

## Material Safety Data Sheet ZINC OXIDE

Section 1 - IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY	
1.1 Identification of the substance	
• <b>Substance Name</b>	Zinc oxide
• <b>EC#</b>	215-222-5
• <b>CAS#</b>	1314-13-2 ; 7440-66-6
• <b>Trade Names</b>	Zinc oxide
• <b>REACH Registration number</b>	01-2119463881-32-0196
• <b>Chemical Formula</b>	ZnO
1.2 Use of the Substance/Mixture:	
<ul style="list-style-type: none"> <li>Used as chemical reagent and additive in all below mention applications: Feed , Ceramic, glazes, Tiles, Tires, Rubber, Glass, Plastic, Paints, Pigments, Coatings, Agriculture, Fertilizer, Food, Pharmaceutical, Nutraceuticals, Cosmetic, Zinc Based Catalyst &amp; Zinc Based Chemicals, Electroplating, Rubber treading, Additives, Varistors etc.</li> </ul>	
1.3 Company/undertaking identification:	
• <b>Manufacturer Details:</b>	AGROMET ASIA PVT LTD No.12, Epz, Horana., Sri Lanka
1.4 Emergency Telephone:	
• <b>Emergency Telephone &amp; Contact</b>	Mr. Chandra Kanth. +94 112581496, Mobile No +94 7731770249
Section 2 - HAZARDS IDENTIFICATION	
2.1 Classification according to Regulation (EC) No 1272/2008 (CLP)	
Substance is not classified as per CLP Regulation	
• <b>Hazard Class and Category Code(s)</b>	Not Classified
• <b>Hazard statement Code(s)</b>	Not Classified

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2.2. Labeling according to Regulation (EC) No 1272/2008 (CLP)																	
• <b>Hazard Pictogram</b>		Not Classified															
• <b>Hazard Statements</b>		Not Classified															
• <b>Precautionary Statements</b>		<p>P280: Wear protective gloves/protective clothing/eye protection/face protection.  P308+P313: IF exposed or concerned: Get medical advice/attention.  P273: Avoid release to the environment.  P391: Collect spillage.  P501: Dispose of contents/container to .... in accordance with local/regional/national /international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.</p>															
2.3. Other hazards																	
Not identified																	
Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS																	
<table border="1"> <thead> <tr> <th>Constituent</th> <th>CAS No.</th> <th>EC No.</th> <th>Typical concentration</th> <th>Concentration range</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Zinc oxide</td> <td>1314-13-2</td> <td>215-222-5</td> <td>99.7% w/w</td> <td>97-100% w/w</td> <td>None</td> </tr> </tbody> </table>						Constituent	CAS No.	EC No.	Typical concentration	Concentration range	Remarks	Zinc oxide	1314-13-2	215-222-5	99.7% w/w	97-100% w/w	None
Constituent	CAS No.	EC No.	Typical concentration	Concentration range	Remarks												
Zinc oxide	1314-13-2	215-222-5	99.7% w/w	97-100% w/w	None												
Section 4 - FIRST AID MEASURES																	
4.1 Description of First Aid measures:																	
• <b>General advice</b> :		Seek medical assistance if discomfort continues															
• <b>Eye contact</b> :		Rinse thoroughly with plenty of water for at least 15 minutes and consult a Physician															
• <b>Skin Contact</b> :		Remove contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water															
• <b>Inhalation</b> :		Remove victim to fresh air. Clean nasal cavity with water. Give oxygen if breathing difficulty. If feeling unwell, immediately seek medical attention															
• <b>Ingestion</b> :		Immediately rinse mouth with water. Do not induce vomiting. Give large quantities of water or milk to drink. If feeling unwell, immediately seek medical attention. Administer activated charcoal.															

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4.2. Most important symptoms and effects, both acute and delayed
No symptoms known currently.
4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
<b>Section 5 - FIRE-FIGHTING MEASURES</b>
5.1. Extinguishing media:
<ul style="list-style-type: none"> <li>Suitable extinguishing media: Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.</li> </ul>
5.2. Special hazards arising from the substance or mixture
Products of Combustion: Non combustible
5.3. Advice for fire-fighters
<p>Firefighters should wear full protective clothing including self-contained breathing apparatus. Appropriate breathing apparatus may be required. Use water spray, alcohol – resistant foam, dry chemical or carbon dioxide. Collect contaminated firefighting water separately, must not be discharged into the drains.</p>
<b>Section 6 - ACCIDENTAL RELEASE MEASURES</b>
6.1. Personal precautions, protective equipment and emergency procedures
<ul style="list-style-type: none"> <li>Handle in accordance with good industrial hygiene and safety Practice.</li> <li>Wear suitable gloves and eye/face protection</li> </ul>
6.2. Environmental precautions:
<ul style="list-style-type: none"> <li>Do not discharge into the drains/surface waters/groundwater.</li> </ul>
6.3. Methods and material for containment and cleaning:
<ul style="list-style-type: none"> <li>Do not discharge into the drains/surface waters/groundwater.</li> </ul>

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<b>Section 7 - HANDLING AND STORAGE</b>	
<b>7.1 Precautions for safe handling</b>	
<ul style="list-style-type: none"> <li>• Provide good ventilation of working area (local exhaust ventilation, if necessary).</li> <li>• Advice on protection against fire and explosion</li> <li>• Keep away from sources of ignition - refrain from smoking. Take precautionary measures against static charges.</li> </ul>	
<b>7.2 Conditions for safe storage:</b>	
<ul style="list-style-type: none"> <li>• Requirements for storage rooms and vessels</li> <li>• Keep container tightly closed in a cool, dry and well-ventilated place.</li> <li>• Keep in original packaging, tightly closed.</li> <li>• Advice on storage assembly</li> <li>• Do not store together with foodstuffs. Do not store together with animal feedstock. Do not store together with: Acids; Bases</li> </ul>	
<b>7.3 Specific end use(s):</b>	
<ul style="list-style-type: none"> <li>• As mentioned in Section 1.2</li> </ul>	
<b>Section 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
<b>8.1 Control Parameters:</b>	
<p>DUST</p> <p>List of approved workplace exposure limits (WELs) / EH40</p> <p>Total Respirable dust: TWA 10 mg/m<sup>3</sup></p> <p>List of approved workplace exposure limits (WELs) / EH40</p> <p>Respirable dust: TWA 4 mg/m<sup>3</sup></p>	
<b>8.2 Exposure Control:</b>	
<ul style="list-style-type: none"> <li>• <b>General Protective Measures:</b></li> </ul>	Do not eat, drink or smoke during work time. After work time and during work intervals the affected skin areas must be thoroughly cleaned. Store work clothing separately. Do not inhale dust.
<ul style="list-style-type: none"> <li>• <b>Respiratory Protection:</b></li> </ul>	If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. Respiratory filter (part): P2
<ul style="list-style-type: none"> <li>• <b>Hand Protection</b></li> </ul>	Protective gloves (EN 374) Appropriate Material rubber Appropriate Material leather Appropriate Material cotton
<ul style="list-style-type: none"> <li>• <b>Eye protection</b></li> </ul>	Safety glasses (EN 166)
<ul style="list-style-type: none"> <li>• <b>Body protection</b></li> </ul>	Lab coat. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

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### Section 9 – PHYSICAL & CHEMICAL PROPERTIES:

#### 9.1 General Information:

• <b>Physical state</b>	Powder form Color: White , Off white, Brown, Light brown, Yellow and Pale yellow etc.
• <b>Odour</b>	Non specific
• <b>pH</b>	Typical 7.50
• <b>Boiling point/boiling range</b>	Not applicable
• <b>Melting point</b>	1975 °C
• <b>Auto Flammability</b>	Non Flammable
• <b>Density</b>	4.8 – 5.5 g/cm <sup>3</sup>
• <b>Vapour pressure</b>	Not applicable
• <b>Vapour density</b>	No data available
• <b>Viscosity</b>	Not applicable
• <b>Solubility in water</b>	Not soluble in Water. Soluble in Dilute Mineral acids and Dilute Base.
• <b>Solubility in organic solvent (n-octanol)</b>	No data available
• <b>log Po/w</b>	No data available
• <b>Index of refraction</b>	No data available

#### 9.2 Other information:

No data available

### Section 10 - STABILITY AND REACTIVITY

• <b>Reactivity</b>	Not expected
• <b>Chemical stability</b>	No data available
• <b>Possibility of hazardous reactions</b>	No hazardous effects reported
• <b>Thermal decomposition</b>	No decomposition if used according to specifications.
• <b>Conditions to avoid</b>	No data available
• <b>Incompatible materials</b>	Acids, alkalis
• <b>Hazardous decomposition products</b>	ZnO-fume can be generated during thermal processing.

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Section 11 - TOXICOLOGICAL INFORMATION			
11.1 Information on toxicological effects:			
Acute Toxicity	Specie	Administration	Result
acute toxicity: oral	Rat	Gavage	LD50:For male and female animals were > 5000 mg/kg bw
Acute inhalation toxicity	Rat	Inhalation	LC50was >5.7 mg/l
Acute Dermal toxicity	Rat	Dermal	LD50:For male and female > 2000 mg/kg bw
11.2 Irritation Corrosion:			
<ul style="list-style-type: none"> <li>Skin: Not found to be irritating to the skin</li> <li>Eye : Non irritating to the eyes</li> </ul>			
11.3 Sensitization			
<ul style="list-style-type: none"> <li>May be sensitizing</li> </ul>			
11.4 CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)			
<ul style="list-style-type: none"> <li><b>Carcinogenicity</b></li> </ul>	IARC: No component of this product present at levels greater than or equal to 0.1%		
<ul style="list-style-type: none"> <li><b>Mutagenic effects</b></li> </ul>	Not found as mutagenic		
<ul style="list-style-type: none"> <li><b>Reprotoxic effects</b></li> </ul>	Not found as reprotoxic		
11.5 Other toxic effects on humans:			
<ul style="list-style-type: none"> <li><b>Inhalation</b></li> </ul>	No data available		
<ul style="list-style-type: none"> <li><b>Eyes</b></li> </ul>	No data available		
<ul style="list-style-type: none"> <li><b>Ingestion</b></li> </ul>	No data available		
<ul style="list-style-type: none"> <li><b>Chronic toxicity</b></li> </ul>	No data available		
11.6 NIOSH Immediately Dangerous To Life or Health Concentration (IDLH):			
<ul style="list-style-type: none"> <li>No information available</li> </ul>			
11.7 Specific target organ toxicity:			
<ul style="list-style-type: none"> <li><b>Single exposure</b></li> </ul>	No data available.		
<ul style="list-style-type: none"> <li><b>Repeated exposure</b></li> </ul>	No data available.		

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Section 12 - ECOLOGICAL INFORMATION	
12.1 Eco toxicity:	<ul style="list-style-type: none"> <li>Data unavailable for powder form.</li> </ul>
12.2 Persistence and degradability:	<ul style="list-style-type: none"> <li>No data available</li> </ul>
12.3 Bioaccumulative potential:	<ul style="list-style-type: none"> <li>not B/vB</li> </ul>
12.3 Mobility in soil:	<ul style="list-style-type: none"> <li>PNEC SOIL: 35.6 mg/kg soil dw</li> </ul>
12.5 Results of PBT and vPvB assessment:	<ul style="list-style-type: none"> <li>the substance is not PBT / vPvB</li> </ul>
12.6 Other adverse effects:	
Section 13 - DISPOSAL CONSIDERATIONS	
Product	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.
Packaging	Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

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### Section 14: TRANSPORT INFORMATION

UN number: 3077

Proper shipping name and description: Environmentally hazardous substance , solid, n.o.s.

Chemical name: zinc oxide

### Section 15 - REGULATORY INFORMATION

#### 15.1 Other regulatory information:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

Control of Substances Hazardous to Health Regulations (COSHH) 2002 SI 2002/2677 and COSHH Essentials: Easy steps to control chemicals - Control of Substances Hazardous to Health Regulations HSG193.

#### Inventory Status

Listed in: Australia (AICS) Canada (DSL/NDSL) China (IECSC) European Union (EINECS/ELINCS) South Korea (KECI) Philippines (PICCS) New Zealand Inventory (NZIoC)

#### HMS (Hazardous Materials :Identification system) classification

Health	0
Fire	0
Reactivity	0

0= No significant risk to health.  
0= Materials that will not burn.  
0 = Normally stable, even under fire exposure conditions, and is not reactive with water

#### 15.2 Chemical Safety Assessment:

A chemical safety assessment has been carried out for the substance or the mixture by the supplier (LR) - Yes

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### Section 16 – OTHER INFORMATION

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 related 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.

#### 16.1 Technical Advice:

Use data given in this Safety Data Sheet and make an inventory list of all chemicals used in the factory

- Create a Register for Workplace Chemicals;
- Set priorities concerning the safety in the organization
- Create emergency plans for the assessed hazards;
- Organize occupational health care and regular surveys as necessary;
- Organize contacts with authorities/laboratories to create a monitoring system for chemical hazards, and to reliably measure and/or estimate occupational exposures to chemicals when needed;
- Start collecting case studies of accidents and sickness records in the enterprise to create a basis for priority measures in the control of hazards;
- Involve workers in safety organizations, such as the system of Safety Representatives and Committees.
- Do regular inspection using checklists made for the particular chemicals and chemical processes in use;
- Mark and label all chemicals;
- Keep at hand an inventory list of all chemicals handled in the place of work together with a collection of Chemical Safety Data Sheets for these chemicals;
- Train workers to read and understand the Chemical Safety Information, including the health hazards and routes of exposure; train them to handle dangerous chemicals and processes with respect;
- Plan, develop and choose the safe working procedures;
- Reduce the number of people coming into contact with dangerous chemicals;
- Reduce the length of time and/or frequency of exposure of workers to dangerous chemicals;
- Train workers to know and understand the emergency procedures;
- Equip and train workers to use personal protective equipment properly after everything possible has been done to eliminate hazards by means of other methods;

#### 16.2 List of relevant R-phrases

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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