

Material Safety Data Sheet
According to OSHA and ANSI

Printing date 04/21/2011

Reviewed on 02/23/2010

1 Identification of the substance/mixture and of the company/undertaking**Product identifier****Product name:** Tin(II) chloride, anhydrous**Stock number:** 41960**CAS Number:**

7772-99-8

EINECS Number:

231-868-0

Relevant identified uses of the substance or mixture and uses advised against.**Sector of Use** SU24 Scientific research and development**Details of the supplier of the safety data sheet****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 telephone number:**

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

2 Hazards identification**Classification of the substance or mixture**

GHS05 Corrosion

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.



GHS07

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R34: Causes burns.



Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R43: May cause sensitization by skin contact.

Label elements**Labelling according to EU guidelines:****Code letter and hazard designation of product:**

C Corrosive

Risk phrases:

22 Harmful if swallowed.

34 Causes burns.

43 May cause sensitization by skin contact.

Safety phrases:

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

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Product name: Tin(II) chloride, anhydrous

Hazard description:
WHMIS classification

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Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

HEALTH	2
FIRE	0
REACTIVITY	1

Health (acute effects) = 2
Flammability = 0
Reactivity = 1

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Substances****(CAS#) Description:**

Tin(II) chloride (CAS# 7772-99-8)

Identification number(s):

EINECS Number: 231-868-0

4 First aid measures**Description of first aid measures****General information** Immediately remove any clothing soiled by the product.**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 Firefighting measures****Extinguishing media****Suitable extinguishing agents**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Hydrogen chloride (HCl)

Metal oxide fume

Advice for firefighters**Protective equipment:**

Wear self-contained respirator.

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.

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Product name: Tin(II) chloride, anhydrous

Methods and material for containment and cleaning up:

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Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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.

7 Handling and storage**Handling****Precautions for safe handling**

Handle under dry protective gas.
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: The product is not flammable

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:

Store away from oxidizing agents.
Store away from strong bases.
Store away from air.
Store away from water/moisture.

Further information about storage conditions:

Store under dry inert gas.
This product is hygroscopic.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and water.
This product is air sensitive.

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:**

Tin metal, oxide and inorganic compounds, except tin hydride, as Sn
mg/m³

ACGIH TLV	2
Austria MAK	2
Belgium TWA	2
Denmark TWA	2
Finland TWA	2
Germany MAK	2
Hungary TWA	1; 2-STEL (skin)
Korea TLV	2
Netherlands MAC-TGG	2
Norway TWA	1
Poland TWA	2
Switzerland MAK-W	2; 4-KZG-W
United Kingdom TWA	2; 4-STEL
USA PEL	2

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.

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Product name: Tin(II) chloride, anhydrous

Avoid contact with the eyes and skin.

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

Protection of hands: Impervious gloves

Eye protection:

Safety glasses

Tightly sealed goggles

Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Crystalline powder

Color: White

Odor: Acidic

Odour threshold: Not determined.

pH-value (100 g/l) at 20°C (68 °F): 2

Change in condition
Melting point/Melting range: 247°C (477 °F)

Boiling point/Boiling range: 652°C (1206 °F)

Sublimation temperature / start: Not determined

Flash point: Not applicable

Flammability (solid, gaseous) Not determined.

Ignition temperature: Not determined

Decomposition temperature: Not determined

Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined

Upper: Not determined

Vapor pressure: Not applicable.

Density at 20°C (68 °F): 3.95 g/cm³ (32.963 lbs/gal)

Relative density Not determined.

Vapour density Not applicable.

Evaporation rate Not applicable.

Solubility in / Miscibility with
Water at 20°C (68 °F): 2700 g/l

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

Viscosity:
dynamic: Not applicable.

kinematic: Not applicable.

Other information No further relevant information available.

10 Stability and reactivity

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

No dangerous reactions known

Reacts with certain metals.

Incompatible materials:

Water/moisture

Oxidizing agents

Bases

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Product name: Tin(II) chloride, anhydrous

Alkali metals

Air

Hazardous decomposition products:

Hydrogen chloride (HCl)

Toxic metal oxide fume

Metal oxide fume

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11 Toxicological information**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Route	LD50	Value
Oral		250 mg/kg (mouse)
		700 mg/kg (rat)
		10000 mg/kg (rabbit)

Primary irritant effect:**on the skin:** Corrosive effect on skin and mucous membranes.**on the eye:** Strong corrosive effect.**Sensitization:** Sensitization possible through skin contact.**Other information (about experimental toxicology):****Bacterial mutagenicity test:** Ames Salmonella Typhimurium: Negative.**Mammal cell mutagenicity test:** Negative.**Subacute to chronic toxicity:**

Tin metal dust/fumes and inorganic tin compounds may cause nausea, vomiting, diarrhea, irritation and pneumoconiosis. Most inorganic tin compounds are poorly absorbed by the body when ingested or inhaled.

The chloride ion generally has a very low toxicity.

Subacute to chronic toxicity:

Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information**Toxicity****Acquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

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

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

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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.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information****DOT regulations:**

Hazard class: 8
Identification number: UN3260
Packing group: III
Proper shipping name (technical name): CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Label: 8

Land transport ADR/RID (cross-border)

ADR/RID class: 8 (C2) Corrosive substances
Danger code (Kemler): 80
UN-Number: 3260
Packaging group: III
UN proper shipping name: 3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Maritime transport IMDG:

IMDG Class: 8
UN Number: 3260
Label: 8
Packaging group: III
Marine pollutant: No
Segregation groups: Acids
Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 8
UN/ID Number: 3260
Label: 8
Packaging group: III
Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

UN "Model Regulation": UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III**Special precautions for user** Warning: Corrosive substances**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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Product name: Tin(II) chloride, anhydrous

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15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product related hazard informations:

Hazard symbols:

C Corrosive

Risk phrases:

22 Harmful if swallowed.

34 Causes burns.

43 May cause sensitization by skin contact.

Safety phrases:

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

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.

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 MSDS: Health, Safety and Environmental Department.

Contact:

Zachariah C. Holt

Global EHS Manager

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

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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