



POWER CHEMICAL

SAFETY DATA SHEET

1. Identification

Product Name	Zinc Metal Powder
CAS No	7440-66-6
Synonyms	Zinc Dust (Certified/Technical)
Recommended Use	Laboratory chemicals.
Uses advised against	Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

POWER CHEMICAL

Tel: (20) 111-7366722

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Substances/mixtures which, in contact with water, emit flammable gases	Category 1
Pyrophoric solids	Category 1
Combustible dust	Yes

Label Elements

Signal Word

Danger

Hazard Statements

May form combustible dust concentrations in air

In contact with water releases flammable gases which may ignite spontaneously

Catches fire spontaneously if exposed to air

**Precautionary Statements****Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Do not allow contact with air

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from any possible contact with water, because of violent reaction and possible flash fire

Handle under inert gas. Protect from moisture

Skin

Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages

Fire

In case of fire: Use fire-fighting equipment on basis class D for extinction

Drysand

Storage

Store under an inert atmosphere

Store in a dry place. Store in a closed container

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Zinc powder - zinc dust (pyrophoric)	7440-66-6	100

4. First-aid measures

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Most important symptoms and effects	None reasonably foreseeable.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media

Dry sand, clay, approved class D extinguishers.

Unsuitable Extinguishing Media

DO NOT USE WATER, Carbon dioxide (CO2), Dry chemical, Foam

Flash Point

No information available

Method -

No information available

Autoignition Temperature

460 °C / 860 °F

Explosion Limits

Upper

Lower

No data available

No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

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 vapors. Keep product and empty container away from heat and sources of ignition. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Hydrogen.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
1	4	3	W

6. Accidental release measures

Personal Precautions

Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation.

Environmental Precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling

Wear personal protective equipment/face protection. Avoid dust formation. Avoid ingestion and inhalation. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Keep away from heat, sparks and flame. Keep away from water or moist air. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases. Amines.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if

exposure limits are exceeded or if irritation or other symptoms are experienced.

Handle in accordance with good industrial hygiene and safety practice.

Hygiene Measures

9. Physical and chemical properties

Physical State**Autoignition Temperature****Appearance****Decomposition Temperature****Odor****Viscosity****Odor Threshold****Molecular Formula****pH****Molecular Weight****Melting Point/Range****Boiling Point/Range****Flash Point****Evaporation Rate****Flammability (solid,gas)****Flammability or explosive limits****Upper****Lower****Vapor Pressure****Vapor Density****Specific Gravity****Solubility****Partition coefficient; n-octanol/water**

Solid	No data available
Light blue	1 mmHg @ 487 °C
Odorless	Not applicable
No information available	7.14
No information available	Insoluble in water
419 °C / 786.2 °F	No data available
908 °C / 1666.4 °F	460 °C / 860 °F
No information available	No information available
Not applicable	Not applicable
No information available	Zn
No data available	65.37

10. Stability and reactivity

Reactive Hazard

Yes

Stability

Water reactive. Moisture sensitive. Air sensitive. Pyrophoric: Spontaneously flammable in air.

Conditions to Avoid

Avoid dust formation. Incompatible products. Exposure to air. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.

Strong oxidizing agents, Strong acids, Strong bases, Amines

Incompatible Materials

Hazardous Decomposition Products Hydrogen

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc powder - zinc dust (pyrophoric)	LD50 > 2000 mg/kg bw (Rat) OECD 401	Not listed	LC50 > 5.41 g Zn/m ³ air (rat) OECD 403 (highest attainable concentration)

Toxicologically Synergistic No information available

Products

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

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Zinc powder - zinc dust (pyrophoric)	7440-66-6	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Zinc powder - zinc dust (pyrophoric)	<p>EC50: 0.11 - 0.271 mg/L, 96h static (Pseudokirchneriella subcapitata)</p> <p>EC50: 0.09 - 0.125 mg/L, 72h static (Pseudokirchneriella subcapitata)</p>	<p>LC50: = 0.41 mg/L, 96h static (Oncorhynchus mykiss)</p> <p>LC50: = 0.59 mg/L, 96h semi-static (Oncorhynchus mykiss)</p> <p>LC50: 2.16 - 3.05 mg/L, 96h flow-through (Pimephales promelas)</p> <p>LC50: 0.211 - 0.269 mg/L, 96h semi-static (Pimephales promelas)</p> <p>LC50: = 2.66 mg/L, 96h static (Pimephales promelas)</p> <p>LC50: = 30 mg/L, 96h</p>	Not listed	<p>EC50: 0.139 - 0.908 mg/L, 48h Static (Daphnia magna)</p>

		(Cyprinus carpio) LC50: = 0.45 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 7.8 mg/L, 96h static (Cyprinus carpio) LC50: = 0.24 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 3.5 mg/L, 96h static (Lepomis macrochirus)		
--	--	--	--	--

Persistence and Degradability

Insoluble in water

Bioaccumulation/ Accumulation

No information available.

Mobility

Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No

Proper Shipping Name

Hazard Class

Subsidiary Hazard Class

Packing Group

UN-No

Proper Shipping Name

Hazard Class

Subsidiary Hazard Class

Packing Group

IATA

UN-No

TDG

Proper Shipping Name UN1436
Hazard Class ZINC POWDER
Subsidiary Hazard Class 4.3
Packing Group 4.2
IMDG/IMO II
UN-No UN1436
Proper Shipping Name ZINC POWDER
Hazard Class 4.3
Subsidiary Hazard Class 4.2

UN1436
ZINC POWDER
4.3
4.2
II
UN1436
ZINC POWDER
4.3
4.2
II
UN1436
ZINC POWDER
4.3
4.2
Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Zinc powder - zinc dust (pyrophoric)	7440-66-6	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

Component	CAS No	TSCA 12(b) - Notices of Export
Zinc powder - zinc dust (pyrophoric)	7440-66-6	Section 5 Section 6

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Zinc powder - zinc dust (pyrophoric)	7440-66-6	X	-	231-175-3	X	X		X	X	KE-35518

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations**SARA 313**

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Zinc powder - zinc dust (pyrophoric)	7440-66-6	100	1.0

SARA 311/312 Hazard Categories

See section 2 for more information

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Zinc powder - zinc dust (pyrophoric)	-	-	X	X

Clean Air Act**CERCLA**

OSHA - Occupational Safety and Health Administration

Not applicable

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Zinc powder - zinc dust (pyrophoric)	1000 lb	-

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know

Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Zinc powder - zinc dust (pyrophoric)	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

This product does not contain any DHS chemicals.

U.S. Department of Homeland Security

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Zinc powder - zinc dust (pyrophoric)	7440-66-6	Listed	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Zinc powder - zinc dust (pyrophoric)	7440-66-6	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 02-Jun-2010

Revision Date 24-Dec-2021

Print Date 24-Dec-2021

Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally

Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

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

End of SDS