

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Zinc, Enriched Zinc
Chemical Formula	Zn
Molecular Weight:	65.37 amu
CAS No.	7440-66-6
RTECS No.	ZG8600000
Synonyms	Blue powder, Granular zinc, LS 2, LS 6, Merrillite, Rheinzink, Zinc dust, Zinc powder
Supplier Address*	ISO FLEX USA PO Box 29475 San Francisco CA 94129 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac / +1 800-535-5053
Email	iusa@isoflex.com
Website	www.isoflex.com
Preparation Information	ISO FLEX USA Product Safety +1 415-440-4433

*May include subsidiaries or affiliate companies/divisions

2. HAZARDS IDENTIFICATION

Emergency Overview: Self-heating substances and mixtures (Category 1), H251. Substances and mixtures, which in contact with water, emit flammable gases (Category 2), H261.

NFPA Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 0 Flammability = 0 Reactivity = 0



HMIS Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 0 Flammability = 0 Physical Hazard = 0

HEALTH HAZARD	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

Potential Health Effects

<i>Skin Contact</i>	May cause skin irritation
<i>Skin Absorption</i>	May be harmful if absorbed through the skin
<i>Eye Contact</i>	May cause eye irritation
<i>Inhalation</i>	Material may be irritating to mucous membranes and upper respiratory tract; may be harmful if inhaled
<i>Ingestion</i>	May be harmful if swallowed

For additional information on toxicity, please refer to Section 11.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Zinc
CAS No.:	7440-66-6
Chemical Formula:	Zn
Molecular Weight:	65.37 amu

4. FIRST AID MEASURES

<i>Oral Exposure</i>	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
<i>Inhalation Exposure</i>	If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
<i>Dermal Exposure</i>	In case of contact, immediately wash skin with soap and copious amounts of water.
<i>Eye Exposure</i>	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

5. FIREFIGHTING MEASURES

<i>Flash Point</i>	N/A
<i>Autoignition Temperature</i>	N/A
<i>Flammability</i>	N/A
<i>Suitable Extinguishing Media</i>	Water spray. carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

<i>Protective Equipment</i>	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
<i>Specific Hazard(s)</i>	Emits toxic fumes under fire conditions

6. ACCIDENTAL RELEASE MEASURES

<i>Personal Precautions</i>	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.
<i>Environmental Precautions</i>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
<i>Methods for Cleaning Up</i>	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Keep tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Wear dust mask

Hand

Protective gloves

Eye

Chemical safety goggles

General Hygiene Measures

Wash thoroughly after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State

Solid

Color

Grey

Safety Data

Molecular Weight:	65.37 amu	pH:	N/A
Boiling Point/Range:	N/A	Melting Point/Range:	419.5 °C
Freezing Point:	N/A	Vapor Pressure:	N/A
Vapor Density:	N/A	Saturated Vapor Concentration:	N/A
SG/Density:	7.14 g/cm ³	Bulk Density:	N/A
Odor Threshold:	N/A	Volatile%:	N/A
VOC Content:	N/A	Water Content:	N/A
Solvent Content:	N/A	Evaporation Rate:	N/A
Viscosity:	N/A	Surface Tension:	N/A
Partition Coefficient:	N/A	Decomposition Temperature:	N/A
Flash Point:	N/A	Explosion Limits:	N/A
Flammability:	N/A	Autoignition Temperature:	N/A
Refractive Index:	N/A	Optical Rotation:	N/A
Miscellaneous Data:	N/A	Solubility:	N/A

10. STABILITY AND REACTIVITY

Stable

Stable

Materials to Avoid

Zinc reacts with acids, strong alkalis, chlorides, chlorates, oxides, nitrates, fluorine, and carbon disulfide. The presence of moisture can result in spontaneous combustion.

Hazardous Decomposition Products

Zinc/zinc oxides, zinc oxide fumes

Hazardous Polymerization

Will not occur

11. TOXICOLOGICAL INFORMATION

Signs and Symptoms of Exposure

Inhalation of zinc fumes may result in sweet taste, throat dryness, cough, weakness, generalized aching, chills, fever, nausea, vomiting and purging. Remarks: Mild irritation effect.

Acute Toxicity

<i>Inhalation</i>	No data available
<i>Dermal</i>	No data available
<i>Skin Corrosion/Irritation</i>	No data available
<i>Serious Eye Damage/Eye Irritation</i>	No data available
<i>Respiratory or Skin Sensitization</i>	No data available
<i>Germ Cell Mutagenicity</i>	No data available

Carcinogenicity

<i>IARC</i>	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.
<i>ACGIH</i>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<i>NTP</i>	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.
<i>OSHA</i>	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.
<i>Reproductive Toxicity</i>	No data available
<i>Specific Target Organ Toxicity / Single Exposure</i>	No data available
<i>Specific Target Organ Toxicity / Repeated Exposure</i>	No data available
<i>Aspiration Hazard</i>	No data available

12. ECOLOGICAL INFORMATION

<i>Toxicity</i>	No data available
<i>Persistence and Degradability</i>	No data available
<i>Bioaccumulative Potential</i>	No data available
<i>Mobility in Soil</i>	No data available
<i>Results of PBT and vPvB Assessment</i>	PBT/vPvB assessment not available, as chemical safety assessment not required/not conducted
<i>Other Adverse Effects</i>	No data available

13. DISPOSAL CONSIDERATIONS

<i>Product</i>	Material in the elemental state should be recovered for reuse or recycling. Observe all federal, state, and local environmental regulations.
<i>Contaminated Packaging</i>	Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT**

Proper Shipping Name None
Non-Hazardous for Transport This substance is considered non-hazardous for transport.

IATA

Non-Hazardous for Air Transport Non-hazardous for air transport

Contact ISOFLEX for other transportation information.

15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards No SARA Hazards

Massachusetts Right to Know Components Zinc / CAS No. 7440-66-6 / Revision Date 1993-04-24

Pennsylvania Right to Know Components Zinc / CAS No. 7440-66-6 / Revision Date 1993-04-24

New Jersey Right to Know Components Zinc / CAS No. 7440-66-6 / Revision Date 1993-04-24

California Prop. 65 Components This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Prepared By ISOFLEX USA
PO Box 29475
San Francisco CA 94129
United States

Issuing Date December 29, 2014

Revision Date July 29, 2021

Revision Number 2

Revision Note Required review and update

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
BOD5	Biochemical Oxygen Demand
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
COD	Chemical Oxygen Demand
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
ECL	Korean Existing Chemicals List
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)

RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
SNUR	Significant New Use Rule (TSCA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

*One or more of the above-listed items may not appear in this document.

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between ISOFLEX USA (or any of its affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. ISOFLEX shall not be held liable for any damage resulting from handling or from contact with the above product.