

Safety Data Sheet

C-TEC ZHS

MSDS No. 9765.12

Date of Preparation: 5/21/97

Revision: 2/25/14

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: C-TEC ZHS

Synonyms: Charring agent.

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

Manufacturer: Marshall Additive Technologies

Division of the R. J. Marshall Company

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Section 2 - Hazards Identification

Not regulated under EC Directive 1272/2008/EC.

Not regulated or classified as dangerous under EC Directive 67/548/EC.

Label Elements: Not classified

Reproductive/Developmental: None known.

Hazard Statements: not applicable

Risk phrases: not applicable

Precautionary Statements: not applicable

Safety phrases: not applicable

HMIS

H 1

F 0

R 0

PPE† E

†Sec. 8

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Percent by Weight
Zinc Hydroxy Stannate	12027-96-2	Max 100.0

Section 4 - First Aid Measures

Inhalation: Accidental inhalation of dust at greater than 10mg/m³ may cause light irritation to the respiratory system. Remove person to fresh air if symptoms are observed.

Eye Contact: May cause eye irritation. Rinse eyes with fresh water or eye wash fountain. If irritation persists for than 30 minutes, seek medical attention.

Skin Contact: May cause drying of the skin. If irritation appears, wash thoroughly with soap and water.

Ingestion: Small amounts (tsp or less) swallowed accidentally are not likely to cause effects. Swallowing amounts larger than 1 tsp may cause gastrointestinal symptoms. Choking may occur if large quantities are swallowed. Drink a few glasses of water or milk. Seek medical attention. Maintain adequate kidney function and force fluid. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure.

Section 5 - Fire-Fighting Measures

Flammability Classification: Non-flammable.

Extinguishing Media: The material is not combustible. Use extinguishing media appropriate for surrounding fire.

Unusual Fire or Explosion Hazards: Burning produces irritant fumes.

Hazardous Combustion Products: None known.

Section 6 - Accidental Release Measures

Personal Precautions: Wear goggles (class P1) and glasses when exposure is prolonged and there is a high concentration in the air.

Methods for Cleaning: Sweep up spillages and place into clean containers. Avoid generation and spreading of dust. Flush with plenty of water to clean spillage area.

Regulatory Requirements: Avoid release to natural watercourses. Wastewater must be disposed of in accordance with national and local regulations.

Section 7 - Handling and Storage

Handling Precautions: Avoid contact with skin and eyes. Ensure adequate ventilation or exhaust ventilation in the working area. Rinse hands after handling and before eating, drinking, or smoking.

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

Shelf Life: 12 months when stored in 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.

Administrative Controls:

Respiratory Protection: If ventilation is insufficient wear approved dust mask or respirator.

Protective Clothing/Equipment: Use suitable protective gloves made of butyl rubber, nitrile, or PVC. Wear safety glasses for long exposures and high concentration levels.

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: 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.

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Inorganic Tin Compounds	None established	None established	10 mg/m ³	None established

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 23.5.

Section 9 - Physical and Chemical Properties

Appearance: white powder

Odor: odorless

Odor Threshold: n/e

Vapor Pressure: Negligible @ 20C

Vapor Density (Air=1): n/a

Formula Weight: 286.12

Density: n/a

Specific Gravity (H₂O=1, at 4 °C): 3.3

pH: 7 (aqueous filtrate of 20% suspension)

Flash Point: n/a

Flash Point Method: n/a

Burning Rate: Not determined.

Auto-ignition Temperature: Not self-ignitable.

Water Solubility: Insoluble.

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/a

Partition coefficient octanol/water: not determined

Explosive Properties: not applicable

Decomposition temp: >180C

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: High temperatures and direct contact with fire and heat sources.

Hazardous Decomposition Products: n/a

Section 11- Toxicological Information

Toxicity Data:*

Routes of Exposure: Ingestion, Inhalation, and Skin

Acute Inhalation Effects: Low acute inhalation toxicity. LC₅₀ Rat: >4.35mg/l /4 hr). Dust may irritate respiratory system or lungs.

Acute Toxicity:

Skin Effects: Low acute dermal toxicity. LD₅₀ Rat: >2466mg/kg. Frequent or prolonged contact may cause mild skin discomfort.

Acute Oral Effects: Low acute oral toxicity. LD₅₀ Rat: >5000mg/kg
Chronic Effects: None known.

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

Mutagenicity: No evidence found.

Eye Irritation: Particles in the eyes may cause irritation and redness.

Reproductive Toxicity: No evidence found.

Sensitizing properties: Frequent or prolonged contact may cause mild skin discomfort.

Section 12 - Ecological Information

Acute toxicity to fish: No observed effect LC₅₀>3.3mg/l (96hrs) Rainbow Trout

Acute toxicity to Daphnia: No observed effect EC₅₀>3.3mg/l (48hrs)

Test carried out up to solubility limit.

Persistence and degradability: Not applicable-inorganic chemical

Bioaccumulative potential: Not applicable-inorganic chemical

Mobility in soil: Expected to be immobile in soil due to its low solubility.

Results of PBT and vPvB assessment: Not applicable-inorganic chemical.

Other adverse effects: Not regarded as dangerous for the environment.

Water hazard classification: No data available.

Section 13 - Disposal Considerations

Disposal: Dispose of in accordance with local authority requirements. Do not disperse in city drain or watercourse.

Contaminated Packaging: Must be completely emptied, segregated, and disposed of as general waste.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101): This product is not classified as dangerous under the transport regulations for road, rail, sea, or air transport.

Section 15 - Regulatory Information

EPA Regulations:

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

RCRA Hazardous Waste Classification: Not classified

CERCLA Hazardous Substance (40 CFR 302.4) Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

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

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 or all of its components are on the Chemical Substances Inventory of the Toxic Substance Control Act (TSCA Inventory [USA]).

Subject to Section 5(e) consent order.

A commenced PMN substance.

Identified in a proposed or final SNUR.

INTERNATIONAL REGULATIONS

Australia: Listed on AICS.

Canada: This product is listed on the Canadian NDSL.

China: Listed on IECSC.

Europe: This product is listed on EINECS, #404-410-4.

Japan: Listed on ENCS.

Korea: Listed on ECI, number 2001-3-1701.

New Zealand: Listed on NZIoC.

Taiwan: Listed on NECI.

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: 2/25/14

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

C-TEC ZHS

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