

1 Identification

Product identifier

Product name: Lead (II) fluoride

Stock number: 10723

CAS Number:
7783-46-2

EC number:
231-998-8

Index number:
082-001-00-6

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)



GHS08 Health hazard

Repr. 1A H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Oral and Inhalative.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS07 GHS08

Signal word

Danger

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H360 May damage fertility or the unborn child.

H373 May cause damage to the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Oral and Inhalative.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 2 Health (acute effects) = 2

FIRE 0 Flammability = 0

REACTIVITY 0 Physical Hazard = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

7783-46-2 Lead(II) fluoride

Identification number(s):

EC number: 231-998-8

Product name: Lead (II) fluoride													
Index number: 082-001-00-6													
(Contd. of page 1)													
4 First-aid measures Description of 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 medical treatment. 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 Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Hydrogen fluoride (HF) Lead 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 product to reach sewage system or any water course. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. 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. See Section 13 for disposal information.													
7 Handling and storage Handling Precautions 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 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. Store away from alkali metals. 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: 7783-46-2 Lead(II) fluoride (100.0%) <table><tr><td>PEL (USA)</td><td>Long-term value: 0.05*, 2.5** mg/m³ *as Pb, **as F; See 29 CFR 1910.1025</td></tr><tr><td>REL (USA)</td><td>Long-term value: 0.05*, 2.5** mg/m³ *as Pb; 8-hr TWA; **as F; See Pocket Guide App. C</td></tr><tr><td>TLV (USA)</td><td>Long-term value: 0.05*, 2.5** mg/m³ *as Pb, **as F</td></tr><tr><td>EL (Canada)</td><td>Long-term value: 0.05*, 2.5** mg/m³ *as Pb, **as F</td></tr><tr><td>EV (Canada)</td><td>Long-term value: 0.05 mg/m³ as Pb, Skin (organic compounds)</td></tr></table> Ingredients with biological limit values: 7783-46-2 Lead(II) fluoride (100.0%) <table><tr><td>BEI (USA)</td><td>30 µg/100 ml Medium: blood Time: not critical Parameter: Lead</td></tr></table> Additional information: No data		PEL (USA)	Long-term value: 0.05*, 2.5** mg/m ³ *as Pb, **as F; See 29 CFR 1910.1025	REL (USA)	Long-term value: 0.05*, 2.5** mg/m ³ *as Pb; 8-hr TWA; **as F; See Pocket Guide App. C	TLV (USA)	Long-term value: 0.05*, 2.5** mg/m ³ *as Pb, **as F	EL (Canada)	Long-term value: 0.05*, 2.5** mg/m ³ *as Pb, **as F	EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)	BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
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BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead												
(Contd. on page 3) USA													

Product name: **Lead (II) fluoride**

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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.
Store protective clothing separately.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
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.
Material of gloves Butyl rubber, BR
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:
Form: Crystalline or powder
Color: White
Odor: Odorless
Odor threshold: Not determined.
pH-value: Not applicable.
Change in condition
Melting point/Melting range: 855 °C (1571 °F)
Boiling point/Boiling range: 1290 °C (2354 °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 at 904 °C (1659 °F): 13.3 hPa (10 mm Hg)
Density at 20 °C (68 °F): 8.445 g/cm³ (70.474 lbs/gal)
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with
Water at 20 °C (68 °F): 0.64 g/l
Partition 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 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 No dangerous reactions known
Conditions to avoid No further relevant information available.
Incompatible materials:
Acids
Alkali metals
Hazardous decomposition products:
Hydrogen fluoride
Lead oxide fume

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Harmful if inhaled.
Harmful if swallowed.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral	LD50	3015 mg/kg (mouse)
		3031 mg/kg (rat)

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:
EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.
IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.
NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

(Contd. on page 4)
USA

Product name: **Lead (II) fluoride**

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15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms



Signal word Danger
Hazard statements
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P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
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)
7783-46-2 | Lead(II) fluoride
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7783-46-2 | Lead(II) fluoride
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.
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 / -
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)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)