

Zinc Metal Pigment

Version 2.0

TH

MSDS Number: 300000003628

Revision Date: 2016/03/15

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Zinc Metal Pigment

Trade name : 4P16 ; 4P32 ; 4P64 ; 4P645 ; MP20 ; Super Extra ; Super Fine ; Standard 5 ; Standard 7 ; ZS ; Zinc Sand; EE/F; EE/C; EE/RS ; ZP90 ; Microfine ; GMQ BZM-1; BZM-2; FMC; MC; MM; ERS; ZP-S; Standard 7 EP; Standard 5 EP; Super-fine; Super Extra EP; Super Fine EP; Standard 5 EP ; Standard 7 EP ; Super Fine 25 ; ZMP STANDARD 7-EP-L ; ZMP STANDARD 7 –EP-S ; ZP75; ArmoGalv® TDZ-D75

Product code : 300000003628

Supplier

Emergency telephone number : For transport in Europe, Central- and South America, Israel and Africa (Non-Arabic speaking countries): +32 3 213 15 70
For transport in the Middle East (Israel excluded) & Arabic speaking Africa: +32 3 213 33 79
For transport in the USA and Canada: 1-877 986 4267
For transport in Asian and the Pacific (China excluded): +65 62 64 78 36
For transport in China: 400 88 71 190

Hours of operation : This telephone number is available 24 hours per day, 7 days per week.

Recommended use of the chemical and restrictions on use

Recommended use : Anti-corrosion paint
Manufacture of chemicals.

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2. HAZARDS IDENTIFICATION

GHS Classification

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS Label element

Hazard pictograms :



Signal word : Warning

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

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Response:
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
Zinc.	7440-66-6	<=98
zinc oxide	1314-13-2	<=6

4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

If inhaled : If symptoms persist, call a physician.
If unconscious, place in recovery position and get medical attention immediately.

In case of eye contact : Remove contact lenses.
Flush eyes with water as a precaution.
Protect unharmed eye.

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	Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: None known.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water mist Water spray jet Foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	: Water High volume water jet
Specific hazards during fire-fighting	: May form explosive mixtures in air. Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas. The product reacts with water and generates heat. Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Warning: water promotes the spread of fire. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: None No hazardous combustion products are known
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

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- Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.
To maintain product quality, do not store in heat or direct sunlight.
- Materials to avoid : Do not store near acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Zinc.	7440-66-6	TWA	10 mg/m ³	ACGIH
		TWA	3 mg/m ³	ACGIH
zinc oxide	1314-13-2	TWA (Fumes)	5 mg/m ³	TH OEL
		TWA (Respirable fraction)	2 mg/m ³	ACGIH
		STEL (Respirable fraction)	10 mg/m ³	ACGIH

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Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Metal powder

Colour : grey

Odour : odourless

Melting point/range : 420 °C

Boiling point/boiling range : 908 °C

Flammability (solid, gas) : May be combustible at high temperature.

Relative density : 7.14

Density : 7.14 g/cm³

Solubility(ies)
Water solubility : insoluble

10. STABILITY AND REACTIVITY

Reactivity : In contact with water releases flammable gases.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : Wetted powder will heat and release gases (hydrogen)
Dust can form an explosive mixture in air.
No decomposition if stored and applied as directed.

Conditions to avoid : Heat, flames and sparks.
Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area.
Avoid generation of dust.
Exposure to moisture

Incompatible materials : Acids

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Oxidizing agents

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Components:

Zinc.:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

zinc oxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Result: No skin irritation

Serious eye damage/eye irritation

Product:

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Remarks: No data available

Components:

zinc oxide:

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

zinc oxide:

Exposure routes: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Components:

zinc oxide:

Genotoxicity in vitro

: Species: Bacteria
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo

: Species: Mammalian-Animal
Method: OECD Test Guideline 475
Result: negative
Remarks: Based on read across from structural related substance:
zinc sulphate

Carcinogenicity

Product:

Remarks: No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

STOT - single exposure

Product:

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Remarks: No data available

STOT - repeated exposure

Product:

Remarks: No data available

Further information

Product:

Remarks: No data available

Components:

zinc oxide:

Remarks: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Zinc.:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.238 - 0.269 mg/l
Exposure time: 96 h
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.356 mg/l
Exposure time: 48 h
Remarks: Fresh water

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.106 mg/l
Exposure time: 72 h
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0727 mg/l
Exposure time: 21 DAYS
Remarks: Fresh water

M-Factor (Chronic aquatic toxicity) : 1

zinc oxide:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 320 mg/l
Exposure time: 96 h
Remarks: Fresh water

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.17 mg/l
Exposure time: 72 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.017 mg/l
Exposure time: 72 h
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

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

Components:

zinc oxide:

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

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Dispose of in accordance with the European Directives on waste and hazardous waste.
In accordance with local and national regulations.
Do not contaminate ponds, waterways or ditches with chemical or used container.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in

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discussion with the waste disposal authorities.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulation

UNRTDG

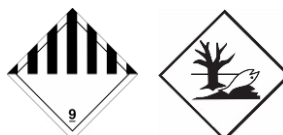
UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(Zinc., zinc oxide)
Class : 9
Packing group : III
Labels : 9



Marine pollutant : yes

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Zinc., zinc oxide)
Class : 9
Packing group : III
Labels : Miscellaneous



Packing instruction (cargo aircraft) : 956
Maximum quantity : 400.00 KG
Packing instruction (passenger aircraft) : 956
Maximum quantity : 400.00 KG

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(Zinc., zinc oxide)
Class : 9
Packing group : III

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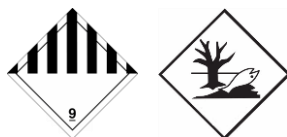
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Labels : 9



EmS Code : F-A, S-F

Marine pollutant : yes

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

Not applicable for product as supplied.

Special precautions for user

Remarks : Effective 1st of January 2015, when carried in single packaging or inner packagings of 5 kg or less, this material is not subject to the transport regulations dangerous goods. The single packaging or outer packaging must not be UN-approved but must be a good quality packaging. The product qualities covered by this MSDS have been tested according to the criteria for classes 4.1, 4.2 and 4.3. The test results show that these qualities don't meet the criteria for classification as dangerous goods in the classes 4.1, 4.2 or 4.3 for transport:

15. REGULATORY INFORMATION

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

Hazardous Substance Act B.E. 2535 : Not applicable

Emergency Decree on Controlling the Use of Volatile Substances B.E. 2533 : Not applicable

The components of this product are reported in the following inventories:

CH INV : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

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IECSC

: On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TDG - Transportation of Dangerous Goods; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System; DSL - Domestic Substances List (Canada); KECl - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Date format : yyyy/mm/dd

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.

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