

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier:

Identification as on the label/Trade name: Zinc Metal Powder, Enriched Zinc.

Molecular weight: 65.39

Chemical formula: Zn

Synonyms: Blue powder, Granular zinc, LS 2, LS 6, Merrillite, Rheinzink, Zinc dust, Zinc powder.

Details of the supplier of the Safety Data Sheet:

Neonest AB

Storgatan 70C, Solna

SE-17152

Sweden

Contact details:

+46-76-219-9731

24-hour Emergency Contact:

Swedish Poisons Centre

Phone: 112 - Ask for Poisons Information, 112 – begär Giftinformation.

Other International Contacts:

CHEMTREC 24-hour: +1-703-741-5500 (US + Worldwide)

NHS: 111 (UK)

Charite: +49 30 450 531 000 (Netherlands)

INTCF: +34 917689800 (Spain)

CapTv: +33 1 40 05 48 48 (France)

Section 2: Hazards Identification

Classification of the substances or mixture:

The mixture is classified according to: Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories:

Pyrophoric Solid (Category 1)

Water-Reactive (Category 1)

Aquatic Acute (Category 1)

Aquatic Chronic (Category 1)

Hazard statement:

H250

H260

H400

H410

Label elements:

Hazard pictograms:



Signal Words: Danger.

Hazard Statements:

H250 Catches fire spontaneously if exposed to air.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P222 Do not allow contact with air.

P231 + P232 Handle and store contents under inert gas. Protect from moisture.

P223 Do not allow contact with water.

P231 + P232 Handle and store contents under inert gas. Protect from moisture.

P233 Keep container tightly closed.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing.

P302 + P334 IF ON SKIN: Immerse in cool water or wrap in wet bandages.

P391 Collect spillage.

Other hazards: None known.

Section 3: Composition/Information on Ingredients

Substance/Mixture: Substance.

Ingredients:

Substance name (IUPAC/EC)	CAS-No.	Molecular weight	Concentration % by weight	Classification EC1272/2008
	EC-No.			
Zinc	7440-66-6	65.39	>99%	Pyr. Sol. 1 H250
	231-175-3			Water-react. 1 H260 Aquatic Acute 1 H400 Aquatic Chronic 1H410

For explanation of abbreviations see Section 16.

Section 4: First-Aid Measures

Description of first aid measures:

In case of inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Flush eyes with water as a precaution.

In case of ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Inhalation: May be harmful if inhaled; may cause respiratory tract irritation.

Eyes: May cause eye irritation.

Skin contact: May be harmful if absorbed through skin; may cause skin irritation.

Ingestion: May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically. Show this safety data sheet to a physician or emergency room.

Section 5: Fire-Fighting Measures

Extinguisher media:

Suitable extinguisher media: Dry sand, clay, approved class D extinguishers.

Unsuitable extinguishing media: Water spray.

Special hazards arising from the mixture: Flammable. Fine dust dispersed in air may ignite. Pyrophoric: Spontaneously flammable in air. Water-reactive. Contact with water liberates extremely flammable gases. Thermal decomposition can lead to release of irritating gases and vapours. Keep product and empty container away from heat and sources of ignition.

Advice for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Avoid dust formation. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods for containment and cleaning up:

Methods for cleaning up: Pick up and arrange disposal without creating dust. Do not flush with water. Keep in suitable, closed containers for disposal.

Reference to other sections:

Treat recovered material as described in the section "Disposal considerations".

Section 7: Handling and Storage

Precautions for safe handling:

Advice on safe handling: Provide appropriate exhaust ventilation at places where dust is formed. Further processing of solid materials may result in the formation of combustible dusts. Keep away from sources of ignition. Provide appropriate exhaust at places where dust is formed.

Hygiene measures: Do not eat, drink or smoke when using this product.

Conditions for safe storage, including incompatibilities:

Requirements for storage areas and containers: Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8: Exposure Controls/Personal Protection

Control parameters:

Occupational exposure limits: Contains no substances with occupational exposure limit values.

Exposure controls:

Appropriate engineering controls: Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Face shield and safety glasses: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand protection: The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle product with gloves.

Body protection: Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance (form): Solid (powder).

Colour: Grey.

Odour: Odourless.

Odour threshold: No data available.

Molecular Weight: 65.39

pH (concentration): No data available.

Melting point/range (°C): 419 °C

Boiling point/range (°C): 907 °C

Freezing point (°C): No data available.

Flash point (°C): No data available.

Evaporation rate: No data available.

Flammability (solid, gas): The substance is a flammable solid.

Ignition temperature (°C): No data available.

Upper/lower flammability/explosive limits: No data available.

Vapour pressure (20 °C): No data available

Vapour density: 7133 g/mL at 25 °C

Relative density (25 °C): No data available.

Water solubility (g/L) at 20 °C: Insoluble.

n-Octanol/Water partition coefficient: No data available.

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity, dynamic (mPa s): No data available.

Explosive properties: During processing, dust may form explosive mixture in air.

Oxidising properties: The substance or mixture is not classified as oxidizing.

Section 10: Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Water-reactive, moisture-sensitive, air-sensitive, pyrophoric: spontaneously flammable in air.

Possibility of hazardous reactions: Reacts violently with water.

Conditions to avoid: Heat, flames and sparks, moisture, dust formation.

Incompatible materials: Strong acids and oxidizing agents.

Hazardous decomposition products: Zinc/zinc oxides, zinc oxide fumes.

Section 11: Toxicological Information

Information on toxicological effects:

Not classified based on available information.

Classification according to GHS (1272/2008/EG, CLP)

Skin corrosion/irritation:

Not classified based on available information.

Serious eye damage/eye irritation:

Not classified based on available information.

Respiratory or skin sensitisation:

Not classified based on available information.

Germ cell mutagenicity:

Not classified based on available information.

Carcinogenicity:

IARC: 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.

ACGIH: 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.

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.

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.

Reproductive toxicity:

Not classified based on available information.

Specific target organ toxicity – single exposure (STOT):

Not classified based on available information.

Specific target organ toxicity (STOT) – repeated exposure:

Not classified based on available information.

Aspiration toxicity:

Not classified based on available information.

Section 12: Ecological Information

Toxicity:

Toxicity to Fish: LC₅₀ – *Cyprinus carpio* (carp) – 450 ug/l – 96 h

Toxicity to Daphnia and Other Aquatic Invertebrates: LC₅₀ – *Daphnia magna* (water flea) – 0.068 mg/l – 48 h

Mortality NOEC – *Daphnia* (water flea) 0.101 – 0.14 mg/l – 7 d

Persistence and degradability: No data available.

Bioaccumulative potential: Bioaccumulation: Algae – 7 d at 16 °C – 5 ug/l. Bioconcentration Factor (BCF): 466

Mobility in soil: No data available.

Results of PBT& vPvB assessment: Not relevant.

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life, with long lasting effects.

Section 13: Disposal Considerations

Waste treatment methods: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all local and national environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Section 14: Transport Information

DOT:

Proper Shipping Name: ZINC POWDER.

Hazard Class: 4.3

Subsidiary Hazard Class: 4.2

UN Number: 1436

Packing Group: II

Hazard Label:



TDG:

Proper Shipping Name: ZINC POWDER.

Hazard Class: 4.3

Subsidiary Hazard Class: 4.2

UN Number: 1436

Packing Group: II

IATA:

Proper Shipping Name: ZINC POWDER.

Hazard Class: 4.3

Subsidiary Hazard Class: 4.2

UN Number: 1436

Packing Group: II

IMDG:

Proper Shipping Name: ZINC POWDER.

Hazard Class: 4.3

Subsidiary Hazard Class: 4.2

UN Number: 1436

Packing Group: II

Section 15: Regulatory Information

EU regulations:

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations:

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use:

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding.

Not regulated.

Other EU regulations:

Directive 2012/18/EU on major accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Always applicable.

Directive 94/33/EC on the protection of young people at work

Not listed.

Other regulations: The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

SARA 311/312 Hazards**Acute Health Hazard:** Yes.**Chronic Health Hazard:** No.**Fire Hazard:** Yes.**Reactive Hazard:** Yes.**Clean Water Act:** CWA-Toxic Pollutants: Listed**Clean Air Act:** Not applicable.**OSHA:** Not applicable.**CERCLA:** This material contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).**Hazardous Substances RQs:** 1000 lb**Massachusetts Right to Know Components:** CAS No. 7440-66-6**Pennsylvania Right to Know Components:** CAS No. 7440-66-6**New Jersey Right to Know Components:** CAS No. 7440-66-6**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.**U.S. Department of Transportation****Reportable Quantity (RQ):** No.**DOT Marine Pollutant:** No.**DOT Severe Marine Pollutant:** No.**U.S. Department of Homeland Security:** This product does not contain any DHS chemicals.**Other International Regulations****Canada:** This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR).**WHMIS Hazard Class:** B6 Reactive flammable material.**National regulations:** Follow national regulation for work with chemical agents.**Chemical safety assessment:** No Chemical Safety Assessment has been carried out.**Section 16: Other Information****List of abbreviations:**

ACGIH American Conference of Governmental Industrial Hygienists

ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road

ALARA As Low As Is Reasonably Achievable

AMU Atomic Mass Unit

ANSI American National Standards Institute

BLS Basic Life Support

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)
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
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
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
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
RTECS Registry of Toxic Effects of Chemical Substances

SARA Superfund Amendments and Reauthorization Act (USA)

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

References:

Not available.

Full text of any H-statements not written out in full under Sections 2 to 15:

H250 Catches fire spontaneously if exposed to air.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Revision information:

None.

Training information:

Follow training instructions when handling this material.

Further Information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.