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Material Safety Data Sheet

Zinc Metal, Amalgamated MSDS

Section 1: Chemical Product and Company Identification

Product Name: Zinc Metal, Amalgamated

Catalog Codes: SLZ1039

CAS#: Mixture.

RTECS: ZG8600000

TSCA: TSCA 8(b) inventory: Zinc Metal; Mercury

CI#: Not applicable.

Synonym: Zinc Metal, Amalgamated

Chemical Name: Zinc Metal

Chemical Formula: Zn

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Zinc Metal	7440-66-6	99
Mercury	7439-97-6	1

Toxicological Data on Ingredients: Mercury LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Non-corrosive for skin. Non-permeator by skin.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH [Mercury]. Classified 3 (Not classifiable for human.) by IARC [Mercury]. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available.

DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of moisture.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Zinc + NaOH causes ignition. Oxidation of zinc by potassium proceeds with incandescence. Residues from zinc dust /acetic acid reduction operations may ignite after long delay if discarded into waste bins with paper. Incandescent reaction when Zinc and Arsenic or Tellurium, or Selenium are combined. When hydrazine mononitrate is heated in contact with zinc, a flaming decomposition occurs at temperatures a little above its melting point. Contact with acids and alkali hydroxides (sodium hydroxide, potassium hydroxide, calcium hydroxide, etc.) results in evolution of hydrogen with sufficient heat of reaction to ignite the hydrogen gas. Produces flammable gases on contact with water. May ignite on contact with water or moisture.

Special Remarks on Explosion Hazards:

A violent exothermic reaction or possible explosion occurs when mercury comes in contact with lithium and rubidium. CHLORINE DIOXIDE & LIQUID HG, WHEN MIXED, EXPLODE VIOLENTLY. Mercury and Ammonia can produce an explosive compound. A mixture of the dry carbonyl and oxygen will explode on vigorous shaking with mercury. Methyl azide in the presence of mercury was shown to be potentially explosive. (Mercury)

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions: Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Mercury TWA: 0.025 from ACGIH (TLV) [United States] SKIN TWA: 0.05 CEIL: 0.1 (mg/m³) from OSHA (PEL) [United States] Inhalation TWA: 0.025 (mg/m³) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Granular solid. Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Bluish-grey

pH (1% soln/water): Not applicable.

Boiling Point: 907°C (1664.6°F)

Melting Point: 419°C (786.2°F)

Critical Temperature: Not available.

Specific Gravity: The only known value is 13.55 (Water = 1) (Mercury).

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is insoluble in water and oil.

Ionicity (in Water): Not available.

Dispersion Properties: Is not dispersed in cold water, hot water.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials, moisture

Incompatibility with various substances:

Reactive with oxidizing agents, acids, alkalis, moisture. Non-reactive with metals.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with NH₄NO₃, barium oxide, Ba(NO₃)₂, Cadmium, CS₂, chlorates, Cl₂, CrO₃, F₂, Hydroxylamine, Pb(N₃)₂, MnCl₂, HNO₃, performic acid, KClO₃, KNO₃, N₂O₂, Selenium, NaClO₃, Na₂O₂, Sulfur, Te, (NH₄)₂S, As₂O₃, CS₂, CaCl₂, chlorinated rubber, catalytic metals, halocarbons, o-nitroanisole, nitrobenzene, nonmetals, oxidants, paint primer base, pentacarbonyliron, transition metal halides. seleninyl bromide, HCl, H₂SO₄, (Mg +Ba(NO₃)₂ +BaO₂), (ethyl acetoacetate +tribromoneopentyl alcohol. Contact with Alkali Hydroxides(Sodium Hydroxide, Potassium Hydroxide, Calcium Hydroxide, etc) results in evolution of hydrogen. Ammonium nitrate + zinc + water causes a violent reaction with evolution of steam and zinc oxide. When hydrazine mononitrate is heated in contact with zinc, a flaming decomposition occurs at temperatures a little above its melting point. May react vigorously or explosively on contact with water.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

LD₅₀: Not available. LC₅₀: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH [Mercury]. Classified 3 (Not classifiable for human.) by IARC [Mercury]. May cause damage to the following organs: lungs.

Other Toxic Effects on Humans:

Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation. Non-permeator by skin.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

Contains approximately 1.0% Mercury which may affect genetic material and cause adverse reproductive effects, birth defects and cancer

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause skin irritation. Dermal exposure to zinc may produce leg pains, fatigue, anorexia, and weight loss. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation. May affect the lungs. Inhalation of dust may cause flu-like "fume metal fever" with chills, malaise, respiratory symptoms (chest tightness, difficulty breathing, coughing), fever, chills, gastrointestinal symptoms (dry mouth, nausea, vomiting, diarrhea, abdominal pain, hypermotility, stomatitis, salivation, metallic taste), and gingivitis. It may affect behavior/central nervous system/ peripheral nervous system (depression, anxiety, decreased strength, muscle aches/weakness, lethargy, fatigue, headache, insomnia, dizziness, clumsiness or muscle incoordination, short-term memory loss, slurred speech, tremor, irritability, emotional instability, apathy, hallucinations, mania, xenophobia, sensitivity, impaired concentration, convulsions), liver, metabolism(anorexia), cardiovascular system (hypertension, tachycardia), urinary system (kidney damage, renal impairment),

and blood(increased white blood cell count, thrombocytopenia, anemia). Ingestion: May cause gastrointestinal tract irritation with abdominal cramps, nausea, vomiting, and diarrhea, thirst, salivation, and metallic taste. It may affect behavior/central nervous system, peripheral nervous system with symptoms similar to inhalation. May also affect liver, and kidneys and blood. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause dermatitis.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Mercury California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Mercury Connecticut hazardous material survey.: Mercury Illinois toxic substances disclosure to employee act: Mercury Illinois chemical safety act: Mercury New York release reporting list: Zinc Metal; Mercury Rhode Island RTK hazardous substances: Zinc Metal; Mercury Pennsylvania RTK: Zinc Metal; Mercury Florida: Zinc Metal Minnesota: Mercury Michigan critical material: Zinc Metal Massachusetts RTK: Zinc Metal; Mercury New Jersey: Zinc Metal; Mercury New Jersey spill list: Mercury Louisiana spill reporting: Mercury TSCA 8(b) inventory: Zinc Metal; Mercury TSCA 12(b) one time export: Zinc Metal

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R15- Contact with water liberates extremely flammable gases. R17- Spontaneously flammable in air. S7/8- Keep container tightly closed and dry.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 0

Reactivity: 1

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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