1 Identification

Product identifier

Product name: Lead granules

Stock number: 45081
CAS Number: 7439-92-1
EC number: 231-100-4
Index number: 082-001-00-6

Relevant identified uses of the substance or mixture and uses advised against.

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, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, 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, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P381 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
D2A - Very toxic material causing other toxic effects

Classification system

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

Health (acute effects) = 1
Flammability = 0
Reactivity = 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:
7439-92-1 Lead

Identification number(s):
EC number: 231-100-4

(Contd. on page 2)
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: Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents: Water.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
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 material to be released to the environment without proper governmental permits.
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:
No information known.

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.

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:

7439-92-1 Lead (100.0%)

PEL (USA) Long-term value: 0.05* mg/m³
REL (USA) Long-term value: 0.05* mg/m³
* See 29 CFR 1910.1025
TLV (USA) Long-term value: 0.05* mg/m³
EL (Canada) Long-term value: 0.05 mg/m³
R; elemental: IARC 2B; inorganic comp.: IARC 2A
EV (Canada) Long-term value: 0.05 mg/m³

Ingredients with biological limit values:

7439-92-1 Lead (100.0%)

BET (USA) 30 µg/100 ml Medium: blood
Time: not critical
Parameter: Lead
10 µg/100 ml Medium: blood
Time: not critical
Parameter: Lead (women of child bearing potential)
Product name: Lead granules

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.
Store protective clothing separately.
Maintain an ergonomically appropriate working environment.

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

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.

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: Granules/shot
Color: Grey
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: 327.5 °C (622 °F)
Boiling point/Boiling range: 1749 °C (3180 °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: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure at 20 °C (68 °F): 0 hPa
Density at 20 °C (68 °F): 11.34 g/cm³ (94.632 lbs/gal)

Bulk density at 20 °C (68 °F): 5280 kg/m³
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with Water: Insoluble
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinnematic: 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: Oxidizing agents

Hazardous decomposition products: 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: No data

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: Not sensitizing effects known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

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.

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.

Reproductive toxicity:

May damage fertility or the unborn child.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure:
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

Specific target organ system toxicity - single exposure: No effects known.

(Contd. on page 4)
12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Very toxic for aquatic organisms.
Additional ecological information:
General notes:
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Avoid transfer into the environment.
Very toxic for aquatic organisms.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

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.

14 Transport information

UN-Number
DOT, ADN, IMDG, IATA: Not applicable
UN proper shipping name
DOT, ADN, IMDG, IATA: Not applicable
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA: Not applicable
Class: Not applicable
Packaging group
DOT, IMDG, IATA: Not applicable
Environmental hazards:
DOT, IMDG, IATA: Environmentally hazardous substance, solid
Special precautions for user: Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

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:
H302+H332 Harmful if swallowed or inhaled.
H360 May damage fertility or the unborn child.
H373 May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, 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.

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):
7439-92-1 Lead

California Proposition 65:
Prop 65 - Chemicals known to cause cancer
7439-92-1 Lead

Prop 65 - Developmental toxicity
7439-92-1 Lead
Product name: Lead granules

38.0.2 Prop 65 - Developmental toxicity, female
7439-92-1 Lead

38.0.2 Prop 65 - Developmental toxicity, male
7439-92-1 Lead

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 11/23/2015 / -

Abbreviations and acronyms:

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

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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)