### 1 Identification

**Product identifier**

**Product name:** Tin shot  
**Stock number:** 11009  
**CAS Number:** 7440-31-5  
**EC number:** 231-141-8

**Relevant identified uses of the substance or mixture and uses advised against.**

**Identified use:** SU24 Scientific research and development

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**  
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

**Information Department:** Health, Safety and Environmental Department  
**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 of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)**

The substance is not classified according to the Globally Harmonized System (GHS).

**Hazards not otherwise classified**

No information known.

**Label elements**

- **GHS label elements** Not applicable  
- **Hazard pictograms** Not applicable  
- **Signal word** Not applicable  
- **Hazard statements** Not applicable  
- **WHMIS classification** Not controlled

**HMIS ratings (scale 0-4)**

<table>
<thead>
<tr>
<th>Classification System</th>
<th>Health (acute effects)</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Other hazards**

Results of PBT and vPvB assessment

- **PBT:** Not applicable.  
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization:** Substances  
**CAS# Description:**  
7440-31-5 Tin  
**Identification number(s):**  
EC number: 231-141-8

### 4 First-aid measures

**Description of first aid measures**

- **After inhalation** No special measures required.  
- **After skin contact** No special measures required.  
- **After eye contact** No special measures required.  
- **After swallowing** If symptoms persist consult doctor.

**Information for doctor**

Most important symptoms and effects, both acute and delayed No further relevant information available.  
Indication of any immediate medical attention and special treatment needed No further relevant information available.

### 5 Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing agents** Special powder for metal fires. Do not use water.  
- **For safety reasons unsuitable extinguishing agents** Water  
- **Special hazards arising from the substance or mixture**
  - If this product is involved in a fire, the following can be released: Tin oxides

**Advice for firefighters**

- **Protective clothing:** Wear self-contained respirator.  
- **Protective equipment:** Wear fully protective impervious suit.

### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

- **Wear protective equipment. Keep unprotected persons away.**  
- **Ensure adequate ventilation.**  
- **Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.  
- **Methods and material for containment and cleaning up:** Pick up mechanically.  
- **Prevention of secondary hazards:** No special measures required.  
- **Reference to other sections**
  - See Section 7 for information on safe handling
  - See Section 8 for information on personal protection equipment.
Product name: Tin shot

7 Handling and storage

Handling
Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.

Information about protection against explosions and fires: No information known.

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:
Do not store together with acids.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

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

8 Exposure controls/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.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Limit Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-31-5 Tin</td>
<td>Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
<tr>
<td></td>
<td>REL (USA) Long-term value: 2 mg/m³</td>
<td>7439-96-5 Tin metal</td>
</tr>
<tr>
<td></td>
<td>TLV (USA) Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
<tr>
<td></td>
<td>EL (Canada) Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
<tr>
<td></td>
<td>EV (Canada) Long-term value: 2 mg/m³</td>
<td>metal</td>
</tr>
</tbody>
</table>

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes) Not determined

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:
Solid in various forms

Color:
Silver grey

Odor:
Odorless

Odor threshold:
Not determined.

pH-value:
Not applicable.

Change in condition

Melting point/Melting range: 231.9 °C (449 °F)
Boiling point/Boiling range: 2270 °C (4118 °F)

Sublimation temperature / start: Not determined

Flammability (solid, gaseous) Not determined

Ignition temperature: Not determined

Decomposition temperature: Not determined

Auto igniting: Not determined.

Danger of explosion: Not determined.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure: Not applicable

Density at 20 °C (68 °F): 7.31 g/cm³ (61.002 lbs/gal)
Relative density Not determined.

Vapor density Not applicable.

Evaporation rate Not applicable

Solubility in / Miscibility with Water: Insoluble

Partition coefficient (n-octanol/water): Not determined.

Viscosity:
dynamic: Not applicable.

kinematic: Not applicable.
### 10 Stability and reactivity

**Reactivity** No information known.
**Chemical stability** Stable under recommended storage conditions.
**Thermal decomposition / conditions to be avoided** Decomposition will not occur if used and stored according to specifications.
**Possibility of hazardous reactions** Reacts with strong oxidizing agents
**Conditions to avoid** No further relevant information available.

### 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity** The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
**LD/LC50 values that are relevant for classification** No data
**Skin irritation or corrosion** May cause irritation
**Eye irritation or corrosion** May cause irritation
**Sensitization** No sensitizing effects known.
**Germ cell mutagenicity** No effects known.
**Carcinogenicity** The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
**Reproductive toxicity** No effects known.
**Specific target organ system toxicity - repeated exposure** No effects known.
**Specific target organ system toxicity - single exposure** No effects known.
**Subacute to chronic toxicity** No effects known.
**Additional toxicological information** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

### 12 Ecological information

**Toxicity**
**Aquatic toxicity** No further relevant information available.
**Persistence and degradability** No further relevant information available.
**Bioaccumulative potential** No further relevant information available.
**Mobility in soil** No further relevant information available.
**Additional ecological information**
**General notes** Do not allow material to be released to the environment without proper governmental permits. Avoid transfer into the environment.
**Results of PBT and vPvB assessment** PBT: Not applicable.
**vPvB**: Not applicable.
**Other adverse effects** No further relevant information available.

### 13 Disposal considerations

**Waste treatment methods**
**Recommendation** Consult state, local or national regulations to ensure proper disposal.
**Uncleaned packagings:**
**Recommendation** Disposal must be made according to official regulations.

### 14 Transport information

**UN-Number**
**DOT, ADN, IMDG, IATA** Not applicable
**UN proper shipping name**
**DOT, ADN, IMDG, IATA** Not applicable
**Transport hazard class(es)**
**DOT, ADR, ADN, IMDG, IATA** Not applicable
**Class** Not applicable
**Packing group**
**DOT, IMDG, IATA** Not applicable
**Environmental hazards:** Not applicable
**Special precautions for user** Not applicable
**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
**Transport/Additional information:**
**DOT**
**Marine Pollutant (DOT):** No
**UN "Model Regulation":** -

### 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**GHS label elements** Not applicable
**Hazard pictograms** Not applicable
**Signal word** Not applicable
**Hazard statements** Not applicable
**National regulations**
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
**SARA Section 313 (specific toxic chemical listings)** Substance is not listed.
**California Proposition 65**
**Prop 65 - Chemicals known to cause cancer** Substance is not listed.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS: Global Marketing Department
Date of preparation / last revision 11/24/2015 / -