

# Lead Antimony Alloy

Revision Date: 04/26/2018

## Safety Data Sheet

In Accordance with Federal Register Vol. 77, No. 58/Monday March 26, 2012/Rules & Regulations

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### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Lead Antimony Alloy

**Synonyms:** Lead/ Antimony/Tin/Arsenic Alloy. Hard Lead

#### 1.2 Intended Use of the Product

Use of the substance/mixture: Commercial/Industrial - For professional use only.

#### 1.3 Name, Address, & Telephone of the Responsible Party

##### Company

Vulcan Global Manufacturing Solutions, Inc.

1400 W. Pierce Street

Milwaukee, WI 53204

414-645-2040

#### 1.4 Emergency Telephone Number

Emergency Number: 414-645-2040, 414-573-7373

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

This product is an article as sold. Grinding, sawing, drilling cutting, sanding, machining, welding, thermal cutting, soldering of this product may produce airborne contaminants that are hazardous. The following classification information is for the hazardous substances in the dust or fumes that could be released or generated from such processes.

##### Classification (GHS-US):

Carcinogenicity, Category 1A

Toxic to Reproduction, Category 1A

Specific Target Organ Toxicity-Repeated Exposure (STOT-RE), Category 1

Hazardous to the Aquatic Environment- Acute, Category 1

Hazardous to the Aquatic Environment- Chronic, Category 1

#### 2.2 Label Elements:

Signal Word (GHS-US):

**Danger**

Hazard Pictograms (GHS-US):



Hazard Statements (GHS-US):

H350 – May cause cancer

H360- May damage fertility or the unborn child

H362- May cause harm to breast-fed children

H372- Causes damage to organs (nervous system, kidney, blood-forming tissues) through prolonged or repeated via ingestion or inhalation

H400 – Very toxic to aquatic life

H410- Very toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):

P102- Keep out of reach of children

P201 – Obtain special instructions before use.

P202 – Do not handle until all safety precautions have been read & understood.

P260- Do not breathe dust or fumes

P263- Avoid contact during pregnancy or while nursing

P264 Wash skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P271 Use only outdoors or in a well-ventilated area

P273 - Avoid release to the environment.

P280 - Wear protective gloves, clothing gloves.

P314- Get medical attention if you feel unwell

P391 Collect spillage

P405 - Store locked up.

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

### 2.3 Other Hazards

Risk of thermal burns on contact with molten product.

### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substance** Not applicable

### 3.2 Mixture

Name	Product Identifier	%
Lead	(CAS No) 7439-92-1	86.7 - 99
Antimony	(CAS No) 7440-36-0	1 - 13
Tin	(CAS No) 7440-31-5	0.1 - 1
Arsenic	(CAS No) 7440-38-2	0.05 - 0.4

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

No first aid is likely to be needed when the product is handled as sold. The following first aid measures may be needed if dust or fume generating processes such as grinding, sawing, drilling cutting, sanding, machining, welding, thermal cutting, soldering are performed on the product.

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance. Seek medical attention for thermal burns.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**First-aid Measures After Ingestion:** Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor /physician

### 4.2 Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries after Inhalation of Ingestion:** Lead: High acute dose or through chronic exposure to inhaled or ingested lead dust or fumes may cause the following symptoms: headaches, lassitude, insomnia, abdominal pain, anorexia, constipation, colic, gingival lead line, tremor, hypotension, memory loss, kidney failure, anemia, change in skin tone or pallor, reproductive problems, weakness, pain, or tingling in the extremities. May harm the unborn child. May cause cancer.

Arsenic: Prolonged exposure to arsenic may cause lung or skin cancer, irritation of the skin and mucous membranes and brain/nervous system effects. Acute high exposures may cause severe gastritis or gastroenteritis. Tin dust may cause eye, skin and respiratory irritation. Antimony: May cause skin and upper respiratory tract irritation. Respirable sized particles of antimony trioxide powders have been associated with cancer in animal studies.

**Symptoms/Injuries After Skin Contact:** Risk of thermal burns on contact with molten product.

**Symptoms/Injuries After Eye Contact:** Dusts generated during handling or processing may cause physical eye irritation.

**Chronic Symptoms:** May cause cancer. Repeated or prolonged exposure to lead dust or fumes may damage the kidneys, blood forming tissue, nervous system, reproductive system or cardiovascular system. Prolonged exposure to arsenic may cause lung or skin cancer, irritation of the skin and mucous membranes and brain/nervous system effects.

### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

### 5.2 Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** In molten form may react violently with water.

### 5.3 Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Other Information:** Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid contact with skin, eyes, or clothing. Avoid breathing dust or fumes generated from processes such as grinding, sawing, drilling cutting, sanding, machining, welding, thermal cutting, soldering.

#### 6.1.1 For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2 For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself & the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2 Environmental Precautions: Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3 Methods and Material for Containment and Cleaning Up

**For Containment:** If metal is in molten form allow to cool and collect as a solid. If metal is in solid form collect for recycling.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. HEPA vacuum clean-up for dust spills is preferred. If sweeping is required use a dust suppressant. Contact competent authorities after a spill.

### 6.4 Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling: Use safe furnace practices when using this product.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water after handling and before eating, drinking or smoking and when leaving work.

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from Incompatible materials.

**Incompatible Products:** Strong acids. Strong bases. Strong oxidizers. In molten form: moisture.

### 7.3 Specific End Use(s): For professional use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters

#### Lead (7439-92-1)

USA ACGIH	ACGIH TWA	0.05 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL TWA	0.050 mg/m <sup>3</sup>
USA IDLH	NIOSH IDLH	100 mg/m <sup>3</sup>
USA OSHA	OSHA PEL TWA	50 µg/m <sup>3</sup> (0.05 mg/m <sup>3</sup> )

#### Antimony (7440-36-0)

USA ACGIH	ACGIH TWA	0.50 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL TWA	0.50 mg/m <sup>3</sup>
USA IDLH	NIOSH IDLH	50 mg/m <sup>3</sup>
USA OSHA	OSHA PEL TWA	0.50 mg/m <sup>3</sup>

#### Tin (7440-31-5)

USA ACGIH	ACGIH TWA	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL TWA	2 mg/m <sup>3</sup>
USA IDLH	NIOSH IDLH	25 mg/m <sup>3</sup>
USA OSHA	OSHA PEL TWA	2 mg/m <sup>3</sup>

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### Arsenic (7440-38-2)

USA ACGIH	ACGIH TWA	0.01 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL TWA	0.002 mg/m <sup>3</sup>
USA IDLH	NIOSH IDLH	5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>

## 8.2 Exposure Controls

**Appropriate Engineering Controls:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below the occupational exposure limits.



**Hand Protection:** If a risk assessment indicates that such protection is necessary, wear gloves to protect hands from molten metal, hot objects or sharp edges.

**Eye Protection:** If a risk assessment indicates that such protection is necessary, use safety eyewear.

**Skin and Body Protection:** Wash hands with soap and water after use or handling. If a risk assessment indicates that other parts of the body may be exposed, use appropriate coveralls, suits, aprons and/or footwear.

**Respiratory Protection:** If a risk assessment indicates that such protection is necessary, a NIOSH approved respirator should be used. Respirator selection must be based on known or anticipated employee exposure levels and the capability of the respirator that is selected. If an air purifying respirator is selected, the device should be capable of removing particulates.

**Thermal Hazard Protection:** Fire retardant clothing and gloves, as well as safety shoes are required for safe furnace work

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

Physical State	Solid
Appearance	Bluish-gray soft metal
Odor	No data available
Odor Threshold	No data available
pH	No data available
Evaporation Rate	No data available
Melting Point	621 °F (327 °C)
Freezing Point	No data available
Boiling Point	3164 °F (1740 °C)
Flash Point	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Flammability (solid, gas)	No data available
Vapor Pressure	1 mm Hg @ 973 °C (1783 °F)
Relative Vapor Density at 20 °C	No data available
Specific Gravity	11.3
Solubility	Not soluble in water
Partition Coefficient: N-Octanol/Water	No data available
Viscosity	No data available

9.2. **Other Information:** No additional information available.

## SECTION 10: STABILITY AND REACTIVITY

10.1 **Reactivity:** In molten form may react violently with water.

10.2 **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

10.3 **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

10.4 **Conditions to Avoid:** Incompatible materials. In molten form: moisture.

10.5 **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

10.6 **Hazardous Decomposition Products:** Thermal decomposition generates: lead fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1. Information on Toxicological Effects**

This product is an article as sold. Grinding, sawing, drilling cutting, sanding, machining, welding, thermal cutting, soldering of this product may produce airborne contaminants that are hazardous. The following classification information is for the hazardous substances in the dust or fumes that could be released or generated from such processes.

- Acute Toxicity:** Not classified
- Skin Corrosion/Irritation:** Not classified
- Serious Eye Damage/Irritation:** Not classified
- Respiratory or Skin Sensitization:** Not classified
- Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:**

<b>Arsenic (7440-38-2)</b>	
IARC group	1-Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogen
<b>Antimony (7440-36-0)</b>	
IARC group	2B-Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Not listed
<b>Lead (7439-92-1)</b>	
IARC group	2A, Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
<b>Tin (7440-31-5)</b>	
IARC group	Not listed
National Toxicology Program (NTP) Status	Not listed

**Reproductive Toxicity:** Lead is a productive toxin

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Lead: Repeated or prolonged exposure to lead dust or fumes may damage the kidneys, blood forming tissue, nervous system, reproductive system or cardiovascular system. Lead may cause the following symptoms: headaches, lassitude, insomnia, abdominal pain, anorexia, constipation, colic, gingival lead line, tremor, hypotension, memory loss, kidney failure, anemia, change in skin tone or pallor, reproductive problems, weakness, pain, or tingling in the extremities. May harm the unborn child. May cause cancer. Arsenic: Prolonged exposure to arsenic may cause lung or skin cancer, irritation of the skin and mucous membranes and brain/nervous system effects. Acute high exposures may cause severe gastritis or gastroenteritis. Antimony: Respirable sized particles of antimony trioxide powders have been associated with cancer in animal studies.

**Aspiration Hazard:** Not classified

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Ecology:** This material is very toxic to aquatic life on an acute and chronic basis Harmful to aquatic life.

**12.2. Persistence and Degradability:** No additional information available.

**12.3. Bioaccumulative Potential:** No additional information available.

**12.4. Mobility in Soil:** No additional information available.

**12.5. Other Information:** Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, & international regulations.

**SECTION 14: TRANSPORT INFORMATION**

**14.1. In Accordance with DOT:** Not regulated for transport.

**14.2. In Accordance with IMDG:** Not regulated for transport.

**14.3. In Accordance with IATA:** Not regulated for transport.

**SECTION 15: REGULATORY INFORMATION**

**15.1 US Federal Regulations**



<b>LEAD ANTIMONY ALLOY</b>	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
Lead (7439-92-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	

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SARA Section 313 - Emission Reporting	0.1 %
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**15.2 US State Regulations**

<b>Lead (7439-92-1)</b>	
U.S. - California - Proposition 65 - Carcinogens List, Developmental Toxicity, Reproductive Toxicity – Female and Reproductive Toxicity – Male	 <b>WARNING:</b> This product can expose you to chemicals including Lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> .
<b>Arsenic (7440-38-2)</b>	
U.S. - California - Proposition 65 - Carcinogens List	 <b>WARNING:</b> This product can expose you to chemicals including Arsenic which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> .
<b>Antimony (7440-36-0)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Tin (7440-31-5)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Arsenic (7440-38-2)</b>	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Lead (7439-92-1)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	

**SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

**Revision Date:** 04/26/2018

**Other Information:** This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*