1 Identification of substance:

Product details:
Product name: Tin(II) 2-ethylhexanoate
Stock number: B23612

Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency information:
During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:
Description: (CAS#)
Tin(II) 2-ethylhexanoate (CAS# 301-10-0)
Identification number(s):
EINECS Number: 206-108-6

3 Hazards identification

Hazard description:
Xn Harmful

Information pertaining to particular dangers for man and environment
R 63 Possible risk of harm to the unborn child
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

Health (acute effects) = 1
Flammability = 1
Reactivity = 1

GHS label elements

Warning

3.7/2 - Suspected of damaging fertility or the unborn child.
Prevention:
Wear protective gloves/clothing.

4 First aid measures

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released:

(Contd. on page 2)
6 Accidental release measures

**Person-related safety precautions:**
- Wear protective equipment. Keep unprotected persons away.
- Ensure adequate ventilation

**Measures for environmental protection:**
- Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Ensure adequate ventilation.

**Additional information:**
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

**Handling**

**Information for safe handling:**
- Keep container tightly sealed.
- Store in cool, dry place in tightly closed containers.
- Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**
- Keep ignition sources away.

**Storage**

**Requirements to be met by storerooms and receptacles:**
- No special requirements.

**Information about storage in one common storage facility:**
- Store away from oxidizing agents.

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

8 Exposure controls and 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.

**Components with limit values that require monitoring at the workplace:**

Tin metal, tin oxide and inorganic tin compounds, except tin hydride, as Sn

<table>
<thead>
<tr>
<th>Country</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV</td>
<td>2 mg/m3</td>
</tr>
<tr>
<td>Austria MAK</td>
<td>2</td>
</tr>
<tr>
<td>Belgium TWA</td>
<td>2</td>
</tr>
<tr>
<td>Denmark TWA</td>
<td>2</td>
</tr>
<tr>
<td>Finland TWA</td>
<td>2</td>
</tr>
<tr>
<td>Germany MAK</td>
<td>2</td>
</tr>
<tr>
<td>Hungary TWA</td>
<td>1; 2-STEL (skin)</td>
</tr>
<tr>
<td>Netherlands MAC-TGG</td>
<td>2</td>
</tr>
<tr>
<td>Norway TWA</td>
<td>1</td>
</tr>
<tr>
<td>Poland TWA</td>
<td>2</td>
</tr>
<tr>
<td>Switzerland MAK-W</td>
<td>2; 4-KEG-W</td>
</tr>
<tr>
<td>United Kingdom TWA</td>
<td>2; 4-STEL</td>
</tr>
<tr>
<td>USA PEL</td>
<td>2</td>
</tr>
</tbody>
</table>

**Additional information:**
- No data

**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.
- Avoid contact with the eyes and skin.

**Breathing equipment:**
- Use suitable respirator when high concentrations are present.
Material Safety Data Sheet
acc. to OSHA and ANSI

Product name: Tin(II) 2-ethylhexanoate

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.

Material of gloves
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information
Form: Viscous liquid
Color: Colorless
Odor: Not determined

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flash point: > 110°C (> 230°F)
Ignition temperature: Not determined
Decomposition temperature: Not determined
Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure: Not determined

Density at 20°C (68°F): 1.251 g/cm³

Solubility in / Miscibility with Water: Not miscible or difficult to mix

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.

Materials to be avoided: Oxidizing agents

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition:
Carbon monoxide and carbon dioxide
Metal oxide fume

11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification:
Oral LD50 5810 mg/kg (rat)

Primary irritant effect:
on the skin: May cause irritation
on the eye: May cause irritation

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:
Metallic tin and inorganic tin compounds may cause nausea, vomiting, diarrhea, irritation and pneumoconiosis.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Possible risk of harm to the unborn child.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
12 Ecological information:

**Additional ecological information:**

**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

**Product:**

**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

Not a hazardous material for transportation.

<table>
<thead>
<tr>
<th>DOT regulations:</th>
<th>Hazard class:</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land transport ADR/RID (cross-border)</strong></td>
<td>ADR/RID class:</td>
<td>None</td>
</tr>
<tr>
<td><strong>Maritime transport IMDG:</strong></td>
<td>IMDG Class:</td>
<td>None</td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td><strong>Air transport ICAO-TI and IATA-DGR:</strong></td>
<td>ICAO/IATA Class:</td>
<td>None</td>
</tr>
</tbody>
</table>

**Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

**Product related hazard informations:**

**Hazard symbols:**

Xn Harmful

**Risk phrases:**

63 Possible risk of harm to the unborn child

**Safety phrases:**

36/37 Wear suitable protective clothing and gloves.

**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).

**Information about limitation of use:** For use only by technically qualified individuals.

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 MSDS:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)
Product name: Tin(II) 2-ethylhexanoate

HMSI: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

USA