1 Identification

Product identifier
Product name: Lead(II) iodide

Stock number: 57103
CAS Number: 10101-63-0
EC number: 233-256-9
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 organs through prolonged or repeated exposure.

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 organs through prolonged or repeated exposure.

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.
P305+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)

Health (acute effects) = 2
Flammability = 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:
10101-63-0 Lead(II) iodide
Identification number(s):
EC number: 233-256-9
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:
Lead oxide fume
Hydrogen iodide (HI)
Iodine (I₂)

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:
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 in the dark.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from exposure to light.

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:

Lead, elemental, and inorganic compounds (as Pb)

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV</td>
<td>0.05 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Austria MAK</td>
<td>0.1 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Belgium TWA</td>
<td>0.15 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Denmark TWA</td>
<td>0.15 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Germany MAK</td>
<td>0.15 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Japan OEL</td>
<td>0.15 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Korea TLV</td>
<td>0.05 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Netherlands TWA</td>
<td>0.15 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Norway TWA</td>
<td>0.05 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Poland TWA</td>
<td>0.05 mg/(Pb)/m³</td>
</tr>
<tr>
<td>Sweden TWA</td>
<td>0.05 (resp. dust) mg/(Pb)/m³</td>
</tr>
<tr>
<td>Switzerland MAK-W</td>
<td>0.1 mg/(Pb)/m³</td>
</tr>
<tr>
<td>United Kingdom TWA</td>
<td>0.1 mg/(Pb)/m³</td>
</tr>
<tr>
<td>USA PEL</td>
<td>0.05 mg/(Pb)/m³</td>
</tr>
</tbody>
</table>

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. 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. 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.

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**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**
Powder

**Form:**
Yellow

**Color:**
Odorless

**Odor threshold:**
Not determined.

**pH-value:**
Not applicable.

**Change in condition**

**Melting point/Melting range:**
402 °C (756 °F)

**Boiling point/Boiling range:**
954 °C (1749 °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):**
6.16 g/cm³ (51.405 lbs/gal)

**Relative density:**
Not determined

**Evaporation rate:**
Not applicable

**Solubility in / Miscibility with**

**Water at 20 °C (68 °F):**
0.63 g/l

**Partition coefficient (n-octanol/water):**
Not determined

**Viscosity:**

**dynamic:**
Not applicable

**kinematic:**
Not applicable

**Other information**
No further relevant information available.

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**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:**
Light

**Hazardous decomposition products:**
Toxic metal compounds

**Hydrogen iodide (HI)**

**Lead oxide fume**

**Iodine (I₂)**

**11 Toxicological information**

**Information on toxicological effects**

**Acute toxicity:**
Harmful if inhaled.

**LD/LC₅₀ values that are relevant for classification:**
No data

**Skin irritation or corrosion:**
Irritant to skin and mucous membranes.

**Eye irritation or corrosion:**
Irritating effect.

**Sensitization:**
No sensitizing effects known.

**Germ cell mutagenicity:**
No effects known.

**Carcinogenicity:**

**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.

**Reproductive toxicity:**
May damage fertility or the unborn child.

**Specific target organ system toxicity - repeated exposure:**
May cause damage to organs through prolonged or repeated exposure.

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

**Aspiration hazard:**
No 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.
12 Ecological information

Toxicity
Aquatic toxicity: 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.

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, IMDG, IATA
UN2291

UN proper shipping name
DOT
RQ Lead compounds, soluble, n.o.s.

IMDG, IATA
LEAD COMPOUND, SOLUBLE, N.O.S.

Transport hazard class(es)

DOT

Class
6.1 Toxic substances.

Label
6.1

Class
6.1 (T5) Toxic substances

Label
6.1

IMDG, IATA

Class
6.1 Toxic substances.

Label
6.1

Packing group
DOT, IMDG, IATA
III

Environmental hazards:
Environmentally hazardous substance, solid

Special precautions for user
Warning: Toxic substances

EMS Number:
F-A, S-A

Segregation groups
Heavy metals and their salts (including their organometallic compounds), lead and its compounds

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:

DOT
Hazardous substance: 10 lbs, 4.54 kg
Marine Pollutant (DOT): No

UN "Model Regulation": UN2291, Lead compounds, soluble, n.o.s., 6.1, III

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

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 organs through prolonged or repeated exposure.
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 Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings)
10101-63-0 Lead(II) iodide

California Proposition 65

Prop 65 - Chemicals known to cause cancer

10101-63-0 Lead(II) iodide

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.
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.

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.

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:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
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
CAR: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Information System (Canada)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LD50: Lethal dose, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
AGCIIH: 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)