SAFETY DATA SHEET

Product Name: Lead Shot
Cat No.: L18-500
Synonyms: Lead Metal Shot
Recommended Use: Laboratory chemicals.
Uses advised against: Not for food, drug, pesticide or biocidal product use

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity: Category 4
Acute Inhalation Toxicity - Dusts and Mists: Category 4
Skin Corrosion/irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 2
Carcinogenicity: Category 1A
Reproductive Toxicity: Category 1A
Specific target organ toxicity (single exposure): Category 3
Target Organs - Respiratory system.
Specific target organ toxicity - (repeated exposure): Category 2
Target Organs - Kidney, Liver, Blood.

Signal Word
Danger

Hazard Statements
Harmful if swallowed
Harmful if inhaled
Causes skin irritation
Causes eye irritation
May cause cancer
May damage fertility or the unborn child
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Do not get in eyes, on skin, or on clothing

Response
IF exposed or concerned: Get medical attention/advice

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin
Take off contaminated clothing and wash before reuse
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects
WARNING. Cancer and Reproductive Harm - https://www.p65warnings.ca.gov/

### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>90 - 98.9</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>1 - 8</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>0.1 - 2</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
### Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

### Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

### Ingestion
Do not induce vomiting. Obtain medical attention.

### Most important symptoms and effects
No information available.

### Notes to Physician
Treat symptomatically

---

#### 5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Suitable Extinguishing Media</th>
<th>Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable Extinguishing Media</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Method -</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Sensitivity to Mechanical Impact</td>
<td>No information available</td>
</tr>
<tr>
<td>Sensitivity to Static Discharge</td>
<td>No information available</td>
</tr>
</tbody>
</table>

#### Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors.

#### Hazardous Combustion Products
lead oxides antimony oxide arsenic oxides

#### Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

---

#### 6. Accidental release measures

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

#### Environmental Precautions
Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

#### Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

---

#### 7. Handling and storage

#### Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust.

#### Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.

---

#### 8. Exposure controls / personal protection

Exposure Guidelines
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>TWA: 0.05 mg/m³</td>
<td>TWA: 50 µg/m³</td>
<td>IDLH: 100 mg/m³</td>
<td>TWA: 0.15 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 0.050 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
</tr>
<tr>
<td>Antimony</td>
<td>TWA: 0.5 mg/m³</td>
<td>(Vacated) TWA: 0.5 mg/m³</td>
<td>IDLH: 50 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 0.5 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
</tr>
<tr>
<td>Arsenic</td>
<td>TWA: 0.01 mg/m³</td>
<td>(Vacated) TWA: 0.5 mg/m³</td>
<td>IDLH: 5 mg/m³</td>
<td>Ceiling: 0.002 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 0.01 mg/m³</td>
<td>TWA: 0.01 mg/m³</td>
</tr>
</tbody>
</table>

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

- **Eye/face Protection**: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

- **Skin and body protection**: Wear appropriate protective gloves and clothing to prevent skin exposure.

- **Respiratory Protection**: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

10. Stability and reactivity

Reactive Hazard

None known, based on information available
Stability
Stable under normal conditions.

Conditions to Avoid
Avoid dust formation. Incompatible products.

Incompatible Materials
Strong acids, Peroxides

Hazardous Decomposition Products
lead oxides, antimony oxide, arsenic oxides

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Oral LD50
Category 4. ATE = 300 - 2000 mg/kg.
Mist LC50
Category 4. ATE = 1 - 5 mg/l.

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>LD50 = 7 g/kg ( Rat )</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Arsenic</td>
<td>LD50 = 15 mg/kg ( Rat )</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 = 763 mg/kg ( Rat )</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Irritating to eyes, respiratory system and skin

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Group 2A</td>
<td>Reasonably Anticipated</td>
<td>A3</td>
<td>X</td>
<td>A3</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Group 1</td>
<td>Known</td>
<td>A1</td>
<td>X</td>
<td>A1</td>
</tr>
</tbody>
</table>

IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
Mexico - Occupational Exposure Limits - Carcinogens
A1 - Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Confirmed Animal Carcinogen
A4 - Not Classifiable as a Human Carcinogen
A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects
Mutagenic effects have occurred in humans.

Reproductive Effects
Experiments have shown reproductive toxicity effects on laboratory animals.
Developmental Effects
Developmental effects have occurred in experimental animals.

Teratogenicity
Teratogenic effects have occurred in experimental animals.

STOT - single exposure
Respiratory system
Kidney Liver Blood

STOT - repeated exposure

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Not listed</td>
<td>LC50: = 1.17 mg/L, 96h flow-through (Oncorhynchus mykiss)</td>
<td>Not listed</td>
<td>EC50: = 600 µg/L, 48h (water flea)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: = 1.32 mg/L, 96h static (Oncorhynchus mykiss)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: = 0.44 mg/L, 96h semi-static (Cyprinus carpio)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>Not listed</td>
<td>Cyprinodon variegatus: LC50 = 6.2-8.3 mg/L/96h</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available

Bioaccumulation/ Accumulation
No information available.

Mobility
No information available.

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
Not regulated

TDG
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

15. Regulatory information

All of the components in the product are on the following Inventory lists:

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-100-4</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Antimony</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-146-5</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Arsenic</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-148-6</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

<table>
<thead>
<tr>
<th>SARA 313</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead</td>
<td>7439-92-1</td>
<td>90 - 98.9</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Antimony</td>
<td>7440-36-0</td>
<td>1 - 8</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>0.1 - 2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories See section 2 for more information

<table>
<thead>
<tr>
<th>CWA (Clean Water Act)</th>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Antimony</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Clean Air Act

<table>
<thead>
<tr>
<th>Clean Air Act</th>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depletors</th>
<th>Class 2 Ozone Depletors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Antimony</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

OSHA Occupational Safety and Health Administration
Not applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifically Regulated Chemicals</th>
<th>Highly Hazardous Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>30 µg/m³ Action Level</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>50 µg/m³ TWA</td>
<td>-</td>
</tr>
<tr>
<td>Arsenic</td>
<td>10 µg/m³ TWA</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5 µg/m³ Action Level</td>
<td>-</td>
</tr>
</tbody>
</table>

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>CERCLA</th>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead</td>
<td>10 lb</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Antimony</td>
<td>5000 lb 10 lb</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Arsenic</td>
<td>1 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

California Proposition 65 This product contains the following proposition 65 chemicals

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
</table>
### Lead Shot

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Antimony</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Arsenic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

#### U.S. Department of Transportation

- Reportable Quantity (RQ): Y
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

#### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

#### Other International Regulations

Mexico - Grade: No information available

### 16. Other information

**Prepared By**

Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

**Creation Date**

24-Aug-2009

**Revision Date**

18-Jan-2018

**Print Date**

18-Jan-2018

**Revision Summary**

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of SDS**