

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 01/19/2007

1 Identification of substance:**Product details:****Product name:** Tin powder**Stock number:** 10378**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 (CAS# 7440-31-5): 100%

Identification number(s):**EINECS Number:** 231-141-8**3 Hazards identification****Hazard description:**

Xn Harmful

Information pertaining to particular dangers for man and environment

R 40 Limited evidence of a carcinogenic effect.

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

HEALTH	1
FIRE	0
REACTIVITY	0

Health (acute effects) = 1

Flammability = 0

Reactivity = 0

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.

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Product name: Tin powder**After swallowing** Seek immediate medical advice.

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5 Fire fighting measures**Suitable extinguishing agents**

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents Water**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Metal oxide fume

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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:

Dispose contaminated material as waste according to item 13.

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:

Do not store together with oxidizing and acidic materials.

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.

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Components with limit values that require monitoring at the workplace:

Tin metal, tin oxide and inorganic tin 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)
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**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.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Impervious gloves

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:	Powder
Color:	Silver-colored
Odor:	Odorless
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
Flash point:	Not applicable
Ignition temperature:	Not determined
Decomposition temperature:	Not determined

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Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure at 1492°C (2718°F):	1.33 hPa (1 mm Hg)
Density at 20°C (68°F):	7.29 g/cm ³
Solubility in / Miscibility with Water:	Insoluble

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:

Acids

Oxidizing agents

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition: Metal oxide fume

11 Toxicological information**Acute toxicity:****Primary irritant effect:**

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Other information (about experimental toxicology):

Tumorigenic effects have been observed on tests with laboratory animals.

Subacute to chronic toxicity:

Metallic tin and inorganic tin compounds may cause nausea, vomiting, diarrhea, irritation and pneumoconiosis.

Subacute to chronic toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:

Gastrointestinal - hypermotility, diarrhea.

Gastrointestinal - nausea or vomiting.

Tumorigenic - equivocal tumorigenic agent by RTECS criteria.

Tumorigenic - tumors at site of application.

Additional toxicological information:

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

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

12 Ecological information:**General notes:**

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

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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.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None

Maritime transport IMDG:

IMDG Class: None

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: None

Transport/Additional information:

Not dangerous according to the above specifications.

15 Regulations

Product related hazard informations:

Hazard symbols:

Xn Harmful

Risk phrases:

40 Limited evidence of a carcinogenic effect.

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.

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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: Paul V. Connolly

USA