SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
- Trade name: Antimony(V) chloride, 99%
- Item number: 93-5102
- CAS Number: 7647-18-9
- EC number: 231-601-8
- Index number: 051-002-00-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Strem Chemicals, Inc.
  7 Mulliken Way
  NEWBURYPORT, MA 01950
  USA
  info@strem.com

- Further information obtainable from: Technical Department

1.4 Emergency telephone number:
  EMERGENCY: CHEMTREC: +1 (800) 424-9300
  During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  GHS05 corrosion
  Skin Corr. 1B H314 Causes severe skin burns and eye damage.
  GHS09 environment
  Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
  The substance is classified and labelled according to the CLP regulation.
- Hazard pictograms
  GHS05  GHS09

- Signal word Danger

- Hazard-determining components of labelling:
  antimony pentachloride
- Hazard statements
  H314 Causes severe skin burns and eye damage.
Safety data sheet  
according to 1907/2006/EC, Article 31

Trade name: Antimony(V) chloride, 99%

H411 Toxic to aquatic life with long lasting effects.
· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P231 Handle under inert gas.
  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.
  P403+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P403+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

· 2.3 Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances
  · CAS No. Description
    7647-18-9 antimony pentachloride
  · Identification number(s)
    · EC number: 231-601-8
    · Index number: 051-002-00-3

SECTION 4: First aid measures

· 4.1 Description of first aid measures
  · General information: Immediately remove any clothing soiled by the product.
  · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  · After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
  · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
  · 4.3 Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media
  · Suitable extinguishing agents:
    CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  · 5.2 Special hazards arising from the substance or mixture
    During heating or in case of fire poisonous gases are produced.
  · 5.3 Advice for firefighters
    · Protective equipment: Mouth respirator protective device.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
7647-18-9 antimony pentachloride
WEL Long-term value: 0.5 mg/m³ as Sb

Additional information: The lists valid during the making were used as basis.
**Trade name: Antimony(V) chloride, 99%**

Avoid contact with the eyes and skin.

- **Respiratory protection:**
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**
  The protective gloves must be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- **Material of gloves:**
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material:**
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**
  Tightly sealed goggles

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<table>
<thead>
<tr>
<th>9.1 Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>General Information</em></td>
</tr>
<tr>
<td><em>Appearance:</em></td>
</tr>
<tr>
<td>Form: Liquid</td>
</tr>
<tr>
<td>Colour: Light yellow</td>
</tr>
<tr>
<td>Odour: Pungent</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td><em>pH-value:</em> Not determined.</td>
</tr>
<tr>
<td><em>Change in condition:</em></td>
</tr>
<tr>
<td>Melting point/Melting range: 2.8 °C</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 79 /22 mm °C</td>
</tr>
<tr>
<td><em>Flash point:</em> Not applicable.</td>
</tr>
<tr>
<td><em>Flammability (solid, gaseous):</em> Not determined.</td>
</tr>
<tr>
<td><em>Ignition temperature:</em></td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td><em>Self-igniting:</em> Not determined.</td>
</tr>
<tr>
<td><em>Danger of explosion:</em> Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><em>Explosion limits:</em></td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td><em>Vapour pressure at 21 °C:</em> no data hPa</td>
</tr>
<tr>
<td><em>Density at 20 °C:</em> 2.336 g/cm³</td>
</tr>
<tr>
<td><em>Relative density:</em> Not determined.</td>
</tr>
<tr>
<td><em>Vapour density:</em> Not determined.</td>
</tr>
</tbody>
</table>
Trade name: Antimony(V) chloride, 99%

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water</td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Dynamic: Not determined.</td>
</tr>
<tr>
<td>- Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solvent content</td>
<td>Organic solvents: 0.0 % VOC (EC) 0.00 %</td>
</tr>
<tr>
<td>9.2 Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

- 10.1 Reactivity: No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification:
  7647-18-9 antimony pentachloride
  Oral LD50 1115 mg/kg (rat)
  Inhalative LC50/4 h 0.62 mg/l (rat)
- Primary irritant effect:
- Skin corrosion/irritation
  Causes severe skin burns and eye damage.
- Serious eye damage/irritation
  Causes severe skin burns and eye damage.
- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Based on available data, the classification criteria are not met.
- Reproductive toxicity
  Based on available data, the classification criteria are not met.
- STOT-single exposure
  Based on available data, the classification criteria are not met.
- STOT-repeated exposure
  Based on available data, the classification criteria are not met.
- Aspiration hazard
  Based on available data, the classification criteria are not met.
SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
  - **Remark:** Toxic for fish
  - **Additional ecological information:**
  - **General notes:**
    Must not reach sewage water or drainage ditch undiluted or unneutralised.
    Also poisonous for fish and plankton in water bodies.
    Toxic for aquatic organisms
  - **12.5 Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation**
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
  - **ADR, IMDG, IATA** UN1730

- **14.2 UN proper shipping name**
  - **ADR** 1730 ANTIMONY PENTACHLORIDE, LIQUID
  - **IMDG** ANTIMONY PENTACHLORIDE, LIQUID
  - **IATA** Antimony pentachloride, liquid

- **14.3 Transport hazard class(es)**
  - **ADR, IMDG, IATA**
    - **Class** 8 Corrosive substances.
    - **Label** 8

- **14.4 Packing group**
  - **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:**
  - **Marine pollutant:** No
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: Antimony(V) chloride, 99%

14.6 Special precautions for user
- Danger code (Kemler): X80
- Segregation groups: Acids
- Stowage Category: E
- Stowage Code: SW2 Clear of living quarters.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Transport/Additional information:
  - ADR
    - Limited quantities (LQ): 1L
    - Excepted quantities (EQ): Code: E2
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 500 ml
  - Transport category: 2
  - Tunnel restriction code: E

- IMDG
  - Limited quantities (LQ): 1L
  - Excepted quantities (EQ): Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- UN "Model Regulation": UN 1730 ANTIMONY PENTACHLORIDE, LIQUID, 8, II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category E2 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements: 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements: 500 t

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS: Technical Department.
- Contact: Technical Director
- 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)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised 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)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
**Trade name:** Antimony(V) chloride, 99%

- vPvB: very Persistent and very Bioaccumulative
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2