



**SAFETY DATA SHEET**  
**Zinc Oxide****1. SUBSTANCE AND MANUFACTURER IDENTIFICATION**

<b>1.1 PRODUCT IDENTIFIER:</b>																	
<b>PRODUCT NAME</b>	Zinc Oxide - Any grades.																
<b>PRODUCT CODE</b>	CAS number: 1314-13-2. EC number: 215-222-5. Index number: 030-013-00-7 Registration number: 01-2119463881-32-0078.																
<b>COMMON, COMMERCIAL NAME, SYNONYMS</b>	Zinc Oxide - Green Seal, Zinc Oxide - Gold Seal, Zinc Oxide - Silver Seal, Zinc Oxide - Red Seal, Zinc Oxide - Commercial Seal.																
<b>1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE AND USES ADVISED AGAINST:</b>	Chemical reagent or raw material for production of: rubber compounding (activator) and tires, vulcanization or polymerization processes, ceramics, paints (pigment, anti-corrosive and anti-fouling paints), glass, zinc chemicals production (basic chemical for production of organic and inorganic compounds), basic compound for production of additives in lubricants and fuel and fuels, plastics, animal feed (trace element compound), component of fertilizers, plating agents and metal surface treatment, polymers, electronics (basic component for varistors and ferrites), component in batteries, catalysts, pharmaceuticals (API) and cosmetics (UV-absorber) substances, semiconductors, photosensitive agents and photo-chemicals substances, corrosion inhibitors and anti-scaling agents.																
<b>1.3 SUPPLIER INFORMATION OF SAFETY DATA SHEET:</b>																	
<b>MANUFACTURER</b>	A-ESSE S.p.A. Via Conturli, 33 16042 Carasco GE - ITALY Phone company numbers: 0039 185 350177 – 8 (from Monday to Wednesday, from 8.00 am, to 6.00 pm) Fax number: 0039 185 350863 Phone handler numbers: 0039 348 5831754 (h.24) e-mail: <a href="mailto:ufficiotecnico@a-esse.com">ufficiotecnico@a-esse.com</a> - <a href="http://www.a-esse.com">http://www.a-esse.com</a>																
<b>1.4 EMERGENCY TELEPHONE NUMBERS</b>	<table border="1"><tr><td>Tel.: 0039 06 49978000</td><td>Hospital: Centro Antiveleni Azienda ospedaliera universitaria Policlinico Umberto (Roma) - h.24</td></tr><tr><td>Tel.: 0039 06 3054343</td><td>Hospital: Centro Antiveleni Policlinico A. Gemelli (Roma) - h.24</td></tr><tr><td>Tel.: 0039 0382 24444</td><td>Hospital: Centro Antiveleni Fondazione S. Maugeri (Pavia) - h.24</td></tr><tr><td>Tel.: 0039 02 66101029</td><td>Hospital: Centro Antiveleni Ospedale Niguarda Cà Grande (Milano) - h.24</td></tr><tr><td>Tel.: 0039 800 883300</td><td>Hospital: Centro Antiveleni Ospedali Riuniti di Bergamo (Bergamo) - h.24</td></tr><tr><td>Tel.: 0039 055 797819</td><td>Hospital: Centro Antiveleni Azienda Ospedaliero Universitaria Careggi (Firenze) - h.24</td></tr><tr><td>Tel.: 0039 081 7472870 Tel.: 0039 081 5453333</td><td>Hospital: Centro Antiveleni Azienda ospedaliera A. Cardarelli (Napoli) - h.24</td></tr><tr><td>Tel.: 0039 0881 732326</td><td>Hospital: Centro Antiveleni Azienda ospedaliero universitaria (Foggia) - h.24</td></tr></table>	Tel.: 0039 06 49978000	Hospital: Centro Antiveleni Azienda ospedaliera universitaria Policlinico Umberto (Roma) - h.24	Tel.: 0039 06 3054343	Hospital: Centro Antiveleni Policlinico A. Gemelli (Roma) - h.24	Tel.: 0039 0382 24444	Hospital: Centro Antiveleni Fondazione S. Maugeri (Pavia) - h.24	Tel.: 0039 02 66101029	Hospital: Centro Antiveleni Ospedale Niguarda Cà Grande (Milano) - h.24	Tel.: 0039 800 883300	Hospital: Centro Antiveleni Ospedali Riuniti di Bergamo (Bergamo) - h.24	Tel.: 0039 055 797819	Hospital: Centro Antiveleni Azienda Ospedaliero Universitaria Careggi (Firenze) - h.24	Tel.: 0039 081 7472870 Tel.: 0039 081 5453333	Hospital: Centro Antiveleni Azienda ospedaliera A. Cardarelli (Napoli) - h.24	Tel.: 0039 0881 732326	Hospital: Centro Antiveleni Azienda ospedaliero universitaria (Foggia) - h.24
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## 2. HAZARD IDENTIFICATION

<b>2.1 CLASSIFICATION OF THE SUBSTANCE:</b>	<p>Classification according to Regulation (EC) n. 1272/2008 (CLP/GHS)</p> <p>Hazard pictogram:</p>  <p>GHS09: environment</p> <p>Aquatic Acute 1 H400 - Very toxic to aquatic life</p> <p>Aquatic Chronic 1 H410 - Very toxic to aquatic life with long lasting effects</p>
<b>2.2 LABEL ELEMENTS:</b>	<p>Labeling according to Regulation (EC) n. 1272/2008 (CLP/GHS)</p>  <p>GHS09: environment</p> <p><b>Signal word:</b> warning</p> <p><b>Hazard statements:</b></p> <p>H410 - Very toxic to aquatic life with long lasting effects</p> <p><b>Precautionary statements:</b></p> <p>P273 - Avoid release to the environment.</p> <p>P391 - Collect spillage.</p> <p>P501 - Dispose of contents / container in accordance with local / regional / national / international.</p>
<b>2.3 OTHER HAZARDS:</b>	
<b>CRITERIA FOR PBT AND vPvB</b>	<p>Substance meets the criteria for PBT according to Regulation (EC) N° 1907/2006, Annex XIII</p> <ul style="list-style-type: none"> <li>No</li> </ul> <p>Substance meets the criteria for vPvB according to Regulation (EC) N° 1907/2006, Annex XIII:</p> <ul style="list-style-type: none"> <li>No</li> </ul>

For more detailed information about effects on health and relevant symptoms, see Section 11.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>3.1 SUBSTANCE</b>	Substance
<b>CHEMICAL FORMULATION</b>	ZnO

COMPONENT NAME:	CAS NUMBER	%	CE NUMBER (EINECS)	CLASSIFICATION
ZINC OXIDE	1314-13-2	> 95	215-222-5	Environment, Attention, Aquatic Acute 1 H400, Aquatic Chronic 1 H410

The occupancy exposure limits are listed in Section 8 - The complete text of R sentences mentioned is given in Section 16.

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#### 4. FIRST AID MEASURES

<b>4.1 DESCRIPTION OF FIRST AID MEASURES:</b>	
<b>INHALATION</b>	Take away from exposure source and let breath fresh air. Place the injured person in a position comfortable for breathing. Making, if necessary, shares of first aid by trained personnel only. Consult a doctor if complaint.
<b>SWALLOWING</b>	Wash the mouth with clean water, remove any dentures. drinking water. Do not induce vomiting. Call a surgery, if problems are evidenced.
<b>SKIN CONTACT</b>	Wash the skin immediately with plenty water. Remove clothing and shoes, wash before use. Call a surgery, if irritation occurs.
<b>EYE CONTACT</b>	Wash eyes immediately with plenty water for several minutes. Check for slow, then remove and rinse out with plenty of water. Call a surgery, if problems are evidenced.
<b>4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:</b>	There are no known effects and / or specific symptoms
<b>4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:</b>	There are no such situations that require immediate medical consultation. However, in case of symptoms after contact or inhalation or ingestion of the substance, you should consult a physician.

#### 5. FIRE FIGHTING MEASURES

<b>5.1 EXTINGUISHING DEVICES:</b>	Not combustible substance. Apply an extinguishing substance suitable for delimited fires.
<b>5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:</b>	No risk because the substance is not classified as flammable.
<b>5.3 ADVICE FOR FIREFIGHTERS:</b>	
<b>SPECIAL FIRE FIGHTING MEASURES</b>	Dike water used to extinguish the fire because contaminated with this substance and prevent access to waterway, sewer or drain.
<b>PROTECTIVE MEASURES FOR FIRE-EXTINGUISHING PERSONNEL</b>	In the case of a fire nearby, use a breathing apparatus with protection shield on face. Wear suitable protective clothing.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:</b>	Wear suitable protective clothing as described in Section 8. Avoid generating dust. Vacuum up and collect spilled material in appropriate containers.
<b>6.2 ENVIRONMENTAL PRECAUTIONS:</b>	Avoid the dispersion and the formation dust. Prevent entry into waterways and ground water, sewer, or water networks. Avoid contamination of soil. Notify authorities if released in large quantities.
<b>6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:</b>	Vacuum up and collect spilled material in appropriate labelled containers for its recovery or disposal. Dispose of the refusal through company authorized. Avoid dust formation. Prevent entry into waterways and ground water, sewer, or water networks.

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<b>6.4 REFERENCE TO OTHER SECTIONS:</b>	See section 1 for emergency numbers and section 8 for personal protective equipment. For information on waste disposal refer to section 13.
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## 7. HANDLING AND STORAGE

<b>7.1 PRECAUTIONS FOR SAFE HANDLING:</b>	Wear appropriate personal protective equipment (see sect. 8). Avoid exposure. Avoid generating dust. Wash hands after use. Do not eat, drink or smoke in areas where the material is handled, stored, and processed. Remove contaminated clothing and protective equipment before entering areas where you eat.
<b>7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:</b>	Wear suitable personal protective equipment (see sect.8). Keep the product stored in dry, ventilated room, inside closed containers. Store away from acids and bases. Store inside the original containers.
<b>7.3 SPECIFIC END USE(S):</b>	No other information available.

## 8. PERSONAL PROTECTION/EXPOSURE CONTROL

<b>8.1 CONTROL PARAMETERS:</b>	<p>No occupancy safety limits are known – Italy.</p> <p>Substance whose exposure limit values must be monitored at workplaces: zinc oxide (1314-13-2)</p> <p>-Total inhalable dust: TLV-TWA 10 mg/m<sup>3</sup></p> <p>- Respirable dust: TLV-STEL 2 mg/m<sup>3</sup></p> <p><u>Limits DNELs</u></p> <ul style="list-style-type: none"> <li>• Oral <ul style="list-style-type: none"> <li>DNELoral soluble Zn = 50 mg<sub>Zn</sub>/day (i.e., 0.83 mg<sub>Zn</sub>/kg bw/day);</li> <li>DNELoral insoluble Zn = 50 mg<sub>Zn</sub>/day (i.e., 0.83 mg<sub>Zn</sub>/kg bw/day);</li> </ul> </li> <li>• Dermal <ul style="list-style-type: none"> <li>DNELdermal soluble Zn = 500 mg<sub>Zn</sub>/day (i.e., 8.3 mg<sub>Zn</sub>/kg bw/day);</li> <li>DNELdermal insoluble Zn = 5000 mg<sub>Zn</sub>/day (i.e., 83 mg<sub>Zn</sub>/kg bw/day);</li> </ul> </li> <li>• Inhalation - Worker <ul style="list-style-type: none"> <li>DNELinhal soluble Zn (worker) = 1 mg<sub>Zn</sub>/m<sup>3</sup>;</li> <li>DNELinhal insoluble Zn (worker) = 5 mg<sub>Zn</sub>/m<sup>3</sup>;</li> </ul> </li> <li>• Inhalation - Consumer <ul style="list-style-type: none"> <li>DNELinhal soluble Zn (consumer) = 1.3 mg<sub>Zn</sub>/m<sup>3</sup>;</li> <li>DNELinhal insoluble Zn (consumer) = 2.5 mg<sub>Zn</sub>/m<sup>3</sup>;</li> </ul> </li> </ul> <p><u>Limits PNEC</u></p> <ul style="list-style-type: none"> <li>• Water <ul style="list-style-type: none"> <li>PNEC fresh water = 20.6 µg/l;</li> <li>PNEC salt water = 6.1 µg/l;</li> </ul> </li> <li>• Sediment <ul style="list-style-type: none"> <li>PNEC fresh water sediment = 117.8 mg/kg sediment d.w.;</li> <li>PNEC salt water sediment = 56.5 mg/kg peso sediment d.w.;</li> </ul> </li> <li>• Soil <ul style="list-style-type: none"> <li>PNEC soil = 35.6 mg/kg soil d.w.;</li> </ul> </li> <li>• STP <ul style="list-style-type: none"> <li>PNEC = 100 µg/l.</li> </ul> </li> </ul>
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<b>8.2 EXPOSURE CONTROLS:</b>	
<b>8.2.1 APPROPRIATE ENGINEERING CONTROLS:</b>	Cleaning of devices and work equipment. Storage of the substance in dedicated areas. Maintain adequate ventilation of the areas.
<b>8.2.2 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:</b>	
<b>OCCUPATIONAL EXPOSURE CONTROLS</b>	Keep adequate ventilation general. Do not eat, drink or smoke in areas where this material is handled, stored and processed.
<b>RESPIRATORY PROTECTION</b>	No specific protective measures are suggested, but in exceptional cases, that is when high atmospheric pollution occurs, they can be required. In this case, wear a mask provided with dust filter P2 (EN 149).
<b>HAND PROTECTION</b>	Use suitable protective gloves for chemical risks (EN 374) of skin contact and / or mechanical risks (EN 388).
<b>EYE PROTECTION</b>	Wear safety goggles (EN 166) where eye exposure is reasonably likely.
<b>SKIN PROTECTION</b>	Wear appropriate work clothes and safety shoes (EN 20345).
<b>PROTECTIVE EQUIPMENT</b>	
<b>8.2.3 ENVIRONMENTAL EXPOSURE CONTROLS:</b>	According to the quantity stored the substance is subject to the "Seveso" regulation (Italy - D. lgs. 105/2015 and subsequent amendments, Directive 2012/18/UE).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:</b>	
<b>PHYSICAL STATE AT 20C° AND 101.3 kPa</b>	Solid (powder or granules).
<b>COLOUR</b>	White
<b>ODOUR</b>	Odourless
<b>pH</b>	7 ÷ 8 (suspended in water) ISO 787/9
<b>MELTING POINT</b>	1970 ÷ 1975 °C
<b>BOILING POINT</b>	Not applicable to solids with a melting point above 300°C or which decompose before reaching the boiling point. The substance decomposes before boiling, (column 2 of Annex VII of the REACH Regulation (EC) n. 1907/2006).
<b>FLASH POINT</b>	Not applicable to inorganic substances (Column 2 of Annex VII of REACH regulation (EC) n. 1907/2006).
<b>FLAMMABILITY</b>	All grades of zinc oxide powder were not to be considered as flammable. The substance is not flammable.
<b>EVAPORATION RATE</b>	Not applicable to solids.
<b>UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS</b>	Not applicable.

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<b>VAPOUR PRESSURE</b>	Not applicable if the melting point is above 300°C (Column 2 of Annex VII REACH regulation (EC) n. 1907/2006).
<b>VAPOUR DENSITY</b>	Not applicable
<b>RELATIVE DENSITY</b>	5.68 g/cm <sup>3</sup>
<b>WATER SOLUBILITY</b>	2.9 mg/l
<b>OCTANOL/WATER PARTITION COEFFICIENT</b>	Not applicable if the substance is inorganic (column 2 of Annex VII of the REACH regulation (EC) n. 1907/2006)
<b>AUTO-IGNITION TEMPERATURE</b>	The substance is not auto-flammable.
<b>DECOMPOSITION TEMPERATURE</b>	Not applicable
<b>VISCOSITY</b>	Not applicable
<b>EXPLOSIVE PROPERTIES</b>	Zinc oxide has no flammability, explosive or self-inflammability properties.
<b>GRANULOMETRY</b>	The D <sub>50</sub> is 1,05 µm, the D <sub>80</sub> is < 20 µm.
<b>9.2 OTHER INFORMATION:</b>	
<b>MOLE WEIGHT (AT WT)</b>	81.38 uma
<b>SPECIFIC GRAVITY (water = 1)</b>	5.6 @ 20°C

## 10. STABILITY AND REACTIVITY

<b>10.1 REACTIVITY:</b>	No reactions or decomposition of the product under normal storage conditions. It is not corrosive to metals. It does not react with water.
<b>10.2 CHEMICAL STABILITY:</b>	Stable under normal conditions of storage and use.
<b>10.3 POSSIBILITY OF HAZARDOUS REACTIONS:</b>	No possibility of hazardous reactions if stored away from acids and bases.
<b>10.4 CONDITIONS TO AVOIDED:</b>	Avoid contact with acids and bases.
<b>10.5 INCOMPATIBLE MATERIALS:</b>	Acids and bases.
<b>10.6 DANGEROUS DECOMPOSITION PRODUCTS:</b>	No dangerous decomposition product under normal conditions of storage and use.

## 11. TOXICOLOGICAL INFORMATION

<b>11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:</b>	
<b>ACUTE TOXICITY- ORAL</b>	LD <sub>50</sub> (rat) > 15000 mg <sub>ZnO</sub> /kg - Löser 1972; LD <sub>50</sub> (ratto) > 5000 mg <sub>ZnO</sub> /kg - Löser (1977).
<b>ACUTE TOXICITY - SKIN</b>	Not available.
<b>ACUTETOXICITY - INHALATION</b>	LC <sub>50</sub> (rat - 4 hours) > 5.7 mg <sub>ZnO</sub> /l - (Klimisch et al. 1982), not leading to classification for acute inhalation toxicity.

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<b>SKIN IRRITATION</b>	Not irritating (Löser, 1977; Lansdown, 1991).
<b>EYE IRRITATION</b>	Not irritating (Van Huygevoort, 1999e; Thijssen, 1978; Löser, 1977)
<b>RESPIRATORY IRRITATION</b>	Non irritante (Klimish et al, 1982)
<b>SENSITIZATION</b>	No sensitizing effects known (Van Huygevoort, 1999 g,h).
<b>GERM CELL MUTAGENICITY</b>	No biologically relevant genotoxic activity, (Chemical Safety report (CSR) zinc oxide. 2010).
<b>CARCINOGENICITY</b>	No experimental or epidemiological evidence exists to justify classification of zinc compounds for carcinogenic activity (Chemical Safety report (CSR) zinc oxide. 2010).
<b>REPRODUCTION TOXICITY</b>	No experimental or epidemiological evidence exists to justify classification of zinc compounds for reproductive or developmental toxicity, (Chemical Safety report (CSR) zinc oxide. 2010).
<b>SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE</b>	No experimental or epidemiological sufficient evidence for specific target organ toxicity - single exposure (Heydon and Kagan, 1990; Gordon et al., 1992; Mueller and Seger, 1985). (Chemical Safety report (CSR) zinc oxide. 2010).
<b>SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE</b>	No experimental or epidemiological sufficient evidence for specific target organ toxicity - repeated exposure (Lam et al, 1985, 1988; Conner et al., 1988). (Chemical Safety report (CSR) zinc oxide. 2010)).
<b>ASPIRATION HAZARD</b>	No data available.

## 12. ECOLOGICAL INFORMATION



<b>12.1 TOXICITY:</b>	
<b>ACUTE AQUATIC TOXICITY</b>	EC <sub>50</sub> : for pH < 7: 0.67 mg <sub>Zn</sub> /l (based on 48 hr Ceriodaphnia dubia test according to US EPA 821-R-02-012 standard test protocol), (Hyne et al 2005). EC <sub>50</sub> : for pH > 7: 8.5: 0.21 mg <sub>Zn</sub> /l (based on 72 hr Selenastrum capricornutum test according to US EPA 821-R-02-012 standard test protocol), (Hyne et al 2005).
<b>CHRONIC AQUATIC TOXICITY</b>	Freshwater: 20.6 µg/l, saltwater: 6.1 µg/l.
<b>SEDIMENT TOXICITY</b>	Freshwater sediment PNEC <sub>bioav</sub> : 235.6 mg/kg sediment dry weight, Saltwater sediment PNEC <sub>bioav</sub> : 113 mg/kg sediment dry weight.
<b>SOIL TOXICITY</b>	PNEC <sub>bioav</sub> : 106.8 mg/kg (soil dry weight).
<b>TOXICITY TO MICRO-ORGANISMS IN STP</b>	52 µg/l.
<b>12.2 PERSISTENCE AND BIODEGRADABILITY:</b>	Not applicable to inorganic substances.
<b>12.3 BIOACCUMULATIVE POTENTIAL:</b>	Zinc is a natural, essential element, which is needed for the optimal growth and development of all living organisms, including man. All living organisms have homeostasis mechanisms that actively regulate zinc uptake and absorption/excretion from the body; due to this regulation, zinc and zinc compounds do not bioaccumulate or biomagnify.
<b>12.4 MOBILITY IN SOILS:</b>	Solids-water partitioning coefficient: 158.5 l/kg. (Chemical Safety report (CSR) zinc oxide. 2010).
<b>12.5 RESULTS OF PBT AND vPvB ASSESSMENT:</b>	The substance is not PBT or vPvB.

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### 13. DISPOSAL CONSIDERATIONS

<b>13.1 WASTE TREATMENT METHODS:</b>	The generation of waste should be avoided or minimized. Collect, reprocess, recycle if possible. Dispose of in accordance with the provisions of environmental law and local authorities.
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### 14. TRANSPORT INFORMATION

LAND: Road/Railway	UN Number	Transport Name	Hazard class	Package Group	Labels	Other Information
<b>ADR/RID Classification</b>	UN3077	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)	9  (M7 dangerous substance in the aquatic environment, solid)	III	 	<u>Danger Identification Number 90</u>  Excepted quantities E1 Limited quantities of 5 kg Transport category 3
WATER COURSES: Navigable channels	UN Number	Transport Name	Hazard class	Package Group	Label	Other Information
<b>AND Classification</b>	UN3077	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)	9	III	 	
SEA:	UN Number	Transport Name	Hazard class	Package Group	Label	Other Information
<b>IMO/IMDG Classification</b>	UN3077	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)	9	III	 	Marine pollutant : Si (P) EMS Number: F-A, S-F.
AIR:	UN Number	Transport Name	Hazard class	Package Group	Label	Other Information
<b>IATA Classification</b>	UN3077	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)	9	III	 	Packing instruction: Y911 if gross weight < 30 kg 911 if gross weight ≥ 30 kg

Refer to Sections 7 and 8 for information about precautions for users

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## 15. REGULATORY INFORMATION

<b>15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:</b>	<p>National regulations: in Italy, the zinc oxide is not subject to specific regulations (Italy - D.lgs. 81/08 and subsequent amendments).</p> <p>According to the quantity stored the substance is subject to the "Seveso" regulation, (Italy - D.lgs. 105/2015 and subsequent amendments; Directive 2012/18/EU).</p>
<b>15.2 CHEMICAL SAFETY ASSESSMENT:</b>	<p>Within REACH Cosortium Zinc (IZA-Europe), according to the requirements of the REACH Regulation (EC) No 1907/2006 for the registration of the product, was developed the Chemical Safety Report (CSR) from which have been drawn from the information contained in this safety data sheet.</p>

## 16. OTHER INFORMATION

<b>REASON FOR THE REVIEW:</b>	<p>Periodic update of the safety data sheet: revision section 8, 9, 10 and 16</p>
<b>ABBREVIATIONS AND ACRONYMS:</b>	<p>RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.  ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  IMDG: International Maritime Code for Dangerous Goods.  IATA: International Air Transport Association.  P: Marine Pollutant.  GHS: Globally Harmonised System of Classification and Labelling of Chemicals.  EINECS: European Inventory of Existing Commercial Chemical Substances.  CAS: Chemical Abstracts Service.  DNEL: Derived No Effect Level (REACH).  PNEC: Predicted No Effect Concentration (REACH).  LC50: Lethal concentration, 50 percent.  LD50: Lethal dose, 50 percent.  PBT: Persistent, Bioaccumulative and Toxic.  vPvB: very Persistent and very Bioaccumulative.</p>
<b>BIBLIOGRAPHIC REFERENCES AND SOURCES:</b>	<p>REACH Regulation (EC) n. 1907/2006 subsequent changes.  CLP Regulation (EC) n. 1272/2008 subsequent changes.  Regulation (UE) 2015/830.  GHS - Globally Harmonized System of Classification and Labelling of Chemicals.  Directive 2012/18/UE.  D.lgs. 81/2008 subsequent changes.  Directive 2008/68/CE subsequent changes (ADR 2019).  CRS - Chemical Safety Report.</p>
<b>LIST OF DANGER INDICATIONS - H / TIPS OF PRUDENCE - P / WARNINGS:</b>	<p>Regulation (EC) n. 1272/2008 (CLP/GHS)  H400 - Very toxic to aquatic life.  H410 - Very toxic to aquatic life with long lasting effects.  P273 - Avoid release to the environment.  P391 - Collect spillage.  P501 - Dispose of contents/container in accordance with local/regional/national/international.</p>

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	Warning: attention.
<b>DATE PREVIOUS REVISION:</b>	Revision 9 of 31/10/2017
<b>Information of this Data Safety Sheet is precise and reliable according to the state of the art as per the publication date. They shall be taken as safety directive for use, handling, disposal, storage, and transport, and cannot be considered as warranty and specification. The user is responsible for making sure about suitability of the information for the special use foreseen for the material.</b>	

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