

Nuclead Co., Inc.

Safety Data Sheet:

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Section 1: Identification:

1.1. Product Identifier:

Antimonial Lead

Product Identification Numbers:

44-0004-0524-944-0012-1910-244-0044-3649-7, 70-0000-8019-570-0063-8612-5, 70-0063-8613-3, 70-0063-8614-170-0063-8615-8, 70-0063-8616-6, 70-0063-8617-4, 70-0063-11828-7, 70-0063-8829-5, 70-0063-8830-3, 70-0063-8231-1, 70-0063-8904-6, 70-0063-8917-8, 70-0063-9089-5, 70-0063-9090-3, 70-0063-9091-170-0063-9092-9, 70-0063-9093-7, 70-0063-9094-5, 70-0063-9119-0, 70-0063-9150-5, 70-0161-1069-7

1.2. Recommended use and restrictions on use:

Recommended use:

Lead is used for batteries, weight and shielding applications as well as a moisture and radiation barriers in other applications.,

1.3. Supplier's details:

Manufacture:	Nuclead Co. Inc.
Address:	415 N Elm St. West Bridgewater, MA 02379
Telephone:	1-508-583-2699

1.4. Emergency telephone numbers:

1-508-583-2699

Section 2: Hazard identification:

2.1. Hazard classification:

Carcinogenicity: Category 2.
Acute Toxicity (oral): Category 3.
Reproductive Toxicity: Category IB.
Skin Sensitizer: Category I.
Specific Target Organ Toxicity (repeated exposure): Category 2.
Specific Target Organ Toxicity (single exposure): Category 2.

2.2. Label elements:

Signal word

Danger

Symbols:
Skull and crossbones, Exclamation mark, Health Hazard

Pictograms



Hazard Statements:

Toxic if swallowed.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Suspected of causing cancer.

May cause damage to organs:
Nervous system

May cause damage to organs through prolonged or repeated exposure:
Blood or blood forming organs
Musculoskeletal system
Nervous system
Kidney/urinary tract
Sensory organs

Precautionary Statements:

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fumes/gas/mist/vapors/spray.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

If on skin: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Rinse mouth.
If swallowed: Immediately call a poison center or doctor/physician.
If exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified:

None.

Section 3: Composition/information on ingredients:

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>	<u>OSHA 8-HR TWA</u>	<u>ACGHI 8-HR TWA</u>	<u>ACGHI STEL</u>
Lead	7439-92-1	Balance	0.05mg/m3	0.15mg/m3	0.45mg/m3
Antimony	7440-36-0	5 – 6%	0.5mg/m3	0.5mg/m3	
Arsenic	7440-38-2	<.0.3	0.01mg/m3	0.2mg/m3	

(Ceiling limit)

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

Section 4: First aid measures:

4.1. Description of first aid measures:

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. Get immediate medical attention.

4.1. Most important symptoms and effects, both acute and delayed:

See section 1.1. Information on toxicological effects.

4.2. Indication of any immediate medical attention and special treatment required:

Not applicable.

Section 5: Fire fighting measures:

5.1. Suitable extinguishing media:

Material will not burn. Use fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture:

None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide Carbon	During Combustion
Dioxide	During Combustion
Oxides of Lead	During Combustion

5.3. Special protective action for fire-fighting:

No unusual fire or explosion hazards are anticipated.

Section 6: Accidental release measures:

6.1. Personal precautions, protective equipment and emergency procedures:

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions:

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up:

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

Section 7: Handling and storage:

7.1. Precautions for safe handling:

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, or skin on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities:

Store away from oxidizing agents.

Section 8: Exposure controls/personal protection:

8.1 Control Parameters:

Occupational exposure limits:

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Lead	7439-92-1	Amer Conf of Gov. Indust. Hyg.	TWA (as Pb):0.05 mg/m3	
Lead	7439-92-1	US Dept of Labor- OSHA	TWA:0.05 mg/m3	29 CFR 1910.1025
Antimony	7440-36-0			
Arsenic	7440-38-2			

Amer Conf of Gov. Indust.Hyg.: American Conference of Governmental Industrial Hygienists
American Indust. Hygiene Assoc. American Industrial Hygiene Association.

Chemical Manufacturer Rec Guid :

Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - OSHA: United States of Labor- Occupational and Health Administration

TWA: Time-Weighted-Average STEL.:Short Term Exposure Limit: CEIL.: Ceiling

8.2. Exposure controls:

8.2.1. Engineering Controls:

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2 Personal protective equipment (PPE):

Eye/face protection:

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety Glasses with side shields

Skin/hand protection:

Select and use gloves and/or protective clothing appropriate to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection:

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half face piece or full face piece air-purifying respirator suitable for organic vapors and particulates.

For questions about suitability for a specific application, consult with your respirator manufacturer.

Section 9: Physical and chemical properties:**9.1. Information based on physical and chemical properties:**

General Physical Form:	Solid
Odor, Color Grade:	Silver color, slight smoke rubber odor
Odor threshold	Not applicable
pH	Not applicable
Melting Point	No data
Boiling Point	Not applicable
Flash Point	No flash point
Evaporation Rate	Not applicable
Flammability (solid gas)	Not classified
Flammable Limits (LEL)	Not applicable
Flammable Limits (UEL)	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Specific Density	Not applicable
Solubility In Water	Not applicable
Solubility-non-water	Not applicable
Partition coefficient: n-octanol/water	Not applicable
Auto ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Volatile Organic Compounds	Not applicable
Percent volatile	Not applicable

Section 10: Stability and reactivity:

10.1. Reactivity:

This material may be reactive with certain agents under certain conditions – see the remaining headings in this section.

10.20 Chemical stability:

Stable.

10.3. Possibility of hazardous reactions:

Hazardous polymerization will not occur.

10.4. Conditions to avoid:

None known.

10.5. Incompatible materials:

Strong oxidizing agents.

10.6. Hazardous decomposition products:

<u>Substance</u>	<u>Condition</u>
None know	

Refer to section 5.2 for hazardous decomposition products during combustion.

Section 11: Toxicological information:

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or too signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects:

Sign and Symptoms of Exposure:

Base on test data and/or information on the components, this may produce the following health effects:

Inhalation:

No health effects are expected.

Skin Contact:

May be harmful if contact with skin.

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced):
Signs/symptoms may include redness, swelling, blistering and itching.

Eye Contact:

Contact with eyes during product use is not expected to result in significant irritation.

Toxic if swallowed.

Gastrointestinal irritation: Signs/symptoms may include abdominal pain. Stomach upset, nausea, vomiting and diarrhea.

May cause target organ effects after ingestion.

Targets organs effects:

May accumulate in the body.

Single exposure may cause:

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and or changes in blood pressure and heart rate.

Prolonged or repeated exposure may cause:

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Hard Tissue Effects: Signs/symptoms may include color changes in teeth and nails; changes in development of bone, teeth or nails, weakening of bones; and/or hair loss.

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination sensory loss, tingling or numbness extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Reproductive/Development Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient:	C.A.S. No.	Class Description:	Regulation:
Lead	7439-92-1	Anticipate human carcinogen	National Toxicology Program Carcinogen
Lead	7439-92-1	Group 2B: Possible Human Care	International Agency for Research and cancer

Additional Information:

This product, when in use under reasonable conditions and in accordance with direction for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the products directions for use may affect the performance of the product and may present potential health and safety hazards.

Toxicological Data:

Acute Toxicity:

Name:	Route:	Value:
Overall product	Dermal	Data not available or insufficient for classification calculated ATE 2,596.1mg/kg
Overall product	Ingestion	Data not available or insufficient for classification calculated ATE 104.9mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation:

Name:	Species:	Value:
Lead	similar compounds	No significant irritation

Serious Eye Damage/Irritation:

Name: Lead **Species:** similar compounds **Value:** Mild irritation

Skin Sensitization

Name: Lead **Species:** **Value:** Data not available or insufficient for classification

Respiratory Sensitization:

Name: Lead **Species:** **Value:** Data not available or insufficient for classification

Germ Cell Mutagenicity:

Name: Lead **Route:** In vivo **Value:** Some positive data exist, but the data are not sufficient for classification

Carcinogenicity:

Name: Lead **Route:** Not Specified **Species:** official classification **Value:** Carcinogenic

Reproductive Toxicity:**Reproductive and/or Developmental Effect:**

Name:	Route:	Value:	Species:	Test Result:	Exposure Duration:
Lead	Not Specified	Toxic to female reproduction	Human	LOAEL.10 ug/dl blood	
Lead	Not Specified	Toxic to male reproduction	Human	LOAEL.37 ug/dl blood	
Lead	Not Specified	Toxic to development	Human	NOAEL not available	

Target Organ:**Specific Target Organ Toxicity-single exposure:**

Name:	Route:	Target Organ:	Value:	Species:	Test Results:	Exposure Duration:
Lead	Ingestion	Nervous system	May cause damage To organs	Human	LOAEL 90 ug/dl blood	poisoning and/or abuse
Lead	Ingestion	Heart	Some positive data Are not sufficient for classification	Human	NOAEL not available	poisoning and/or abuse

Specific target organ toxicity – repeated exposure:

Name:	Route:	Target Organ:	Value:	Species:	Test Results:	Exposure Duration:
Lead	Inhalation	Kidney/bladder	May cause damage to organs through prolonged or repeated exposure	Human	LOAEL 60 ug/dl blood	occupational exposure
Lead	Inhalation	Hematopoietic system	May cause damage to organs through prolonged or repeated exposure	Human	LOAEL 50 ug/dl blood	occupational exposure
lead	Inhalation	Nervous system	May cause damage to organs through prolonged or repeated exposure	Human	LOAEL 40 ug/dl blood	occupational exposure
Lead	Inhalation	Heart endocrine system immune system vascular system	Some positive data exists, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Lead	Ingestion	Bone, teeth, nails and/or hair	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 20 ug/dl blood	3 months

lead	Ingestion	Eyes	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 5 mg/kg/day	20 days
Lead	Ingestion	Hematopoietic system, kidney and/or bladder	May cause damage to organs through prolonged or repeated exposure	Human	LOAEL 40 ug/dl blood	Environmental exposure
Lead	Ingestion	Nervous system	May cause damage to organs through prolonged or repeated exposure	Human	LOAEL 11 ug/dl blood	Environmental exposure
Lead	Ingestion	Auditory system heart, endocrine system, vascular system	Some positive data exists, but the data are not sufficient for classification	Human	NOAEL not available	Environmental exposure

Aspiration Hazard:

Name:
Lead

Value:
Not an aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information.

Section 12: Ecological information:

Ecological information:

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information.

Section 13: Disposal considerations:

13.1. Disposal methods:

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

Dispose of waste product in a permitted industrial waste facility.

EPA Hazard waste number (RCRA): DOO8 (Lead)

Section 14: Transport Information:

For transport information, please call 508-583-2699.

Section 15: Regulatory information:

15.1. US Federal Regulations

Contact Nuclead for more info.

311/312 Hazard Categories:

Fire hazard – No Pressure Hazard – No Reactivity Hazard – No Immediate Hazard – Yes Delayed Hazard - Yes

Section 313 Toxic chemical subject to reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Lead	7439-92-1	Trade secret 90-99
Lead	7439-92-1	90 – 99

15.2. State Regulations:

Contact Nuclead Co.

California Proposition 65:

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>Classification</u>
Lead	7439-92-1	Female reproductive toxin
Lead	7439-92-1	Male reproductive toxin
Lead	7439-92-1	Carcinogen
Lead	7439-92-1	Developmental toxin

Warning: This product contains a chemical known to the state of California to cause defects or other reproductive harm.

Warning: This product contains a chemical known to the state of California to cause cancer.

15.3. Chemical Inventories:

This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.

Contact Nuclead Co. for more information

15.4. International Regulations

Contact Nuclead Co. for more information

This SDS has been prepared to meet the US OSHA Hazard Communication Standard, 29 1910.1200.

Section 16: Other information:

NFPA Hazard Classification:

Health: 2 Flammability: 0 Instability: 0 Special Hazards: None

Nation fire protection association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are present by short term, acute exposure to a material under conditions of fire, spill or similar emergencies. Hazard ratings primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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