

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 02/11/2010

Reviewed on 02/10/2010

1 Identification of substance:

Product details:

Product name: Lead(II) thiosulfate

Stock number: A19388

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#)

Lead(II) thiosulfate (CAS# 13478-50-7)

Identification number(s):

EINECS Number: 236-780-6

Index number: 082-001-00-6

3 Hazards identification

Hazard description:



T Toxic

N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 61 May cause harm to the unborn child

R 62 Possible risk of impaired fertility

R 20/22 Also harmful by inhalation and if swallowed.

R 33 Danger of cumulative effects.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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

GHS label elements



Danger

3.7/1A - May damage fertility or the unborn child.

3.9/2 - May cause damage to organs through prolonged or repeated exposure.



Warning

4.1/1 - Very toxic to aquatic life with long lasting effects.



Warning

3.1/4 - Harmful if swallowed.

3.1/4 - Harmful if inhaled.

Prevention:

Obtain special instructions before use.

Avoid release to the environment.

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Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

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**

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

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Lead oxide fume

Sulfur oxides (SO_x)

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.

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.

Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable

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.

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:

Lead, elemental, and inorganic compounds (as Pb)

mg (Pb)/m³

ACGIH TLV 0.05 Confirmed animal carcinogen

Austria MAK 0.1

Belgium TWA 0.15

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Denmark TWA	0.1
Germany MAK	0.1
Japan OEL	0.1
Netherlands TWA	0.15
Norway TWA	0.05
Poland TWA	0.05
Switzerland MAK-W	0.1
United Kingdom TWA	0.1
Finland TWA	0.1
France TWA	0.15
Hungary STEL	0.04
Sweden TWA	0.1 (total dust)
	0.05 (resp. dust)
USA PEL	0.05

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.

Store protective clothing separately.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Refer to 29CFR1910.1025 for regulations on respiratory protection required during exposure to lead and lead compounds.

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:	Powder
Color:	White
Odor:	Odorless

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

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):** 5.18 g/cm³**Solubility in / Miscibility with**
Water at 20°C (68°F): 0.3 g/l**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**Dangerous reactions** No dangerous reactions known**Dangerous products of decomposition:**

Lead oxide fume

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Sulfur oxides (SOx)

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11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: May cause irritation

on the eye: May cause irritation

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

Lead and lead compounds may cause abdominal pain, diarrhea, loss of appetite, metallic taste, nausea, vomiting, lassitude, insomnia, muscle weakness, joint and muscle pain, irritability, headache and dizziness. Red blood cells may be damaged resulting in anemia. Gastritis and injury to the kidneys, liver, male gonads, and central nervous system may also occur.

Additional toxicological information:

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

May cause harm to the unborn child.

Possible risk of impaired fertility.

EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.

IARC-2A: Probably carcinogenic to humans: limited human evidence; sufficient evidence in experimental animals

NTP-2: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

12 Ecological information:

Ecotoxicical effects:

Remark: Very toxic for fish

General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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

Also poisonous for fish and plankton in water bodies.

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

Very toxic for aquatic organisms

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

DOT regulations:



Hazard class:

6.1

Identification number:

UN2291

Packing group:

III

Proper shipping name (technical name): LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) thiosulfate)

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Label 6.1

Land transport ADR/RID (cross-border)



ADR/RID class: 6.1 (T5) Toxic substances
 Danger code (Kemler): 60
 UN-Number: 2291
 Packaging group: III
 Special marking: Symbol (fish and tree)
 Description of goods: 2291 LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) thiosulfate)

Maritime transport IMDG:



IMDG Class: 6.1
 UN Number: 2291
 Label: 6.1
 Packaging group: III
 EMS Number: F-A, S-A
 Marine pollutant: No
 Proper shipping name: LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) thiosulfate)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 6.1
 UN/ID Number: 2291
 Label: 6.1
 Packaging group: III
 Proper shipping name: LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) thiosulfate)

UN "Model Regulation": UN2291, LEAD COMPOUND, SOLUBLE, N.O.S., 6.1, III

Environmental hazards: Environmentally hazardous substance, solid; Marine Pollutant

15 Regulations

Product related hazard informations:

Hazard symbols:

T Toxic

N Dangerous for the environment

Risk phrases:

61 May cause harm to the unborn child

62 Possible risk of impaired fertility

20/22 Also harmful by inhalation and if swallowed.

33 Danger of cumulative effects.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety phrases:

53 Avoid exposure - obtain special instructions before use.

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

60 This material and its container must be disposed of as hazardous waste.

61 Avoid release to the environment. Refer to special instructions/Safety data sheets

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

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All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

Information about limitation of use:

For use only by technically qualified individuals.

This product contains lead and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations

Refer to 29CFR1910.1025 for regulations concerning lead and lead compounds.

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

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)

GHS: Globally Harmonized 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)

HMIS: Hazardous Materials Identification System (USA)

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