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**CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300**
For laboratory and industrial use only.
Not for drug, food or household use.

| | |
|---|---|
| **Product** | **ALUMINUM METAL** |
| **Synonyms** | Aluminum ; Aluminum Metal |

## Section 2 Hazards identification

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified
**Pictograms:** Not classified
**Target organs:** None known.

**GHS Classification:** Not classified
**GHS Label information**: **Hazard statement(s):** Not classified
**Precautionary statement(s):** Not classified

**Supplementary information:**
Do not inhale dust or fumes. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

**Hazards not otherwise classified:**
Health hazards not otherwise classified (HHNOC) - Combustible dust
Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name | CAS # | % | EINECS |
|---|---|---|---|
| Aluminum | 7429-90-5 | >99.5% | 231-072-3 |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Sand, dry chemical, or $CO_2$ should be used on surrounding fire. Do NOT use water on fire where molten metal is present.
**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.
**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Reacts with some acids and caustic solutions to produce hydrogen. Molten aluminum may explode on contact with water. It may also react violently with rust, certain metal oxides (e.g. oxides of copper, iron and lead) and nitrates (e.g. ammonium nitrate and fertilizers containing ammonium nitrate).

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

## Section 7 Handling and storage

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

**Handling:** Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale dust or fumes. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

**Exposure Limits:**

| Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|---|---|---|---|
| Aluminum, metal and insoluble compounds | TWA: 1 mg/m$^3$(A4) Respirable fraction | TWA: 5 mg/m$^3$ Respirable fraction | TWA: 5 mg/m$^3$ Respirable fraction |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Solid. Silver-grey metallic granules
**Odor:** No odor.
**Odor threshold:** Data not available.
**pH:** Data not available.
**Melting / Freezing point:** 660°C (1220°F)
**Boiling point:** Data not available
**Flash point:** Not applicable

**Evaporation rate ( = 1):** Not applicable
**Flammability (solid/gas):** Not applicable
**Explosion limits: Lower / Upper:** Not applicable
**Vapor pressure (mm Hg):** Data not available
**Vapor density (Air = 1):** 0.95 - 0.113 lb/in$^3$
**Relative density (Specific gravity):** Data not available
**Solubility(ies):** Insoluble

**Partition coefficient:** Data not available
**Auto-ignition temperature:** Not applicable
**Decomposition temperature:** Data not available.
**Viscosity:** Data not available.
**Molecular formula:** Al
**Molecular weight:** 26.98

## Section 10 Stability and reactivity

**Chemical stability:** Stable
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** Excessive temperatures and heat.

**Incompatibilities with other materials:** Strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons, and water.

**Hazardous decomposition products:** Reacts with water (in molten form), acids or alkalies to generate hydrogen gas.

## Section 11 Toxicological information

**Acute toxicity:** Data not available
**Skin corrosion/irritation:** Data not available
**Serious eye damage/irritation:** Data not available
**Respiratory or skin sensitization:** Data not available
**Germ cell mutagenicity:** Data not available
**Carcinogenity:** Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
**Reproductive toxicity:** Data not available
**STOT-single exposure:** Data not available
**STOT-repeated exposure:** Data not available
**Aspiration hazard:** Data not available
**Potential health effects:**
Inhalation: Inhalation of dust or fumes may irritate respiratory system.
Ingestion: May be harmful if swallowed.
Skin: May cause irritation.
Eyes: Contact with eyes may cause irritation.
**Signs and symptoms of exposure:** It has been reported that chronic exposure has been suspected of causing lung injury. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards. .
**Additional information: RTECS #:** BD0330000

## Section 12 Ecological information

**Toxicity to fish:** No data available
**Toxicity to daphnia and other aquatic invertebrates:** No data available
**Toxicity to algae:** No data available
**Persistence and degradability:** No data available
**Bioaccumulative potential:** No data available
**Mobility in soil:** No data available
**PBT and vPvB assessment:** No data available
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable
**Shipping name:** Not Regulated
**Hazard class:** Not applicable
**Packing group:** Not applicable
**Reportable Quantity:** No
**Marine pollutant:** No
**Exceptions:** Not applicable
**2020 ERG Guide #** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|---|---|---|---|---|---|---|
| Aluminum | Listed | Not listed | Not listed | Listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**Revision Date:** July 7, 2022 **Supercedes:** September 10, 2020

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| | |
|---|---|
| **Product** | **LEAD METAL** |
| **Synonyms** | Lead |

## Section 2 Hazards identification

**Signal word:** DANGER
**Pictograms:** GHS07 / GHS08 / GHS09
**Target organs:** Lungs, Kidneys

**GHS Classification:**
Acute toxicity, oral (Category 4)
Acute toxicity, inhalation (Category 4)
Reproductive toxicity (Category 1A)
Carcinogenicity (Category 2)
STOT RE (Category 2)
Aquatic acute (Category 1)
Aquatic chronic (Category 1)

**GHS Label information**: **Hazard statement:**
H302: Harmful if swallowed.
H332: Harmful if inhaled.
H351: Suspected of causing cancer.
H360: May damage fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statement:**
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust.
P264: Wash hands 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/protective clothing/eye protection/face protection.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P308+P313: IF exposed or concerned: Get medical attention.
P391: Collect spillage.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name | CAS # | % | EINECS |
|---|---|---|---|
| Lead metal | 7439-92-1 | >99% | 231-100-4 |

## Section 4 First aid measures

**INGESTION:** HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand. Do not use water on fire where molten metal is present.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts wtih oxidizing agents. Molten lead may explde on contact with water.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

## Section 7 Handling and storage

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

**Exposure Limits:**

| Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|---|---|---|---|
| Lead and inorganic compounds | TWA: 0.05 mg/m$^3$(A3) | TWA: 0.05 mg/m$^3$ | TWA: 0.05 mg/m$^3$ |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Solid. Silvery-gray, metallic granules
**Odor:** No odor.
**Odor threshold:** Data not available.
**pH:** Data not available.
**Melting / Freezing point:** 327°C (621°F)
**Boiling point:** 1753°C (3187°F)
**Flash point:** Data not available

**Evaporation rate ( = 1):** Data not available
**Flammability (solid/gas):** Data not available.
**Explosion limits: Lower / Upper:** Data not available
**Vapor pressure (mm Hg):** Data not available
**Vapor density (Air = 1):** Data not available
**Relative density (Specific gravity):** 11.34 (20/4°C)
**Solubility(ies):** Insoluble in water.

**Partition coefficient:** Data not available
**Auto-ignition temperature:** Data not available
**Decomposition temperature:** Data not available.
**Viscosity:** Data not available.
**Molecular formula:** Pb
**Molecular weight:** 207.19

## Section 10 Stability and reactivity

**Chemical stability:** Stable
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** Excessive temperatures and heat.

**Incompatible materials:** Strong oxidizers, hydrogen peroxide, acids.

**Hazardous decomposition products:** Lead fumes.

## Section 11 Toxicological information

**Acute toxicity:** Data not available
**Skin corrosion/irritation:** Data not available
**Serious eye damage/irritation:** Data not available
**Respiratory or skin sensitization:** Data not available
**Germ cell mutagenicity:** Data not available
**Carcinogenity:** Data not available
NTP: Reasonably anticipated to be a human carcinogen.
IARC classified: Group 2B: Possibly carcinogenic to humans.
OSHA: This product contains a chemical known to cause cancer.
CA Prop 65: ⚠ WARNING! : This product can expose you to chemicals including Lead and lead compounds, which are known to the State of California to cause cancer, birth defects, or other reproductive harm.
**Reproductive toxicity:** Data not available
**STOT-single exposure:** Data not available
**STOT-repeated exposure:** Data not available
**Aspiration hazard:** Data not available
**Potential health effects:**
Inhalation: Inhalation of dust or fume can cause lead poisoning.
Ingestion: May cause anorexia, vomiting, malaise, convulsions, due to increased intracranial pressure.
Skin: Contact with skin may cause irritation.
Eyes: Contact with eyes may cause transient irritation.
**Signs and symptoms of exposure:** Danger of cumulative effects. Exercise appropriate procedures to minimize potential hazards.
**Additional information: RTECS #:** OF7525000

## Section 12 Ecological information

**Toxicity to fish:** No data available
**Toxicity to daphnia and other aquatic invertebrates:** No data available
**Toxicity to algae:** No data available
**Persistence and degradability:** No data available
**Bioaccumulative potential:** No data available
**Mobility in soil:** No data available
**PBT and vPvB assessment:** No data available
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable
**Shipping name:** Not Regulated
**Hazard class:** Not applicable
**Packing group:** Not applicable
**Reportable Quantity:** No
**Marine pollutant:** No
**Exceptions:** Not applicable
**2020 ERG Guide #** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|---|---|---|---|---|---|---|
| Lead metal | Listed | Not listed | D008 | Listed | Not listed | ⚠ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**Revision Date:** October 19, 2022 **Revision Date:** October 5, 2020

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| | |
|---|---|
| **Product** | **NICKEL METAL, SHOT** |
| **Synonyms** | Nickel Powder / Nickel / Nickel Shot |

## Section 2 Hazards identification

**Signal word:** DANGER
**Pictograms:** GHS07 / GHS08
**Target organs:** Lungs

**GHS Classification:**
Skin sensitizer (Category 1)
Carcinogenicity (Category 2)
STOT RE (Category 1)

**GHS Label information**: **Hazard statement:**
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer.
H372: Causes damage to organs through prolonged or repeated exposure.

**Precautionary statement:**
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust or fume.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P333+P313: If skin irritation or rash occurs: Get medical attention.
P308+P313: IF exposed or concerned: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name | CAS # | % | EINECS |
|---|---|---|---|
| Nickel shot | 7440-02-0 | 100% | 231-111-4 |

## Section 4 First aid measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand. Do NOT use water on fire where molten metal is present.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Metal reacts with oxidizing agents. Reacts with some acids and caustic solutions ro produce hydrogen. Molten metals produce fumes, vapor and/or dust that may be toxic and/or a respiratory irritant.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

## Section 7 Handling and storage

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts or fume. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

**Exposure Limits:**

| Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|---|---|---|---|
| Nickel, elemental | TWA: 1.5 mg/m$^3$ I | TWA: 1.5 mg/m$^3$ | TWA: 0.015 mg/m$^3$ as Ni |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Solid. Silvery gray, spherical metal peices.
**Odor:** No odor.
**Odor threshold:** Data not available.
**pH:** Data not available.
**Melting / Freezing point:** 1452°C (2645°F)
**Boiling point:** 2732°C (4950°F)
**Flash point:** Flammable as dust

**Evaporation rate ( = 1):** Data not available
**Flammability (solid/gas):** Data not available.
**Explosion limits: Lower / Upper:** Data not available
**Vapor pressure (mm Hg):** 1 mm @ 1810°C
**Vapor density (Air = 1):** Data not available
**Relative density (Specific gravity):** 8.90 @ 20°C
**Solubility(ies):** Insoluble in water.

**Partition coefficient:** Data not available
**Auto-ignition temperature:** Data not available
**Decomposition temperature:** Data not available.
**Viscosity:** Data not available.
**Molecular formula:** Ni
**Molecular weight:** 58.71

## Section 10 Stability and reactivity

**Chemical stability:** Stable
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** Excessive temperatures and heat. Storage near mineral acids.

**Incompatible materials:** Ammonium nitrate, perchlorates, phosphorus, selenium, sulfur. Slowly attacked by dilute hydrochloric acid or sulfuric acid. Readily attacked by nitric acid.

**Hazardous decomposition products:** Reacts with mineral acids to generate hydrogen. Evolved hydrogen may become an explosion hazard. Heating nickel metal emits nickel dust or fumes.

## Section 11 Toxicological information

**Acute toxicity:** Data not available
**Skin corrosion/irritation:** Data not available
**Serious eye damage/irritation:** Data not available
**Respiratory or skin sensitization:** Data not available
**Germ cell mutagenicity:** Data not available
**Carcinogenity:** Data not available
NTP: Known to be a human carcinogen.
IARC classified: Group 2B: Possibly carcinogenic to humans.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
CA Prop 65: ⚠ WARNING! :This product can expose you to Nickel, which is known to the State of California to cause cancer.
**Reproductive toxicity:** Data not available
**STOT-single exposure:** Data not available
**STOT-repeated exposure:** Inhalation - Causes damage to organs through prolonged or repeated exposure.
**Aspiration hazard:** Data not available
**Potential health effects:**
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.
**Additional information: RTECS #:** QR5950000

## Section 12 Ecological information

**Toxicity to fish:** LC50 - Cyprinus carpio (Carp) - 1.3 mg/l - 96 h
**Toxicity to daphnia and other aquatic invertebrates:** EC50 - Daphnia magna (Water flea) - 1 mg/l - 48 h
**Toxicity to algae:** No data available
**Persistence and degradability:** No data available
**Bioaccumulative potential:** No data available
**Mobility in soil:** No data available
**PBT and vPvB assessment:** No data available
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable
**Shipping name:** Not Regulated
**Hazard class:** Not applicable
**Packing group:** Not applicable
**Reportable Quantity:** No
**Marine pollutant:** No
**Exceptions:** Not applicable
**2020 ERG Guide #** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|---|---|---|---|---|---|---|
| Nickel, shot | Listed | Not listed | Not listed | Listed | Not listed | ⚠ WARNING -Cancer - www.P65Warnings.ca.gov. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**Revision Date:** October 27, 2022 **Supercedes:** October 9, 2020

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| | |
|---|---|
| **Product** | **ZINC SHOT** |
| **Synonyms** | Zinc / Zinc Metal / Zinc Metal Shot |

## Section 2 Hazards identification

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified
**Pictograms:** Not classified
**Target organs:** None known

**GHS Classification:** Not classified
**GHS Label information**: **Hazard statement(s):** Not classified
**Precautionary statement(s):** Not classified

**Supplemental information:**
Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

**Hazards not otherwise classified:**
Health hazards not otherwise classified (HHNOC) - Combustible dust
Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name | CAS # | % | EINECS |
|---|---|---|---|
| Zinc, shot | 7440-66-6 | 100% | 231-175-3 |

## Section 4 First aid measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** HARMFUL IF INHALED AS FUME. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE MECHANICAL IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE DERMATITIS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use triclass, dry chemical fire extinguisher. Do NOT use water on fire where molten metal is present.
**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.
**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Small chips, turnings, and dust with ignite readily. Dust cloud may be explosive.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.
**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.
**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

## Section 7 Handling and storage

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

**Handling:** Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes from molten metals. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

**Exposure Limits:**

| Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|---|---|---|---|
| Particulates not otherwise classified | None established | TWA: 5 mg/m$^3$ respirable fraction | None established |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Solid. Metallic silver-gray pellets
**Odor:** No odor.
**Odor threshold:** Data not available.
**pH:** Data not available.
**Melting / Freezing point:** 419°C (787°F)
**Boiling point:** 907°C (1665°F)
**Flash point:** Not applicable

**Evaporation rate ( = 1):** Not applicable
**Flammability (solid/gas):** Not applicable
**Explosion limits: Lower / Upper:** Not applicable
**Vapor pressure (mm Hg):** Data not available
**Vapor density (Air = 1):** Data not available
**Relative density (Specific gravity):** 7.12
**Solubility(ies):** Insoluble

**Partition coefficient:** Data not available
**Auto-ignition temperature:** Not applicable
**Decomposition temperature:** Data not available.
**Viscosity:** Data not available.
**Molecular formula:** Zn
**Molecular weight:** 65.38

## Section 10 Stability and reactivity

**Chemical stability:** Stable
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** Excessive temperatures. Hydrogen may evolve when in contact with water or damp air.

**Incompatibilities with other materials:** Strong acids, halogens, acids, alkalies and water.

**Hazardous decomposition products:** Zinc oxides and zinc fumes. Reacts with water, acids or alkalies to generate hydrogen gas.

## Section 11 Toxicological information

**Acute toxicity:** Data not available
**Skin corrosion/irritation:** Data not available
**Serious eye damage/irritation:** Data not available
**Respiratory or skin sensitization:** Data not available
**Germ cell mutagenicity:** Data not available
**Carcinogenity:** Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
**Reproductive toxicity:** Data not available
**STOT-single exposure:** Data not available
**STOT-repeated exposure:** Data not available
**Aspiration hazard:** Data not available
**Potential health effects:**
Inhalation: Inhalation of dust or fume may cause irritation to eyes, nose, throat, and cause a metallic taste in the mouth. May cause metal fume fever or produce flu-like symptoms.
Ingestion: May be harmful if swallowed.
Skin: May cause dermatitis.
Eyes: Contact with eyes may cause mechanical irritation.
**Signs and symptoms of exposure:** Over-heating of alloy can produce metal fumes and oxides. Over-exposure to dust and fumes may cause mouth, eye, and nose irritation.
**Additional information: RTECS #:** None assigned

## Section 12 Ecological information

**Toxicity to fish:** No data available
**Toxicity to daphnia and other aquatic invertebrates:** No data available
**Toxicity to algae:** No data available
**Persistence and degradability:** No data available
**Bioaccumulative potential:** No data available
**Mobility in soil:** No data available
**PBT and vPvB assessment:** No data available
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable
**Shipping name:** Not Regulated
**Hazard class:** Not applicable
**Packing group:** Not applicable
**Reportable Quantity:** No
**Marine pollutant:** No
**Exceptions:** Not applicable
**2020 ERG Guide #** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|---|---|---|---|---|---|---|
| Zinc | Listed | Not listed | Not listed | Listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



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