h flow-through (Pimephales promelas)</td>
<td>Not listed</td>
<td>EC50: 3.87 mg/L/48h</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>EC50: 0.214 mg/L/72H</td>
<td>Oryzial latipes LC50: 5.62 mg/L/48H</td>
<td>Not listed</td>
<td>EC50: 0.47 mg/L/24H</td>
</tr>
</tbody>
</table>

Persistence and Degradability

May persist

Bioaccumulation/ Accumulation

No information available.

Mobility


13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
14. Transport information

DOT

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

TDG

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

IATA

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

IMDG/IMO

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>1066-45-1</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

15. Regulatory information

United States of America Inventory

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>X</td>
<td>-</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-18626</td>
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<td>Trimethyltin chloride</td>
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<td>X</td>
<td>213-917-8</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

U.S. Federal Regulations

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>75</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

See section 2 for more information
Trimethyltin chloride, 1M (25 wt.%) solution in hexanes  

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CWA (Clean Water Act)  
Not applicable

Clean Air Act

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depletors</th>
<th>Class 2 Ozone Depletors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA - Occupational Safety and Health Administration  
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>5000 lb</td>
<td>-</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>-</td>
<td>500 lb</td>
</tr>
</tbody>
</table>

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>Male Reproductive</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Trimethyltin chloride</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant: N
DOT Severe Marine Pollutant: N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations
Mexico - Grade
No information available

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 22-Jun-2009
Revision Date 23-Jan-2018
Print Date 23-Jan-2018
Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
End of SDS