

ZINC POWDER - ZINC DUST (Stabilized)

MATERIAL SAFETY DATA SHEET (As per EC Regulation 1272/2008)



Arabian Zinc Oxide Factory
Intermediate Chemicals Co. Ltd

1. Identification of substance/ Mixture and of the company/undertaking :

1.1 Product identifier -

Product name : Zinc dust (Stabilized)
Common commercial name : Zinc dust
Synonyms : Zinc Dust, Zinc Powder, Zinc Blue Powder, Zinc Metal Pigment
Product grades : All commercial quality product grades
(AZD35, AZD69 & all applicable grades)
Chemical formula : Zn
CAS number : 7440 -66 - 6
Eines number : 231-175-3
UN number : 3077
Reach Registration : 01-2119467174-37-0087
(Tonnage band 100-1000 MT/Year)

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

In coatings: Major constituent of Zinc Rich Anti-corrosion paints for Protective, Industrial & Marine coating applications.

In Mining: Merrill Crowe Process for purification of precious metals; like gold, silver.

Use advised against: None known

1.3 Details of the supplier of the safety data sheet -

Supplier's name : **INTERMEDIATE CHEMICALS CO. LTD.**
(ARABIAN ZINC OXIDE FACTORY)
ADDRESS : P. O. BOX 35790, JUBAIL 31961, K. S. A.
TELEPHONE NO. : +966 (13) 3417094
FAX NO. : +966 (13) 3417910
EMERGENCY CONTACT NO. : +966 505659722
E-mail. : mufeedk@alsuwaidi.com.sa
Hours of operation : 7 days a week / 24 hours per day

2. HAZARD IDENTIFICATION

Regulation (EC) No 1272/2008 [EU-GHS/CLP]:

Substance Index : 030-001-01-09

Classification in accordance with Regulation (EC) No 1272/2008:


Hazard Class & category codes : Aquatic Acute 1
Aquatic Chronic 1

Hazard Statement codes : H400, H410.

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Labelling in accordance with Regulation (EC) No 1272/2008:

Pictogram	: GHS09	
Hazard Statement	: H410	Very toxic to aquatic life with long lasting effects.
Signal word	: Wng (Warning)	
Precautionary statements	: P273 - Avoid release to the environment P391 - Collect spillage P501 – Dispose of contents / container in accordance with local / regional / national / international regulations	
Physical / chemical hazards	: No special danger to health. No ignition hazard and reaction hazard under normal condition.	

3. COMPOSITION / DATA ON COMPONENTS

<u>CHEMICAL NAME</u>	<u>CAS NO.</u>	<u>RANGE</u>	<u>EC NUMBER</u>
ZINC POWDER (Stabilized)	7440 - 66 -6	> 94%	231-175-3
ZINC OXIDE	1314 - 13 -2	< 6%	215-222-5
LEAD		< 0.01%	231-100-4

This SDS is not a TDS (Technical Data Sheet) or Specification, and covers a range of product grades and customer specifications, where the hazards and controls are substantially similar and covered by the same SDS. See the specific grade TDS or specification covering the tender for specific Zn powder specifications.

4. FIRST AID MEASURES

Inhalation	:	No known significant effects or critical hazards. If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	:	No known significant effects or critical hazards. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
Skin contact	:	No known significant effects or critical hazards. In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before re-use. Thoroughly clean shoes before re-use. Get medical attention if irritation occurs.
Eye contact	:	No known significant effects or critical hazards. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

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5. FIRE FIGHTING MEASURES

- Extinguishing media : Use dry chemical, CO2 or sand.
- Special exposure : No specific hazard.
- Hazards : This material is very toxic to aquatic organisms.
Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products : None.
- Special protective equipment for fire-fighters : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.
- Special remarks on explosion hazards : May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.
- Remarks : Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas. Wetted powder will heat and release gases (hydrogen). Isolate wetted packaging and powder from combustible materials and dry powder and store in a ventilated area. Avoid runoff to sewers.

6. ACCIDENTAL RELEASE MEASURE

- Personal precautions** : Immediately contact emergency personnel.
Keep unnecessary personnel away.
Use suitable protective equipment (Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

- Handling : Avoid contact of spilled material and runoff with soil and surface waterways.
- Storage : Keep container closed tightly.
Keep container in a well-ventilated area.
Keep away from sources of ignition. Keep away from heat.

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- Additional : Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid producing air-borne dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container dry.
- Packaging materials recommended : Use original container.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Zinc powder (stabilized)	: ACGIH TLV (United States, 1/2004). TWA: 10mg/m ³ 8 hours. Form: Particulates (insoluble) Not Otherwise Specified (PNOS)
Zinc oxide	: Lijst Grenswaarden / Valeurs Limites (Belgium, 12/2003). STEL: 10 mg/m ³ 15 minutes. Form: Fume TWA: 10 mg/m ³ 8 hours. Form: Dust TWA: 5 mg/m ³ 8 hours. Form: Fume

Exposure controls

Occupational exposure controls :

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Respiratory protection:

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin protection / Hand protection:

Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Hygiene measures :

General: Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

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9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid (very fine solid powder)
Color	Grey.
Odor	Odorless.
pH	Not applicable.
Melting point	420°C (788°F)
Boiling point	908 °C (1666.4°F)
Flash point	Not applicable.
Flammability (solid, gas)	Not Flammable.
Explosive properties	Non-explosive in presence of shocks. May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.
Oxidizing properties	Not applicable.
Relative Density	7.14 (Water = 1)
Solubility	Insoluble in cold water.
Auto ignition temperature	No data available
Partition coefficient n- octanol/water at 20°C	No data available
Evaporation rate	No data available
Vapor pressure	Negligible @ 20°C
Viscosity	No data available
Vapor density	No data available

9.2 Other Information: No additional information

10. STABILITY AND REACTIVITY

- Stability : The product is stable.
- Materials to avoid : Reactive with oxidizing agents, acids.
Slightly reactive with alkalis.
Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid producing air-borne dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container dry.
- Hazardous decomposition products : None

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11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Eye contact : No known significant effects or critical hazards.

Acute toxicity

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Zinc powder –zinc dust (stabilized)	LD50	>2000 mg/kg	Oral	Rat
	LDLo	388 mg/kg	Oral	Duck
Zinc oxide	LD50	7950 mg/kg	Oral	Mouse
	LD50	>2000 mg/kg	Oral	Dermal Rat
	LDLo	500 mg/kg	Oral	Human
	LD50	>5700 mg/m ³ (4 hours)	Inhalation	Rat [Klimisch et al. 1982]

Potential chronic health effects

Carcinogenicity : No known significant effects or critical hazards.
Classified A4 (Not classifiable for human or animal.) by ACGIH [zinc oxide]
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Eco-toxicity data :

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Zinc powder (stabilized)	Daphnia magna (EC50)	48hours	28mg/l
	Pimephales promelas (LC50)	96 hours	0.238mg/l
	Oncorhynchus mykiss (LC50)	96hours	0.24mg/l
	Oncorhynchus mykiss (LC50)	96hours	0.41mg/l
	Oncorhynchus mykiss (LC50)	96hours	0.56 mg/l
	Daphnia magna (LC50)	96 hours	0.57 mg/l
Zinc oxide	Daphnia magna (EC50)	48 hours	>1000 mg/l
	Oncorhynchus mykiss (LC50)	96hours	1.1mg/l
	Lepomis macrochirus (LC50)	96 hours	>320 mg/l
	Pimephales promelas (LC50)	96 hours	2246 mg/l
	Selenastrum Capricornutum.[Lisec1997] (EC50)	72 hours	0.17 mg/l

Other adverse effects Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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13. DISPOSAL CONSIDERATIONS

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. This product is recyclable. Consideration of disposal via this route should be given.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

14. TRANSPORT INFORMATION

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
ADR / RID / ADN Classification	UN3077	Environmentally hazardous substance, solid, n.o.s. Zinc Powder – Zinc Dust (Stabilized)	9	III	 	Hazard identification number 90
IMO / IMDG Classification	UN3077	Environmentally hazardous substance, solid, n.o.s. Zinc Powder – Zinc Dust (Stabilized)	9	III	 	EMS F-A, S-F
IATA Class	UN3077	Environmentally hazardous substance, solid, n.o.s. Zinc Powder – Zinc Dust (Stabilized)	9	III	 	-

Remark: The product qualities covered by this MSDS don't meet the criteria for classification as dangerous goods in the classes 4.1, 4.2 and 4.3 for transport.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not Relevant

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15. REGULATORY INFORMATION

This SDS complies with GHS-CLP, EU / reach regulations. Classification, labeling and packaging have been performed according to EU regulation (EC) No 1272/2008 of the European parliament and the council.
In accordance with Reach regulation (EC), 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorization (Authorization list).The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.
Customer may specify the requirements about labelling based on the regulations of that country.
Recommended restriction of use: Only for industrial use. The fields of application are specified in the Technical Information belonging to the product. Any further intended application should be discussed with the manufacturer.

16. OTHER INFORMATION

Date of issue : 05-June-2018

Version : 5

All previous versions are superseded by the current version

DISCLAIMER:

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