

Safety Data Sheet

C-TEC ZB200

MSDS No. 9920.7

Date of Preparation: 6/11/98

Revision: 2/15/13

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: C-TEC ZB200

General Use: Flame retardant in plastics, rubber, and resins.

Manufacturer: Marshall Additive Technologies

Division of the R. J. Marshall Company

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Date Revised: 2/15/13

Prepared By: Stephanie Nichols

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS

H 1

F 0

R 0

PPE † E

†Sec. 8

Potential Health Effects



Warning: Irritant R36/37/39 Irritating to the eyes, respiratory system, and skin.

Not regulated under the criteria of EC Directive 67/548/EC.

Not classified as dangerous according to EC Directives.

Primary Entry Routes: Inhalation and Ingestion.

Acute Effects

Inhalation: Inhalation of high concentrations of this inert nuisance particulate can result in mild irritation of the respiratory tract.

Eye: May cause irritation through mechanical abrasion.

Skin: Drying of the skin can occur.

Ingestion: Unlikely. Swallowing large quantities may cause choking.

Section 3 - Composition / Information on Ingredients

| Ingredient Name | CAS Number | Percent by Weight |
|-----------------|------------|-------------------|
| Zinc Borate | 1332-07-6 | Max 100 |

| Exposure Limits: | Industry Recommended PELTS |
|------------------|----------------------------|
| Ingredient | TWA |
| Zinc Borate | 10 mg/m ³ |

Note: for the purpose of reporting for Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.0 the maximum percent by weight Zinc content is 18.26.

Section 4 - First Aid Measures

General: Move the exposed person to fresh air at once. Treat symptomatically.

Inhalation: If overcome by high dust concentrations, remove to a ventilated area. Seek medical advice.

Eye Contact: Flush eyes thoroughly for 15 minutes taking care to rinse under eyelids. Do not scrub. Abrasion may cause irritation. If discomfort continues, continue to wash with water. If irritation persists, consult a physician.

Skin Contact: Remove affected person from source of contamination. Wash skin thoroughly with soap and water for at least 15 minutes. Consult a physician if irritation persists.

Ingestion: Rinse mouth thoroughly. Drink a few glasses of water or milk. Get medical attention immediately!

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: N/A

Special Precautions/Procedures: N/A

Section 5 - Fire-Fighting Measures

Flash Point: N/A

Flash Point Method: N/A

Burning Rate: Not determined.

Auto-ignition Temperature: Not determined.

Flammability Classification: Non-flammable.

Extinguishing Media: This material is not combustible. Use extinguished media appropriate for surrounding fire.

Unusual Fire or Explosion Hazards: None known.

Hazardous Combustion Products: None known.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: No specific fire fighting procedure given.

Section 6 - Accidental Release Measures

Personal Precautions During Spill: S36/37/39-Wear suitable protective clothing, gloves, and eye protection.

Spill /Leak Procedures: Sweep up spillage and place into clean container. Avoid generation and spreading of dust. Use approved respiratory equipment if excessive amounts of dust are present. Flush with plenty of water to clean spillage area. Avoid release to natural watercourses. Wastewater must be disposed of in accordance with national and local regulations.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid generating dust during handling. Provide good ventilation. Mechanical ventilation or local exhaust ventilation may be required. Avoid spilling, skin, and eye contact. Read and follow manufacturer's recommendations. Follow the principles of good occupational hygiene to control personal exposures.

Storage Requirements: S8-Keep container dry. Keep tightly closed and store at moderate temperatures in dry, cool, well ventilated area.

Shelf-Life: 12 months when stored in a dry, cool, well ventilated area.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Respiratory Protection: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

Protective Clothing/Equipment: S36/37/39 Wear suitable protective clothing, gloves, and eye protection. Use protective gloves made of butyl rubber or nitrile, or PVCX. Wear dust resistant safety goggles where there is danger of eye contact.

Safety Stations: Make emergency eyewash stations and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: S20/21: When using do not eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: powder

Appearance and Odor: white odorless powder

Odor Threshold: n/e

Vapor Pressure: n/a

Vapor Density (Air=1): n/a

Formula Weight: 356.06

Density: 400-700 kg/m³

Specific Gravity (H₂O=1, at 4 °C): 2.68

pH: 7-8 (aqueous filtrate of 20% suspension)

Water Solubility: <1% (% in weight)

Other Solubilities: soluble in strong acids and bases.

Boiling Point: n/a

Freezing/Melting Point: n/a

Viscosity: n/a

Refractive Index: n/a

Surface Tension: n/a

% Volatile: n/a

Evaporation Rate: n/e

Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: None known.

Conditions to Avoid: None known.

Hazardous Decomposition Products: No specific hazardous decomposition products noted.

Section 11- Toxicological Information

Toxicity Data:*

Toxicological Data: Acute toxicity LD₅₀

Toxic Dose 1-LD50: >10,000mg/kg (oral rat).

Toxicological Information: Low order of acute toxicity.

Inhalation: Dust may irritate respiratory system or lungs.

Ingestion: No specific health warnings noted. Ingestion of this product is not a likely event. Swallowing large quantities could cause choking.

Skin: No specific health warning noted. Frequent or prolonged contact may cause mild skin discomfort.

Eyes: Particles in the eyes may cause irritation.

Carcinogenicity: Neither this product nor any of its components are considered carcinogenic by OSHA, IARC, NTP, ACGIH.

Medical Conditions Aggravated by Long-Term Exposure: Chronic respiratory disease.

Section 12 - Ecological Information

Stunted and retarded full growth of riverside plants is reported where Zinc levels are excessive.

Zinc Borate is sparingly soluble in water and may leach through soil. Under certain environmental conditions Zinc Borate will slowly hydrolyze to form other inorganic chemicals such as zinc hydroxide and boric acid.

R50/53: Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Section 13 - Disposal Considerations

Disposal: Place material into dry container with clean shovel, cover, and move. Confirm disposal procedures with environmental engineer and local regulations. Dispose of in accordance with local authority requirements. Zinc Borate is not listed under any section of RCRA, however Zinc Borate waste material is classified as hazardous waste in California due to the zinc concentration exceeding the total threshold limit concentration.

Waste Class: special waste

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101): US DOT Hazardous Substance RQ=1000 pounds. When transported in packages less than the reportable quantity (RQ), zinc borate is not a DOT Hazardous material.

UN No.: 3077

Hazard Class (ADR): Class 9: Miscellaneous dangerous substance and articles.

ADR Class No.: 9

ADR Item No.: III

Hazards No. (ADR): 90

ADR Label No.: 9

Proper shipping name I: Environmentally hazardous substance, Solid N.O.S.

UN Sea: 3077

Sea Transport Class No.: 9

Sea Pack Gr: III

Marine Pollutant: No

UN Air: 3077

Air Transport Class No.: 9

Air Pack Gr: III

Tariff/Commodity Code: 2840.20

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification: Not classified

CERCLA Hazardous Substance (40 CFR 302.4) Listed RQ: 1000# (454kg)

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed

CWA Hazardous Substances- 1000# RQ

Zinc or Zinc Compounds are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.0.

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

TSCA

This substance is on the Chemical Substances Inventory of the Toxic Substance Control Act (TSCA Inventory [USA]). Please note that this product is not subject to any legal reporting requirements under these acts.

INTERNATIONAL REGULATIONS

Canada: Listed on DSL.

WHMIS: Uncontrolled product according to WHMIS classification criteria.

Europe: Listed on EINECS #215-566-6.

Listed on the Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC)-Other Ingredients.

Australia: Listed on AICS.

China: Listed on IECSC.

Japan: Listed on ENCS.

Korea: Listed on ECL #KE-03516.

New Zealand: Listed on NZIoC.

Philippines: Listed on PICCS.

Taiwan: Listed on NECL.

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: updated to SDS

Product Grades Available from the R. J. Marshall Company (this list may be incomplete):

CTZB200

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