

SAFETY DATA SHEET

Preparation Date: 06/25/2015

Revision date 12/10/2018

Revision Number: G2

1. Identification

Product identifier

Product code: Z1033
Product Name: ZINC METAL, 0.62 MM THICK, SHEET

Other means of identification

Synonyms: Zinc Metal Sheets; Zinc Metal Shot; Zinc Metal Strips; Zinc Foil
CAS #: 7440-66-6
RTECS # ZG8600000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not classified

Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight-% |
|------------|-----------|----------|
| Zinc Metal | 7440-66-6 | 100 |

4. FIRST AID MEASURES

First aid measures

| | |
|------------------------|--|
| General Advice: | National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. |
| Skin Contact: | Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary. |
| Eye Contact: | Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician. |
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary. |

Most important symptoms and effects, both acute and delayed

Symptoms Health injuries are not known or expected under normal use

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific 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. Zinc powder or dust that is damp or in contact with water or moist (damp) air evolves flammable hydrogen gas. The heat of reaction is sufficient that the hydrogen may ignite.

Special Protective Actions for Firefighters

Specific Methods:

No information available

Special Protective Equipment 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

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Acids
Alkalis

Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Component | CAS No | OSHA | NIOSH | ACGIH | AIHA WEEL |
|------------|-----------|------|-------|-------|-----------|
| Zinc Metal | 7440-66-6 | None | None | None | None |

Canada

| Component | CAS No | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|------------|-----------|------------------|---------------------------|------------------|-----------------|
| Zinc Metal | 7440-66-6 | None | None | None | None |

Australia and Mexico

| Component | CAS No | Australia | Mexico |
|------------|-----------|-----------|--------|
| Zinc Metal | 7440-66-6 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. 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.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses with side-shields.

Skin and body protection: Chemical resistant apron
Gloves
Long sleeved clothing

Respiratory protection: Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Solid

Appearance:
Lustrous. Metal.

Color:
Bluish-grey.

Odor:
No information available.

Taste:
No information available.

Formula:
Zn

Molecular/Formula weight (g/mole):

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| | | |
|---|--|--|
| 65.39 | Flammability (solid, gas) Non-flammable | Flashpoint (°C/°F): No information available |
| Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): No information available | Lower Explosion Limit (%): No information available |
| Upper Explosion Limit (%): No information available | Melting point/range(°C/°F): 419°C/786.2°F | Decomposition temperature(°C/°F): No information available |
| Boiling point/range(°C/°F): 907°C/1664.6°F | Bulk density: No information available | Density (g/cm3): No information available |
| Specific gravity: No information available | pH No information available | Vapor pressure @ 20°C (kPa): No information available |
| Evaporation rate: No information available | Vapor density: No information available | VOC content (g/L): No information available |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): No information available | Viscosity: No information available |
| Miscibility: No information available | Solubility: Insoluble in Acetone Insoluble in cold water Insoluble in diethyl ether Insoluble in hot water Insoluble in methanol Insoluble en n-octanol | |

10. STABILITY AND REACTIVITY

Reactivity

Reactive with acids

Reactive with alkalis

Reactive with oxidizing agents

Incompatible with acids, nitric acid (HNO₃), sulfuric acid, hydrochlorid acid, acetic acid peroxyformic acid, Chromic acid (CrO₃), performic acid, halogenated hydrocarbons, ammonium nitrate (NH₄NO₃), barium dioxide (BaO₂), Barium nitrate (Ba(NO₃)₂), Cadmium, carbon disulfide (CS₂), chlorates, chlorine (Cl₂), chlorine trifluoride (ClF₃), chlorine tetrafluoride, fluorine (F₂), Hydroxylamine, hydrazine mononitrate, Pb(N₃)₂, magnesium + barium nitrate + barium dioxide, manganese chloride (MnCl₂), potassium chlorate (KClO₃), potassium nitrate (KNO₃), potassium peroxide (K₂O₂), potassium dioxide, titanium oxide, Selenium, sodium chloriate (NaClO₃), sodium perioxide (Na₂O₂), Sulfur, Tellurium (Te), ammonium sulfide ((NH₄)₂S), arsenic trioxide (As₂O₃), bromomethane, chloromethane, bromine pentafluoride, calcium chloride (CaCl₂), alkali hydroxides (sodium hydroxide, potassium hydroxide, calcium hydroxide, etc.), chlorinated rubber, catalytic metals, halocarbons, o-nitroanisole, nitrobenzene, nonmetals, oxidants, paint primer base, pentacarbonoyliron, transition metal halides, seleninyl bromide, (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 with sufficient heat of reaction to ignite the hydrogen gas. Ammonium nitrate + zinc + water causes a violent reaction with evolution of steam and zinc oxide. Zinc foil reacts explosively when heated with anhydrous manganese dichloride. Zinc foil will ignite in cold chlorine when trace amounts of moisture are present. Zinc powder or dust that is damp or in contact with water or moist (damp) air evolves flammable hydrogen gas. The heat of reaction is sufficient that the hydrogen may ignite. Zinc in compact form (foil, granular, sheets, strips) does not burn readily until it is heated above 500 deg. C.

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Incompatible materials.

Incompatible Materials: Acids
Alkalis
Oxidizing agents

Hazardous decomposition products: No information available.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

| |
|--------------------|
| Zinc Metal |
| CAS No 7440-66-6 |

LD50/oral/rat = 630 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
Value - Acute Tox = 630 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
Value - Acute Tox = No information available

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available

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VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. Dermal exposure to zinc may produce leg pains, fatigue, anorexia and weight loss.

Eye Contact: Zinc in the forms of Zinc Metal Sheets; Zinc Metal Shot; Zinc Metal Strips; Zinc Foil; Zinc Metal sticks; Zinc Metal, mossy are not expected to get into the eyes and cause eye irritation.

Inhalation Not an inhalation hazard in forms of Zinc Metal Sheets; Zinc Metal Shot; Zinc Metal Strips; Zinc Foil; Zinc Metal sticks; Zinc Metal, mossy when handled under normal conditions.

Ingestion May cause digestive tract irritation with tightness in throat, nausea, vomiting, diarrhea, loss of appetite, malaise, abdominal pain. fever, and chills. May affect behavior/central nervous system and autonomic nervous system with ataxia, lethargy, staggering gait, mild derangement in cerebellar function, lightheadedness, dizziness, irritability, muscular stiffness, and pain. May also affect blood.

Aspiration hazard No information available.

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

Chronic Toxicity No information available.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

| Component | CAS No | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|------------|-----------|------------|---------------------|------------|------------------------|--|--|
| Zinc Metal | 7440-66-6 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Zinc Metal - 7440-66-6

Algae/aquatic plants

EC50: 0.11 - 0.271mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.09 - 0.125mg/L (72h, Pseudokirchneriella subcapitata)

Fish

LC50: 2.16 - 3.05mg/L (96h, Pimephales promelas) LC50: 0.211 - 0.269mg/L (96h, Pimephales promelas) LC50: =2.66mg/L (96h, Pimephales promelas) LC50: =30mg/L (96h, Cyprinus carpio) LC50: =0.45mg/L (96h, Cyprinus carpio) LC50: =7.8mg/L (96h, Cyprinus carpio) LC50: =3.5mg/L (96h, Lepomis macrochirus) LC50: =0.24mg/L (96h, Oncorhynchus mykiss) LC50: =0.59mg/L (96h, Oncorhynchus mykiss) LC50: =0.41mg/L (96h, Oncorhynchus mykiss)

Crustacea

EC50: 0.139 - 0.908mg/L (48h, Daphnia magna)

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Component | CAS No | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|------------|-----------|------------------------|------------------------|------------------------|------------------------|
| Zinc Metal | 7440-66-6 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR
UN Number Not regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Packing group No information available
Subsidiary Risk: No information available

IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID
UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available

ICAO (air)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available
Precautionary Statements - Response IF exposed or concerned
Special Provisions No information available

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|-----------------------------------|
| 15. REGULATORY INFORMATION |
|-----------------------------------|

International Inventories

| Component | CAS No | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | China IECSC | Australia AICS | EINECS-No. |
|------------|-----------|---------------|------------------|---------------------|-------------|-------------|----------------|-------------------|
| Zinc Metal | 7440-66-6 | PresentACTIVE | Present KE-35518 | Present | Not present | X | X | Present 231-175-3 |

U.S. Regulations

Product code: Z1033

Product name: ZINC METAL, 0.62 MM THICK, SHEET

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Zinc Metal

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 2021

New Jersey (EHS) List: 2021 500 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

Michigan - Critical Materials List: Present

New York Release Reporting - List of Hazardous Substances:

1000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 454kgfinal RQno reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

1000lbfinal RQno reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Component | CAS No | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|------------|-----------|------------|------------------------|----------------------------|-------------------------------|
| Zinc Metal | 7440-66-6 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Component | CAS No | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|------------|-----------|---|---|--|---------------------------------|------------------------------------|
| Zinc Metal | 7440-66-6 | 454 kg final RQ 1000 lb final RQ | None | None | None | 1.0 % de minimis concentration |

U.S. TSCA

| Component | CAS No | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|------------|-----------|---|--|
| Zinc Metal | 7440-66-6 | Not Applicable | Not Applicable |

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Not a dangerous product according to HPR classification criteria.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

| Component | CAS No | Canada (DSL) | Canada (NDSL) |
|------------|-----------|--------------|---------------|
| Zinc Metal | 7440-66-6 | Present | Not Listed |

| Component | CAS No | CEPA Schedule I - Toxic Substances |
|------------|-----------|---|
| Zinc Metal | 7440-66-6 | Not listed |
| Component | CAS No | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Zinc Metal | 7440-66-6 | Not listed |

EU Classification**EU GHS - SV - CLP 1272/2008**

| Component | CAS No | EU GHS - SV - CLP (1272/2008) |
|------------|-----------|-------------------------------|
| Zinc Metal | 7440-66-6 | |

EU - CLP (1272/2008)**R-phrase(s)**

not determined (not applicable)

S -phrase(s)

none

| Component | CAS No | Classification | Concentration Limits: | Safety Phrases |
|------------|-----------|----------------|-----------------------|----------------|
| Zinc Metal | 7440-66-6 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC**Indication of danger:**

None

16. OTHER INFORMATION

Preparation Date: 06/25/2015
Revision date: 12/10/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet