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

1.1 Product identifier -

Product name	:	Zinc Oxide
Common commercial name	:	Zinc Oxide
Synonyms	:	NA
Product grades	:	99.9%, White Seal, Technical, Animal Feed and all other commercial quality product grades
Chemical formula	:	ZnO
CAS number	:	1314-13-2
Einecs number	:	215-222-5
UN number	:	3077
Reach Registration	:	01-2119463881-32-0124 (Tonnage band 100-1000 MT/Year)

1.2 Relevant identified uses of the substance / mixture and uses advised against:
Production of Rubber, Tires, Ceramics, Paints, Polymers, Pharmaceuticals, and Manufacture of chemicals, micron nutrient

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 550245475
E-mail.	:	salahma@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 : 030-013-00-07

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

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

Hazard Statement codes : H400, H410.

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

CHEMICAL NAME	CAS NO.	RANGE	EC NUMBER
ZINC OXIDE (ZnO)	1314-13-2	90 - 100%	215-222-5
LEAD (As Pb)		< 0.1%	
CADMIUM (AS Cd)		< 0.02%	

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 Zinc oxide specifications.

4. FIRST AID MEASURES

Inhalation	:	No known significant effects or critical hazards. If inhaled, remove the victim to fresh air. Symptoms may include nose / respiratory tract irritation and coughing. Seek medical attention if feeling unwell or experiencing respiratory distress.
Ingestion	:	No known significant effects or critical hazards. Drink Plenty of water. Do not induce vomiting unless directed to do so by medical personnel. If large quantities are swallowed, call a physician immediately.
Skin contact	:	No known significant effects or critical hazards. In case of contact, wash with soap. Remove contaminated clothing and shoes. Wash clothing and 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. Symptoms may include irritation and redness. Get medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media	:	Use an extinguishing media suitable for the surrounding fire.
Special exposure Hazards	:	No specific hazard. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to environment. No Hazardous thermal decomposition products.
Special protective equipment for fire-fighters	:	Fire fighters should wear appropriate protective equipment and suitable breathing apparatus.

6. ACCIDENTAL RELEASE MEASURE

Personal precautions	:	Avoid breathing dust. Zinc Oxide is non toxic, but may cause zinc chills / brass founder's aque. Refer to section 7 and 8 for advice on handling and PPE.
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for cleaning up	:	Vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal. Refer to section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling	:	This product should be used in accordance with good industrial safety practices, industrial hygiene standards and all local state, international regulations. Avoid creating airborne dust. Ensure adequate exhaust ventilation. Workers who handle material should wear gloves and thoroughly wash hands / forearms after exposure. Eating, drinking and smoking should be prohibited in area where this material is handeled, stored and processed.
Storage	:	Store in original container protected from direct sunlight in a dry, cool, well-ventilated covered area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep away from acids or bases. Store in accordance with local regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters

Country	8 Hour- TWA (mg/m^3)	15 min- STEL (mg/m^3)	Remarks
UK	5 (Fumes), 10 (Dust)		HSE (1998)
Netherlands	5 (Fumes)		SZW (1997)
USA	5 (Fumes), 10 (Dust)	10 (Fumes)	ACGIH (1991) (Guidance values)
USA	5 (Fumes), 15 (Dust) 5 (Dust; Respirable)		OSHA (1989) (Legal limit values)
Germany	5 (Fumes), 6 (Dust)		DFG (1997)
Sweden	5 (Fumes)		National Board of Occupation Safety and Health, Sweden (1993)
Denmark	4 (Fumes), 10 (Dust)		Arbejdstilsynet (1992)

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 limit.

Respiratory protection:

Avoid Creating Dust. Use a properly fitted, particulate filter respirator complying with an approved standard if exposure levels exceed limits. 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 with an approved standard should be worn at all times when handling Zinc oxide. Wear suitable chemical work clothing; based on the task being performed, 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.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid (very fine solid powder)
Color	White / Yellowish / Grayish.
Odor	Odorless.
pH	Not applicable.
Molecular Weight	81.38
Melting point	Sublimation temperature: 1975°C
Initial boiling point and boiling range	Not available.
Flash point	Product does not sustain combustion.
Flammability (solid, gas)	Not Flammable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	No data available
Vapor pressure	Negligible @ 20°C
Vapor density	No data available
Density	5.3 to 5.7 g/cm3
Solubility	Insoluble in water.
Auto ignition temperature	No data available
Partition coefficient n- octanol/water at 20°C	No data available
Viscosity	No data available

9.2 Other Information: No additional information

10. STABILITY AND REACTIVITY

Stability	:	The product is stable.
Reactivity	:	Stable under normal, dry conditions
Hazardous Reactions	:	Hazardous reactions will not occur under normal conditions of storage and use.
Conditions to Avoid	:	No specific Data.
Incompatible Materials	:	Reactive or incompatible with acids, alkalis, heated magnesium, chlorinated rubber above 215°C.
Hazardous decomposition products	:	Not at normal conditions. Potential for ZnO fume sat elevated temperature.

11. TOXILOGICAL INFORMATION

Routs of Entry	:	Oral, Inhalation.
Carcinogenicity	:	No evidence of carcinogenicity in laboratory animals or in man. Not an IARC carcinogen. Not listed in the NTP report on carcinogens. Classified A4 (Not classifiable for human or animal.) by ACGIH [zinc oxide]
Mutagenicity	:	No Biologically relevant genotoxic activity.
Reproductive toxicity	:	No experimental evidence for Reproductive toxicity.
Acute Toxicity	:	LD50 (rat, Inhalation): 7,950 mg/kg (Encyclopedia of Toxicology: Reference Book 2005)
Chronic Toxicity	:	NOAEL: 50 mg/day (based on human clinical studies).
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.

12. ECOLOGICAL INFORMATION

Eco-toxicity data :

Ingredient	Species	Period	Result
Zinc oxide	Algae - Selenastrum Capricornutum	72 hours	0.17 mg/l (Acute EC50)
	Daphnia magna	48 hours	0.40 mg/l Chronic NOEC)
	Fish - Oncorhynchus mykiss	96hours	1.1mg/l (LC50)

Other adverse effects	:	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and Degradability	:	Not Rapidly degradable.
Bio accumulative Potential	:	No evidence to indicate significant bioaccumulative potential.
Mobility in Soil	:	No evidence to indicate significant mobility in soil.
PBT and vPvB assessment	:	ZnO is not PBT or vPvB.

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. Dispose of surplus and non-recyclable products via licensed waste disposal contractor.

Packaging : Waste packaging should be recycled. Incineration or landfill dumping should only be considered when recycling is not feasible.

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 Oxide)	**9**	**III**		Hazard identification number 90. Tunnel code (E). No Special precautions for users.
IMO / IMDG Classification	UN3077	Environmentally hazardous substance, solid, n.o.s. (Zinc Oxide) Marine Pollutant (Zinc Oxide)	**9**	III		EMS F-A, S-F No Special precautions for users.
IATA Class	UN3077	Environmentally hazardous substance, solid, n.o.s. (Zinc Oxide)	**9**	III		**Passenger & Cargo Aircraft:** 400 kg, Packaging instructions: 956 **Passenger Aircraft:** 30 Kg, Packaging instructions: Y956 **IATA-S.P:** A97, A158, A179 Not restricetd as per SPA197

Remark:
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not Relevant
The EU diamond for Dangerous to the Environment has a red border. A copy of this document may not be in colour resulting in the above border incorrectly being diplayed in black.

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 requiremnts 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 : 16-Sep-2018
Version : 5
All previous versions are superseded by the current version

DISCLAIMER:

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