

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



SAFETY DATA SHEET (SDS) MICRONISED HYDRATED ZINC BORATE CAS Number: 138265-88-0

1. Identification of the Substance/Mixture and of the Company/Undertaking

Field	Information
Product Name	MICRONISED HYDRATED ZINC BORATE
Synonyms	Zinc borate 2335; boron zinc hydroxide oxide; hydrated zinc borate
CAS Number	138265-88-0
Relevant Identified Uses	Flame retardant, smoke suppressant, anti-drip synergist, and corrosion-inhibiting additive for plastics, rubber, coatings, cables, and industrial materials
Uses Advised Against	Not intended for direct food, cosmetic, pharmaceutical, or consumer use
Supplier	Polymer Add (Thailand) Co., Ltd
Office Address	106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250
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2. Hazards Identification

Field	Description
Classification (GHS/CLP)	Reproductive toxicity, Category 2 (H361); Hazardous to the aquatic environment, Acute Category 1 (H400) and Chronic Category 1 (H410)
Signal Word	Warning
Pictograms	GHS08 Health Hazard; GHS09 Environment
Hazard Statements	H361: Suspected of damaging fertility or the unborn child. H410: Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P201, P202, P273, P280, P308+P313, P391, P405, and P501
Other Hazards	Micronised powder may cause mechanical irritation of the eyes and

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	respiratory tract. Avoid breathing dust and prevent environmental release.
PBT/vPvB Assessment	Not expected to meet PBT or vPvB criteria based on available information

3. Composition / Information on Ingredients

Substance	CAS No.	EC No.	Molecular Formula	Purity
Hydrated Zinc Borate	138265-88-0	604-070-9	$2\text{ZnO} \cdot 3\text{B}_2\text{O}_3 \cdot 3.5\text{H}_2\text{O}$	Typically $\geq 99\%$

4. First Aid Measures

- **General Advice:** Remove affected person from exposure. Obtain medical advice if symptoms persist
- **Inhalation:** Move to fresh air. Keep at rest. Seek medical attention if coughing, breathing difficulty, or irritation develops
- **Skin Contact:** Remove contaminated clothing and wash skin thoroughly with soap and water
- **Eye Contact:** Rinse cautiously with clean water for several minutes. Remove contact lenses if easy to do. Continue rinsing and seek medical advice if irritation persists
- **Ingestion:** Rinse mouth. Do not induce vomiting. Obtain medical advice promptly if a significant quantity was swallowed
- **Most Important Symptoms:** Dust may cause mechanical irritation. Repeated or significant exposure requires medical assessment because borate compounds may affect reproduction or development

5. Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide; select media appropriate for the surrounding fire
- **Specific Hazards:** Product is not combustible. Strong heating may release water vapour and irritating zinc- and boron-containing fumes
- **Protective Equipment:** Firefighters should wear full protective equipment and positive-pressure self-contained breathing apparatus
- **Additional Advice:** Cool exposed containers with water spray and prevent contaminated firewater from entering drains

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6. Accidental Release Measures

- **Personal Precautions:** Avoid breathing dust and prevent dust generation. Remove ignition sources. Use gloves, goggles, and suitable particulate respiratory protection
- **Environmental Precautions:** Prevent entry into drains, soil, and waterways
- **Clean-Up Methods:** Use an explosion-safe HEPA vacuum where appropriate, or carefully sweep into a closed container. Do not use compressed air. Avoid dry sweeping that produces airborne dust
- **Reference:** See Sections 8 and 13 for exposure control and disposal guidance

7. Handling and Storage

- **Handling:** Obtain special instructions before use. Use with adequate ventilation or local exhaust. Avoid contact with eyes and skin and avoid breathing dust. Prevent release to the environment
- **Hygiene:** Wash hands after handling. Do not eat, drink, or smoke in work areas
- **Storage:** Keep tightly closed in a cool, dry, well-ventilated and secure area. Protect from moisture and excessive heat. Keep away from incompatible materials
- **Packaging:** Store in the original or compatible sealed packaging and protect from physical damage

8. Exposure Controls / Personal Protection

Field	Information
Occupational Exposure Limit	No substance-specific occupational exposure limit identified; apply applicable local limits for nuisance or inhalable/respirable dust
Engineering Controls	Enclosed transfer and local exhaust ventilation recommended for micronised powder
Respiratory Protection	Use an approved P2/P3 or equivalent particulate respirator selected under a workplace risk assessment when ventilation is insufficient
Eye Protection	Safety glasses with side shields; use sealed goggles where dust levels are high
Hand / Skin Protection	Protective gloves and work clothing; wash exposed skin after handling
Environmental Controls	Contain powder and prevent uncontrolled release to drains and the environment

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9. Physical and Chemical Properties

Property	Value
Appearance	White, free-flowing micronised powder
Odour	Odourless or faint characteristic odour
Molecular Weight	Approximately 434.7 g/mol
pH	Approximately 7-9 in aqueous slurry; grade-dependent
Melting / Decomposition Point	Releases water of hydration above approximately 290 deg C; decomposes on stronger heating
Boiling Point	Not applicable; decomposes before boiling
Flash Point	Not applicable to the solid
Flammability	Non-combustible inorganic solid
Vapour Pressure	Negligible at ambient temperature
Relative Density	Approximately 2.7-2.8
Solubility in Water	Insoluble or very slightly soluble in water
Auto-Ignition Temperature	No reliable product-specific data available
Explosive Properties	Not expected to be explosive
Oxidizing Properties	Not oxidizing

10. Stability and Reactivity

- **Reactivity:** No hazardous reaction expected under recommended handling and storage conditions
- **Chemical Stability:** Stable under normal ambient conditions when kept dry
- **Possibility of Hazardous Reactions:** May react with strong acids and strong bases. Releases water of hydration on heating
- **Conditions to Avoid:** Excessive heat, moisture, dust generation, and uncontrolled environmental release
- **Incompatible Materials:** Strong acids, strong bases, and reactive chemicals
- **Hazardous Decomposition Products:** Water vapour and irritating zinc- and boron-containing fumes may form under severe heating or fire conditions

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11. Toxicological Information

Endpoint	Assessment
Acute Toxicity	Not classified for acute toxicity based on available information
Skin Corrosion / Irritation	Not classified; powder may cause mechanical irritation
Serious Eye Damage / Irritation	Not classified; dust may cause temporary mechanical irritation
Respiratory / Skin Sensitisation	Not classified based on available information
Germ Cell Mutagenicity	Not classified based on available information
Carcinogenicity	Not classified based on available information
Reproductive Toxicity	Category 2; suspected of damaging fertility or the unborn child
STOT - Single / Repeated Exposure	Not classified based on available information
Aspiration Hazard	Not applicable to a solid powder

12. Ecological Information

Field	Assessment
Ecotoxicity	Very toxic to aquatic life with long lasting effects (H410)
Persistence / Degradability	Inorganic substance; conventional biodegradability criteria are not applicable
Bioaccumulative Potential	No complete product-specific assessment available
Mobility in Soil	Low water solubility indicates limited mobility, although dissolved zinc and borate species may migrate
PBT / vPvB	PBT and vPvB criteria are not applicable to inorganic substances
Other Adverse Effects	Avoid release to drains, soil, surface water, and groundwater

13. Disposal Considerations

- **Product:** Dispose of through a licensed waste contractor in accordance with national and local regulations
- **Contaminated Packaging:** Empty thoroughly. Recycle or dispose of packaging according to local requirements
- **Precautions:** Do not discharge product or wash water to drains, surface water, or soil

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- **Waste Classification:** Determine the applicable waste code based on the actual use, contamination, and local regulation

14. Transport Information

Field	Information	Remarks
UN Number	UN 3077	
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s.	Contains zinc borate
ADR/RID / IMDG / ICAO-IATA	Class 9	Packing Group III
Marine Pollutant	Yes	Environmentally hazardous substance mark
Special Precautions	Prevent release and protect packages from damage	Small-package exemptions may apply subject to the applicable transport code

15. Regulatory Information

- **GHS / CLP:** Reproductive Toxicity Category 2; Aquatic Acute Category 1; Aquatic Chronic Category 1
- **Chemical Safety Assessment:** No product-specific chemical safety assessment has been performed by Polymer Add (Thailand) Co., Ltd
- **Inventory / Registration Status:** Regulatory status must be confirmed for the destination country and intended use before supply
- **Local Requirements:** The user is responsible for compliance with applicable national workplace, environmental, and chemical-control regulations

16. Other Information - Micronised Hydrated Zinc Borate, CAS 138265-88-0

- **SDS Version:** 1.0 / 2026
- **Date of Preparation:** 19 September 2026
- **Reason for Issue:** Initial issue in Polymer Add SDS format
- **Abbreviations:** ADR: European road transport; CLP: Classification, Labelling and Packaging; GHS: Globally Harmonized System; IATA: air transport; IMDG: maritime transport; PBT: persistent, bioaccumulative and toxic; vPvB: very persistent and very bioaccumulative
- **Important Note:** Because this product is micronised, workplace dust control should be based on the actual particle-size distribution and handling method. Prevent environmental release and follow reproductive-hazard precautions

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Disclaimer:

This SDS is intended for industrial handling, storage, and transportation. It is not a product specification or a substitute for a workplace risk assessment. Information is provided in good faith based on data available at the date of issue. Polymer Add (Thailand) Co., Ltd disclaims liability for improper use or handling.

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