Safety Data Sheet

H-TEC HTMB Series **MSDS No. 9642.22**

Date of Preparation: 7/16/98 Revision: 1/30/15

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: H-TEC HTMB Series
Manufacturer: Marshall Additive Technologies
Division of the R. J. Marshall Company
26776 W. 12 Mile Road
Southfield, MI 48034-7807
Phone: (248) 353-4100, Fax: (248) 948-6460

Emergency Phone: (800) 424-9300
Date Revised: 1/30/15
Preparer: Stephanie Nichols

Section 2 - Hazards Identification

This product does not meet the criteria for classification as ahzardous as defined in the Rgulation EC 1272/20008 and in Directive 67/548/EEC.

Depending on the type of handling and use (e.g. grinding, drying), airborne respirable crystalline silica may be generated. Prolonges and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled. This product should be handled with care to avoid dust generation.

Label elements: None HMIS Rating: H: 1 F: 0 R: 0

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Percent by Weight	Other
Magnesium Hydroxide	1309-42-8	>80%	--------
Crystalline Silica (Respirable fraction)	14808-60-7	<1%	R48/20; H372

R-phrase: R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
H-statement: H372: Causes damage to lung through prolonged or repeated exposure by inhalation.

Section 4 - First Aid Measures

Inhalation: Remove victim to fresh air. Consult a doctor in the event of any complaints.
Eye Contact: Flush eyes thoroughly for 15 minutes taking care to rinse under eyelids. Do not scrub. Abrasion may cause irritation. After initial flushing, remove any contact lenses and continue flushing. If irritation persists, consult a physician.
Skin Contact: No special first aid measures necessary.
Ingestion: No first aid measures required.
After first aid, get appropriate in-plant, paramedic, or community medical support.
Note to Physicians: No special first aid measures necessary.

Section 5 - Fire-Fighting Measures

Suitable Extinguishing Media: Not combustible. All types of extinguishing agent permitted.
Unsuitable Extinguishing Media: None known.
Special hazards arising from the substance or mixture: None known.
Hazardous Combustion Products: None.
Fire-Fighting Instructions: No specific fire-fighting protection is required.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Avoid airborne dust generation. Wear PPE as necessary.
Methods and materials for containment and cleaning up: Avoid dry sweeping. Use water spray or vacuum to prevent airborne dust generation. Use appropriate protection. Collect spilled material in sealable containers. Recycle if possible.

Section 7 - Handling and Storage

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Provide good ventilation in process area to prevent formation of dust.
Conditions for safe storage, including any incompatibilities: Keep containers closed. Keep away from heat and stong acids.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:
Ventilation: Use local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits.
Respiratory Protection: With sufficient extraction or closed system, breathing apparatus not necessary.
Protective Clothing/Equipment: Wear safety glasses and gloves as necessary.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never 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.

Exposure Limits:

	OSHA PEL		ACGIH	
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**
Magnesium Hydroxide	15 mg/m^3 total dust 5 mg/m^3 respirable as nuisance dust, not otherwise regulated	none estab.	10 mg/m3 inhalable 3 mg/m3 respirable as particulates not otherwise specified	none estab.
Crystalline Silica	10mg/m^3 respirable dust	None estab.	0.025mg/m^3 respirable dust	None estab.

Section 9 - Physical and Chemical Properties

Physical State: powder
Appearance and Odor: white odorless
Odor Threshold: n/e
pH: 10 @ 10% aqueous solution
Freezing/Melting Point: decomposes
Boiling Point: decomposes
Flash Point: None known.
Flash Point Method: n/a
Evaporation Rate: n/a
Flammability: Non-flammable.
Upper/lower flammability or explosive limits: not flammable

Vapor Pressure: n/a
Vapor Density (Air=1): n/a
Formula Weight: n/a
Relative Density: 2.4
Solubility: water-9mg/l (20°C)
Partition coefficient: n-octanol/water; not applicable
Decomposition Temp: >300°C (572°F)
Viscosity: n/a

Section 10 - Stability and Reactivity

Reactivity: Reacts with incompatible materials.
Chemical Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.
Possibility of hazardous reactions: Hazardous polymerization cannot occur.
Conditions to Avoid: To avoid thermal decomposition, do not overheat.
Incompatible materials: Strong acids will produce vigorous reaction with heat generated. Malaeic anhydride will cause decomposition of material in a runaway explosive reaction. Phosphorous, if boiled with alkaline hydroxide, yields mixed phosphorous which can spontaneously ignite in air.
Hazardous Decomposition Products: Steam, acid smoke with trace amount of carbon dioxide and carbon monoxide. If heated to the point of volatilization, (i.e. > 1700C), magnesium oxide fume can be generated.

Section 11- Toxicological Information

Acute Toxicity: Magnesium Hydroxide is categorized by the US FDA as a Generally Recognized As Safe (GRAS) food ingredient.
LD50 oral: >2000 mg/kg bw Test Std: OECD423
LC50 inhalation: >2.1 ml/m^3 OECD403. No mortality seen at this level.

Based on available data, Magnesium Hydroxide does not meet the classification criteria for Skin corrosion/irritation, Serious eye damage/irritation, Respiratory or skin sensitization, Germ cell mutagenicity, Carcinogenicity, Reproductive toxicity, STOT-single or repeated exposure, or Aspiration hazard.

Section 12 - Ecological Information

Test	Results
Fish	LC_{50} =1293 mg/l Onchorinchus mykiss
Daphnia	EC_{50} = 284.76 mg/l
Fish	LC_{50} = 511.31 mg/l P. promelas
Algae	ErC_{50} = >100 mg/l

Persistance and degradability: Not readily biodegradable.
Bioaccumulative potential: No additional information available.
Mobility in soil: No additional information available.
Other adverse effects: Avoid release to the environment.

The data available does not support any environmental hazard.

Section 13 - Disposal Considerations

Disposal: Recycle if possible or landfill. This substance is inert and does not require special disposal methods. Follow applicable Federal, state, and local regulations.

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.

UN Number: not regulated
UN proper shipping name: n/a
Transport hazard class: n/a
Packing group: n/a
Environmental hazards: n/a
Special precautions for user: n/a
Transport in bulk according to Annex II or MARPOL 73/78 and the IBC code: n/a

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

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]). Please note that this product is not subject to any legal reporting requirements under these acts.

NFPA Health Hazard: Health: 0 Fire: 0 Reactivity: 0

INTERNATIONAL REGULATIONS

Australia: Listed on AICS. Canadian Domestic Substances List: Listed Canada WHMIS: Uncontrolled product China: Listed on IECSC Europe: Listed on EINECS, # 215-170-3. REACH: exempt EEC International Cosmetics Ingredients Inventory (INCI): absorbant/buffering Germany: Water hazard classification VwVwS	Japan: Listed on ENCS # 1-386. Korea: Listed on ECL, # KE-22716. New Zealand: Listed on NZIoC Philippines: Listed on PICCS Switzerland: Listed on Giftliste 1, #G-8166, toxic category 4. REACH: Exempt

Section 16 - Other Information

Prepared By: Stephanie Nichols
Revision Notes: added HTMB2, HTMB4, HTMB10, and HTMB15

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

HTMB2	HTMB4	HTMB8	HTMB8SA	HTMB8ST	HTMB10	HTMB15

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