Zinc Metal Pigment

Safety Data Sheet

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issue date: 16/05/2017 Revision date: 28/03/2023 Supersedes: 27/07/2022 Version: 7.0

SECTION 1: Identification

1.1. Identification

Product form	:	Substance
Trade name	:	Zinc Metal Pigment
IUPAC name	:	zinc
CAS-No.	:	7440-66-6
Product code	:	300000003628
Formula	:	Zn
Synonyms	:	4P16 ; 4P32 ; 4P64 ; 4P645 ; MP20 ; EE/F; EE/C; EE/RS ; ZP90 ; Microfine ; GMQ BZM-1; BZM-2; FMC; MC; MM; ERS; Standard 7 EP; Standard 5 EP; Super-fine; Super Extra EP ; Super Fine EP; Standard 5 EP ; Standard 7 EP ; ZMP STANDARD 7-EP-L ; ZMP STANDARD 7 –EP-S ; ZP-S; ArmoGalv® TDZ-D75; 4P64 RP; GMQ32; GMQ64; PHQ32 ; ZP100; Super Extra T1; Super Fine T1; Standard 5 T1; Standard 7 T1; ZP-S; Zinc Sand; ZS; Super Fine 25; EEF STD 7; STD7 Pb 14; GMQ64M; GMQ32M

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Manufacture of substances Paints
Restrictions on use	:	None known

1.3. Supplier

EverZinc Belgium - ZMP
Rue de l'Economie, 4
Loncin, 4431
Belgium
T +32 42 90 22 07
Info.MSDS@everzinc.com

1.4. Emergency telephone number

Emergency number	:	Africa and Middle East: +44 1865 407333/ Asia Pacific: Australia: +61 2 8014 4558, China: 400 120 6011 (toll-free number), Malaysia: +60 3 6207 4347, Philippines: +63 2 8231 2149, South Korea: +82 2 3479 8401, Rest of Asia Pacific: +44 1865 407333/ Europe: +44 1235 239670/ North America: Mexico: +52 55 5004 8763, Rest of North America: +1 215 207 0061/ South America: Chile. +56 2 2582 9336, Rest of South America: +44 1865 407333 24 Hours 7 days/week

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent
CAS-No. : 7440-66-6

Name	Product identifier	%	GHS US classification
zinc, powder or dust, stabilized, non pyrophorous	CAS-No.: 7440-66-6	≤ 100	Not classified
lead, powder, particle diameter <1mm (Impurity)	CAS-No.: 7439-92-1	≤ 0.1	Repr. 1A, H360 Lact., H362 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : First aider: Pay attention to self-protection!.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Gently wash with plenty of soap and water. Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from heat and direct sunlight. Keep cool. Store in a well-ventilated place. Store in a dry place. Store in a closed container.
Incompatible materials : Keep away from oxidizers, strong acids and strong bases.
Special rules on packaging : Keep only in original container.
Packaging materials : Keep only in the original container in a cool,well-ventilated place away from combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

(7440-66-6)

No additional information available

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)

No additional information available

lead, powder, particle diameter <1mm (7439-92-1)

USA - ACGIH - Occupational Exposure Limits

Local name	Lead and inorganic compounds, as Pb

lead, powder, particle diameter <1mm (7439-92-1)	
ACGIH OEL TWA	0.05 mg/m³
Remark (ACGIH)	TLV® Basis: CNS & PNS impair; hematologic eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2023
USA - ACGIH - Biological Exposure Indices	
Local name	LEAD AND INORGANIC COMPOUNDS
BEI (BLV)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: Not critical
Remark	Persons applying this BEI® are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB over the current CDC reference value.
Regulatory reference	ACGIH 2023

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Avoid all unnecessary exposure.

Hand protection:				
Protective gloves				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Protective gloves	butyl rubber			

Eye protection:		
Safety glasses		
Type	**Field of application**	**Characteristics**
Safety glasses		With side shields

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Color	:	Gray
Odor	:	odorless
Odor threshold	:	Not applicable
pH	:	Not applicable
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	908 °C
Flash point	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	Not applicable
Flammability (solid, gas)	:	Combustible.
Vapor pressure	:	Not applicable
Relative vapor density at 20°C	:	Not applicable
Relative density	:	No data available
Density	:	7.14 g/cm³
Solubility	:	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	Not applicable Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	> 500 mPa.s Temp.: 'other:' Parameter: 'dynamic viscosity (in mPa s)'
Explosion limits	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Contact with water liberates flammable gases. Self-heating; may catch fire.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Dust may form explosive mixture in air. Reacts with water (moisture): release of highly flammable gases/vapors hydrogen. In contact with water releases flammable gases which may ignite spontaneously.

10.4. Conditions to avoid

Moisture. Heat. flames. sparks. Avoid dust formation. Water, humidity.

10.5. Incompatible materials

Keep away from oxidizers, strong acids and strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

(7440-66-6)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	> 5.41 g/m³ Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	2500 mg/kg
LC50 Inhalation - Rat	> 5410 mg/m³ Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	5.41 mg/l/4h
ATE US (oral)	2500 mg/kg body weight
ATE US (dust, mist)	5.41 mg/l/4h

lead, powder, particle diameter <1mm (7439-92-1)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5.05 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))

Skin corrosion/irritation : Not classified
pH: Not applicable

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
pH	Not applicable (non-soluble in water)

lead, powder, particle diameter <1mm (7439-92-1)	
pH	No data available in the literature

Serious eye damage/irritation : Not classified
pH: Not applicable

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
pH	Not applicable (non-soluble in water)

lead, powder, particle diameter <1mm (7439-92-1)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

lead, powder, particle diameter <1mm (7439-92-1)	
IARC group	2A - Probably carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified.

(7440-66-6)	
LOAEL (oral,rat,90 days)	53.8 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral,rat,90 days)	31.52 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

lead, powder, particle diameter <1mm (7439-92-1)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : Not applicable

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
Viscosity, kinematic	Not applicable (solid)

lead, powder, particle diameter <1mm (7439-92-1)	
Viscosity, kinematic	Not applicable (solid)

Likely routes of exposure : Inhalation. Skin and eye contact.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - water : Toxic to aquatic life.

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
LC50 - Fish [1]	0.169 mg/l (ASTM E729-88, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Zinc ion)
EC50 - Crustacea [1]	416 µg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Ceriodaphnia dubia, Static system, Fresh water, Experimental value, Zinc ion)
ErC50 algae	0.15 mg/l

lead, powder, particle diameter <1mm (7439-92-1)	
LC50 - Fish [1]	107 – 1170 µg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
LC50 - Fish [2]	107 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 72h - Algae [1]	84 µg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

12.2. Persistence and degradability

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
Not rapidly degradable	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

lead, powder, particle diameter <1mm (7439-92-1)	
Not rapidly degradable	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

(7440-66-6)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable
Partition coefficient n-octanol/water (Log Kow)	Not applicable

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
BCF - Fish [1]	0.002 (40 day(s), Danio rerio, Semi-static system, Fresh water, Experimental value, Zinc ion)
Partition coefficient n-octanol/water (Log Pow)	-0.47 Source: NLM
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

lead, powder, particle diameter <1mm (7439-92-1)	
Partition coefficient n-octanol/water (Log Pow)	2.98 Source: SRC
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
Surface tension	No data available in the literature
Ecology - soil	Adsorbs into the soil.

lead, powder, particle diameter <1mm (7439-92-1)	
Surface tension	No data available (test not performed)
Ecology - soil	Adsorbs into the soil. Toxic to flora.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not applicable	UN3077	3077	3077

DOT	TDG	IMDG	IATA
14.2. Proper Shipping Name			
Not applicable	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc)	Environmentally hazardous substance, solid, n.o.s. (zinc)
14.3. Transport hazard class(es)			
Not applicable	9	9	9
			
14.4. Packing group			
Not applicable	III	III	III
14.5. Environmental hazards			
Not applicable	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

DOT
No data available

TDG
UN-No. (TDG) : UN3077

TDG Special Provisions	:	16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS,99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, may be handled, offered for transport or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means containment and during transport. (2) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.
Explosive Limit and Limited Quantity Index	:	5 kg
Excepted quantities (TDG)	:	E1

IMDG

Special provision (IMDG)	:	274, 335, 966, 967, 969
Limited quantities (IMDG)	:	5 kg
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	LP02, P002
Packing provisions (IMDG)	:	PP12
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B3
Tank instructions (IMDG)	:	BK1, BK2, BK3, T1
Tank special provisions (IMDG)	:	TP33
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	:	A
Stowage and handling (IMDG)	:	SW23
MFAG-No	:	171

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y956
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	956
PCA max net quantity (IATA)	:	400kg

CAO packing instructions (IATA)	:	956
CAO max net quantity (IATA)	:	400kg
Special provision (IATA)	:	A97, A158, A179, A197, A215
ERG code (IATA)	:	9L

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory		
Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S		
zinc, powder or dust, stabilized, non pyrophorous	CAS-No. 7440-66-6	≤ 100%
lead, powder, particle diameter <1mm	CAS-No. 7439-92-1	≤ 0.1%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
zinc, powder or dust, stabilized, non pyrophorous	CAS-No. 7440-66-6	≤ 100%
lead, powder, particle diameter <1mm	CAS-No. 7439-92-1	≤ 0.1%

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)	
CERCLA RQ	1000 lb

lead, powder, particle diameter <1mm (7439-92-1)	
CERCLA RQ	10 lb

15.2. International regulations

CANADA

(7440-66-6)
Listed on the Canadian DSL (Domestic Substances List)

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)
Listed on the Canadian DSL (Domestic Substances List)

lead, powder, particle diameter <1mm (7439-92-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

(7440-66-6)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Not listed on the Japanese ENCS (Existing New Chemical Substances) inventory Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Not listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory)

zinc, powder or dust, stabilized, non pyrophorous (7440-66-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on TECI (Thailand Existing Chemicals Inventory)

lead, powder, particle diameter <1mm (7439-92-1)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on TECI (Thailand Existing Chemicals Inventory)

15.3. US State regulations

WARNING: This product can expose you to lead powder, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200
Revision date : 28/03/2023

Full text of H-phrases	
H360	May damage fertility or the unborn child
H362	May cause harm to breast-fed children
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
	Revision date	Modified	No additional information available
	Supersedes	Modified	No additional information available

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.