CHEMICALSTORE.COM

SAFETY DATA SHEET

PRODUCT NAME: ZINC POWDER/ ZINC DUST
EFFECTIVE DATE: FEBRUARY 9, 2018
SCOPE: THIS SDS IS VALID FOR ZINC POWDER/ ZINC DUST Grade ZINC300 SOLD BY ChemicalStore

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name: Zinc Powder, Zinc Dust
CAS number: 7440-66-6Zinc Dust (stabilized)
EINECS number: 231-175-3
Reach Registration: 01-2119467174-37-0057 (Tonnage Band >1000 t/yr)

1.2 Relevant identified uses of the substance/mixture and uses advised against

In EEA member countries, use is restricted to only uses registered under REACH. See section 16 for a complete list of uses for which a Generic Exposure Scenario (GES) was REACH registered

1.3 Details of the supplier of the data sheet

Supplier Address	Supplier Phone	Supplier Contact	
Chemical Store Inc. 1059 Main Avenue Clifton, NJ 07011	+1 973 405 6248	Mohammad Hamzeh	
	Supplier Fax +1 973 272 1073	**Contact Email** info@ChemicalStore.com	**Contact Phone** +1 202 800 8820

1.4 Emergency Contact

Phone Number: +001 973 420 4972 (24 hours)
+001 973 405 6248

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 U.S.A.

For FIBC package units of >0.45 tons

Environmentally Hazardous Substance Solid
N.O.S., Class 9, UN 3077, Packing Group III, RQ (Zinc)

For FIBC package units <0.45 tons

Not Regulated

2.1.2 GHS Classification

2.1.2.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

2.1.2.2 Classification according to Directive 67/548/EEC

Dangerous for the environment; N; R50-53

2.1.2.3 Additional Information

For full text of R-phrases and Hazard- and EU Hazard-statements: see Section 16.

2.2 Labeling in EEA countries

Zinc Dust. Signal word: Warning.

Hazard Statements

H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container as hazardous or special waste in accordance with applicable law.

2.3 Other Hazards

Zinc Dust does not meet the criteria for PBT[1] or vPvB[1] according to (EC) 1907/2006, Annex XIII

3 COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#	EC#	% Composition	Type
Zinc dust, stabilized (Zn)	7440-66-6	231-175-3	95-100	Main
Zinc Oxide	1314-13-2	231-100-4	<5%	Impurity
Lead (PbO)	1317-36-8	082-001-00-6	<0.2%*	Impurity
Cadmium (CdO)	1306-19-0	215-146-2	<0.06%*	Impurity

Note: all other constituents are found at trace levels, or are not regulated. See individual product specifications for specific composition limits.

*- All grades are below these values but some have lower limits

4 FIRST AID MEASURES

4.1 Description of first aid measures

Skin Contact	Immediately wash with soap and water. Seek medical attention if irritation occurs.
Eye Contact	Immediately flush eyes with plenty of water. Get medical attention if irritation occurs.
Ingestion	Drink plenty of water. Do not induce vomiting. Seek medical attention or contact Poison Control.
Inhalation	Remove victim to fresh air. Seek medical attention if feeling unwell or experiencing respiratory distress

4.2 Most important symptoms and effects, both acute and delayed

Acute: May cause respiratory tract irritation

Delayed: No delayed symptoms or effects expected

4.3 Indication of any immediate medical attention and special treatment needed

None expected

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	CO2 or smother with sand
Unsuitable Extinguishing media	Do not use water to extinguish

5.2 Special hazards arising from the substance or mixture

Hazards from the substance	Do not inhale explosion or combustion gases. Burning produces heavy smoke.
Hazardous thermal decomposition products	Combustion products include Zinc Oxide.

5.3 Advice for fire-fighters

Special protective actions for fire-fighters	Use suitable breathing apparatus. In EEA member countries, collect contaminated fire extinguishing media. Do not release down drains. Move undamaged containers from immediate hazard area if it can be done safely
Special protective equipment for fire-fighters	Suitable breathing apparatus

5.4 Other

Water causes accelerate degradation of this product into Zinc Oxide, also releasing Hydrogen and heat which may ignite the evolved Hydrogen gas if trapped in a confined area. To prevent this keep material in a dry and ventilated space.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Avoid breathing dust. Refer to Section 7 and Section 8 for advice on handling/storage and PPE

6.2 Environmental Precautions

Prevent contamination of soil, drains, and surface water. Inform relevant authorities of spill where required.

6.3 Spill Cleanup Recommendation

Avoid dry sweeping or other methods which raise dust. Vacuum or wet-sweep and place into a suitable closable, labeled container for disposal. Dispose of waste via licensed waste disposal contractor.

7 HANDLING AND STORAGE

7.1 Precautions for Safe Handling

This product should be used in accordance with good industrial safety practices and industrial hygiene standards and all local, state, federal, and international regulations. Avoid contact with skin or eyes. Avoid creating airborne dust. Ensure adequate exhaust ventilation. Workers who handle material should wear gloves and thoroughly wash hands/forearms after exposure. See Section 8.2 if exposure exceeds limits.

7.2 Conditions for Safe Storage/Instabilities

This product should be stored in accordance with all local, state, federal and international regulations. Store product in a cool, dry, well-ventilated space in the original containers. Protect containers from damage and repair if damage occurs. Use all product within 2 years. Keep dry. Wet material may generate hydrogen gas which can accumulate in tightly sealed container

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

8.1.1 Occupational Exposure Limits

Product/Ingredient Name	8 Hour- TWA (mg/m^3)	15 min-STEL (mg/m^3)	References
USA	5 (Fumes) 10 (Dust)	10 (fumes)	ACGIH (1991) (guidance values)
USA	5 (Fumes) 15 (Dust; total) 5 (Dust; respirable)		OSHA (1989) (legal limit values)
The Netherlands	5 (Fumes)		SZW (1997)
Germany	5 (Fumes) 6 (Dust)		DFG (1997)
UK	5 (Fumes) 10 (Dust)		HSE (1998)
Sweden	5 (Fumes)		National Board of Occupation Safety and Health, Sweden (1993)
Denmark	4 (Fumes) 10 (Dust)		Arbejdstilsynet (1992)

8.2 Exposure Controls

Respiratory Protection	Avoid creating dust. If exposure levels exceed limits, respiratory protection approved for the work being performed must be worn.
Hand Protection	Always wear glove approved for the work being performed when handling the material.
Skin Protection	Wear normal chemical work clothing.
Eye Protection	Always wear approved protective eyewear if there is a potential for dust being created while handling the material.
General Protective Hygiene Measures	Use local exhaust ventilation to pro-actively reduce dust levels.

8.3 Other

Route(s) of entry	Inhalation and mechanical irritation of eyes and skin
Carcinogen Status	Not a NTP/IARC carcinogen
Signs and symptoms of exposure	Dry throat, cough, and dry itchy skin
Notes	Excess bulk exposure may cause acute respiratory irritation or dry skin

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Silver/grey powder
Typical Particle Size: **2 µm – 8 µm**
Flammability Limits: Not flammible
Explosive Limits: Not explosive
Odor: Odorless
Vapor Pressure: @590C = 10 mm HG
Odor Threshold: Odorless
Vapor Density: n/a
pH: Neutral
Relative Density: 7.1
Melting point: 420 °C
Solubility in water: 0.1 mg/l
Boiling Point: 907 °C
Flash Point: Not applicable to inorganics
Evaporation Rate n/a
Specific Gravity: varies
Molecular Weight: 65.409
Explosive Qualities: Not explosive

10 STABILITY AND REACTIVITY

Reactivity	Stable under normal, dry conditions
Chemical stability	Water may cause accelerate degradation of this product into Zinc Oxide, also releasing Hydrogen and heat which may ignite the evolved Hydrogen gas if trapped in a confined area.
Possibility of hazardous reactions	None
Conditions to avoid or incompatible materials	Water, flames, and other possible sources of ignition.
Hazardous decomposition products	Potential for ZnO fumes at elevated temperatures

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Routes of Entry	Oral, Inhalation
Acute Toxicity	LD_{50}(rat, Inhalation): >5.4 mg/L, 4 hours (Arts, 1996) LD_{50}(rat, oral): >2,000 mg/kg (Prinsen, 1996)
Chronic Toxicity	Not available
Mutagenicity	No data available

Carcinogenicity	No data available. Not listed as an IARC Carcinogen. Not listed in the NTP report on carcinogens.

11.2 Acute Exposure Symptoms

Eye Contact	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the respiratory tract
Skin Contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Tested Species	Result	Exposure length
Freshwater Algae	0.11 - 0.271 mg/L EC50	96 hours
Freshwater Algae	0.09 - 0.125 mg/L EC50	72 hours
Water Flea	0.139-0.908 mg/L EC50	48 hours
Freshwater Fish	0.24 mg/L LC50	96 hours
Freshwater Fish	0.41 mg/L LC50	96 hours

12.2 Persistence and degradability

Not rapidly degradable

12.3 Bioaccumulative potential

No evidence to indicate significant bioaccumulative potential

12.4 Mobility in soil

No evidence to indicate significant mobility in soil

12.5 Results of PBT and vPvB assessment

Zn is not PBT or vPvB.

12.6 Other adverse effects

None

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Generation of product waste should be minimized wherever possible. Disposal of product, solutions, and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements. Dispose of surplus and non-recyclable products via licensed waste disposal contractor. Waste should not be released into sewer system unless regulations permit such release

Containers/Packaging

Generation of packaging waste should be minimized wherever possible. Waste packaging should be recycled when possible. Incineration and/or landfill dumping should only be considered when recycling isn't feasible. Make sure to follow all local, state, federal, and international regulations when disposing of packaging materials.

14 TRANSPORTATION INFORMATION

14.1 This Product is NOT transport regulated in USA, Mexico or Canada unless in packages over 1000 lbs. This product DOES NOT fall under ERG number 138, Zinc Dust or Powder as it does not exhibit characteristics of those materials

14.2 EEA Member Countries UN Number

3077

14.3 UN proper shipping name:

ADR-Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (zinc powder – zinc dust (stabilized), ossido di zinco)

IATA-Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (zinc powder – zinc dust (stabilized), ossido di zinco)

IMDG-Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (zinc powder – zinc dust (stabilized), ossido di zinco)

14.4 Transportation hazard Class(es)

ADR-Class	ADR-Hazard ID Number	IATA-Class	IATA-Label	IMDG-Class	Sea(IMO)
9	90	9	Miscellaneous	9	Regulated as DG,MP

14.5 Packing Group

ADR-Packing Group III

IATA-Packing Group III

IMDG-Packing Group III

14.6 Environmental Hazards

IMDG-Marine pollutant, Dangerous to the environment

14.7 Special Precautions for User

IATA- Passenger Aircraft	IATA-Cargo Aircraft	IATA-S.P.	IATA-ERG	IMDG-EMS	IMDG-Storage category
911	911	A97	9L	F-A, S-F	A

14.8 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No

15 REGULATORY INFORMATION

15.1 EEA

This SDS complies with GHS-CLP, and EEA/EUI REACH, and SDS rules

15.2 EU REACH Information

Product Origin

01-2119467174-37-0057 (Tonnage >1000 t/year)

15.3 TSCA Equivalent 'inventory' regulations

AICS	Yes
SWISS	Yes
PICCS	Yes
DSL	Yes
NDSL	No
ASIA-PAC	Yes
EINECS	Yes, on inventory
ELINCS	No, notification/reporting not required

15.4

US DOT	Not Transport regulated, 49CFR172
SARA 302	None
SARA 311/312	None
SARA 313	Yes
CA Prop 65	Yes
CAA 112, 61 HAP	No, not regulated, no HAP
FIFRA 152 et seq.	No – Product is exempt from FIFRA as zinc metal and impurities
CERCLA 102/103	Yes – if container equal or above 1000 lbs.
NSF 60/61	Submitted NSF, UL
FCC	Listed
CONEG	Compliant
TSCA	Yes, on Inventory, Compliant with TSCA, Notification not required
RCRA 261	If governing spec is >1000 ppm Pb or >20ppm Cd, product must be TCLP (Total Metals) tested to determine if waste product is subject to RCRA
USFDA	Listed as GRAS at 21CFR182.8991

16 OTHER INFORMATION

16.1 HMIS Hazard Rating (Paint and Coating Industry)

16.1.1 Health

1 (Slight)

16.1.2 Flammability

0

16.1.3 Reactivity

0

16.1.4 Personal Protection

E (in bulk dust conditions gloves, mask, and goggles are recommended)

16.2 Table: Identified uses for ZnO and corresponding Generic Exposure Scenarios (GES)

IU number	Identified Use (IU) name	GES code
1	Zinc metal production RLE	GESZn 0
2	Zinc metal production ISF	GESZn 0
3	Storage of ingots-slabs in warehouses	GESZn 1
4	Production of chemicals (pyro)	GESZn 3
5	Production of chemicals (hydro)	GESZn 3
6	Additive for production of inorganic catalysts	GESZn 2
7	Melting, alloying and casting	GESZn 1
8	Cathodic protection - sacrifical anodes	GESZn 1
9	Downstream use of zinc-based sacrifical anodes	GESZn 8
10	Extraction of PM (Parkes process)	GESZn 5
11	Zinc casting / granules, pellets, prills, …	GESZn 1, GESZn 6
12	Zinc sheet casting and rolling	GESZn 1, GESZn 6
13	Wire and rods manufacturing	GESZn 1, GESZn 6
14	Downstream use of Zn based wire for metal spraying	GESZn 8
15	Component for soldering/brazing/welding products	GESZn 1, GESZn 6
16	Downstream use of Zinc based brazing/soldering products	GESZn 8
17	Strips and coins manufacturing	GESZn 1, GESZn 6
18	Batteries ballots, cans manufacturing	GESZn 1, GESZn 6
19	Zinc (pure or alloyed) pwder manufacturing	GESZn 2
20	Passivated zinc powder manufacturing (pure or alloyed)	GESZn 2
21	Use of active powders for batteries	GESZn 7
22	Use of Zinc powders, pure or slightly alloyed, for formulation of paints, coatings, and inks	GESZn 7
23	Use of zinc powder based paints, coatings and inks	GESZn 9
24	Use of zinc powder for mechanical plating	GESZn 7
25	Use of zinc powder as reductant reagent	GESZn 4, GESZn 7
26	Use of (alloyed) Zn powder as corrosion inhibitor for lubricants	GESZn 7
27	use of zinc powder (pure or alloyed) in the manufacture of diamond tools	GESZn 7
28	Use of zinc powder (pure or alloyed) in the manufacture of friction lining	GESZn 7

29	Use of zinc powder (pure or alloyed) in the manufacture of carbon brushes	GESZn 7
30	Brass manufacturing	GESZn 1
31	Use of brass casts for transformation into semi-products	GESZn 6
32	Use of brass containing products	GESZn 8
33	Die-casting alloys manufacturing	GESZn 1
34	Use of die-casting ingots	GESZn 6
35	Manufacturing of Zinc containing Al-alloys	GESZn 1
36	Use of zinc containing Al alloys	GESZn 6
37	General hot dip galvanizing	GESZn 5
38	Continuous hot dip galvanizing	GESZn 5
39	Electrogalvanizing	GESZn 5
40	Electroplating	GESZn 5
41	Production of "targets by (EB) PVD or other sputtering techniques	GESZn 5, Generic consumer/environment*
42	Use of galvanized goods	Generic consumer/environment

*Corresponds to “GES 10” in IUCLID

16.3 Other

This Safety Data Sheet (SDS) provides information on the safety requirements working with this material . This SDS is not a guarantee of the product’s properties. The information is believed to be accurate by the preparer utilizing reasonably available published data. We are not responsible for any inadvertent error or omission. End use of this product will include many factors beyond our control, and we cannot accept liability for any accident, injury, or damage caused by its use.

16.4 Preparation Date (see heading)

16.5 Foot Notes

1:

PBT substances **are** substances **that are Persistent, Bioaccumulative and Toxic (**PBT**).** vPvB substances **are** substances **that are very Persistent and very Bio-accumulative (**vPvB**).** PBT substances **and** vPvB substances **pose big threats to human health and the environment.**