SAFETY DATA SHEET

Revision Date 21-Feb-2020
Revision Number 2

1. Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Mercury (II) trifluoromethanesulfonate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat No. :</td>
<td>39305</td>
</tr>
<tr>
<td>CAS-No</td>
<td>49540-00-3</td>
</tr>
<tr>
<td>Synonyms</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Recommended Use: Laboratory chemicals.

Uses advised against: Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) Identification

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

<table>
<thead>
<tr>
<th></th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>1</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Dusts and Mists</td>
<td>2</td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>2</td>
</tr>
<tr>
<td>Target Organs - Central nervous system (CNS)</td>
<td>2</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
May cause damage to organs through prolonged or repeated exposure
Fatal if swallowed, in contact with skin or if inhaled
Precautionary Statements
Prevention
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
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
Response
Get medical attention/advice if you feel unwell
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
IF ON SKIN: Gently wash with plenty of soap and water
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
<td>&lt;=100</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

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

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a
Mercury (II) trifluoromethanesulfonate

Pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion**
Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**
None reasonably foreseeable.

**Notes to Physician**
Treat symptomatically.

### 5. Fire-fighting measures

**Unsuitable Extinguishing Media**
No information available

- **Flash Point**
  No information available

- **Autoignition Temperature**
  No information available

- **Explosion Limits**
  - Upper
    No data available
  - Lower
    No data available

- **Sensitivity to Mechanical Impact**
  No information available

- **Sensitivity to Static Discharge**
  No information available

**Specific Hazards Arising from the Chemical**
Do not allow run-off from fire-fighting to enter drains or water courses.

**Hazardous Combustion Products**
None known.

**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.

### 6. Accidental release measures

**Personal Precautions**
Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**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.

**Methods for Containment and Clean Up**
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### 7. Handling and storage

**Handling**
Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

**Storage**
Keep containers tightly closed in a dry, cool and well-ventilated place.

### 8. Exposure controls / personal protection

**Exposure Guidelines**
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Mercury (II) trifluoromethanesulfonate

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
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</thead>
<tbody>
<tr>
<td>Mercury (II) trifluoromethanesulfonate</td>
<td></td>
<td></td>
<td>IDLH: 10 mg/m³</td>
<td>TWA: 0.05 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ceiling: 0.1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Engineering Measures

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.

10. Stability and reactivity

Reactive Hazard

None known, based on information available

Stability

Stable under normal conditions.

Conditions to Avoid

Incompatible products.

Incompatible Materials

Strong oxidizing agents

Hazardous Decomposition Products

None under normal use conditions
11. Toxicological information

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic Products

No information available

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

Irritation

No information available

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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<tr>
<td>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
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</tbody>
</table>

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT - single exposure

None known

STOT - repeated exposure

Central nervous system (CNS)

Aspiration hazard

No information available

Symptoms / effects, both acute and delayed

No information available

Endocrine Disruptor Information

No information available

Other Adverse Effects

The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available.

Mobility

No information available.

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

UN-No: UN2025
Proper Shipping Name: Mercury compound, solid, n.o.s.
Technical Name: (Mercury (II) trifluoromethanesulfonate)
Hazard Class: 6.1
Packing Group: II

TDG

UN-No: UN2025
Proper Shipping Name: Mercury compound, solid, n.o.s.
Hazard Class: 6.1
Packing Group: II

IATA

UN-No: UN2025
Proper Shipping Name: Mercury compound, solid, n.o.s.
Hazard Class: 6.1
Packing Group: II

IMDG/IMO

UN-No: UN2025
Proper Shipping Name: Mercury compound, solid, n.o.s.
Hazard Class: 6.1
Packing Group: II

15. Regulatory information

United States of America Inventory

<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>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

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>
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<tr>
<td>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
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</table>

U.S. Federal Regulations

SARA 313 Not applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
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</thead>
<tbody>
<tr>
<td>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
<td>&lt;=100</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
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<tbody>
<tr>
<td>Mercury (II)</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
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</table>
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>Mercury (II) trifluoromethanesulfonate</td>
<td>X</td>
<td></td>
<td></td>
</tr>
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</table>

OSHA - Occupational Safety and Health Administration

Not applicable

CERCLA

Not applicable

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>Mercury (II) trifluoromethanesulfonate</td>
<td>49540-00-3</td>
<td>Developmental</td>
<td>-</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

Not applicable

<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>Mercury (II) trifluoromethanesulfonate</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

Reportable Quantity (RQ): N
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: Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Revision Date: 21-Feb-2020
Print Date: 21-Feb-2020
Revision Summary: SDS authoring systems update, replaces ChemGes SDS No. 49540-00-3.

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