1. CHEMICAL PRODUCT AND IDENTIFICATION

PRINT DATE: August 23, 2010
APPROVAL DATE: March 24, 2010

PRODUCT NAME: HTC-9593
CHEMICAL FAMILY: Bismaleimide (BMI)

CHEMICAL NAME: Carbon Fiber filled Bismaleimide Engineered Structural Composite
FORMULA: Mixture

MANUFACTURER: QUANTUM COMPOSITES®
EMERGENCY TELEPHONE NUMBERS:
(989) 922-3863
1310 S. Valley Center Drive
Bay City, MI 48706

2. COMPOSITION/INFORMATION ON INGREDIENTS

Carbon Fiber filled Bismaleimide Engineered Structural Composite (ESC) 100%

HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME / CAS REGISTRY NUMBER</th>
<th>EXPOSURE</th>
<th>LIMITS</th>
<th>CONCENTRATION by WEIGHT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bismaleimide (BMI) Resin 1 13676-54-5</td>
<td>ACGIH:</td>
<td>N/E</td>
<td>38.5 - 48.5</td>
</tr>
<tr>
<td>Carbon Fiber 7440-44-03</td>
<td>OSHA:</td>
<td>Total Nuisance Dust 15 mg/cu.m Respirable Nuisance Dust 5 mg/cu.m</td>
<td>48.5 - 56.5</td>
</tr>
<tr>
<td></td>
<td>ACGIH:</td>
<td>10 mg/cu.m TWA N/E STEL</td>
<td></td>
</tr>
<tr>
<td>Acetone 67-64-1</td>
<td>OSHA:</td>
<td>1000 ppm TWA N/E STEL</td>
<td>3 - 5</td>
</tr>
<tr>
<td></td>
<td>ACGIH:</td>
<td>500 ppm TWA 750 ppm STEL</td>
<td></td>
</tr>
</tbody>
</table>

(N/E = Not Established)

1 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Non-tacky, stiff, solid sheet layered between polymer film. During a fire, irritating and toxic gases may be generated. See Section 10.

POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY: Inhalation, skin contact / absorption, eye contact.

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE: Irritating to all parts of the respiratory tract. Acetone Vapors can be irritating to eyes. Dermal contact may cause moderate irritation.

INHALATION: Excessive inhalation of vapors can cause nasal & respiratory tract irritation. Overexposure to vapor during heat curing may cause irritation or injury to the respiratory tract and eyes.

SKIN CONTACT: Direct contact can cause moderate irritation. Repeated or prolonged dermal contact may cause allergic skin reactions.

EYE CONTACT: Can cause eye irritation, redness, tearing, and blurred vision.

INGESTION: May be harmful if swallowed. May cause irritation of the digestive tract.

CARCINOGENICITY of BISMALEIMIDE RESIN: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CARCINOGENICITY of ACETONE: A4 (Not classifiable for human or animal) by ACGIH.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Previous respiratory disorders, dermatitis.

4. FIRST AID MEASURES:

FIRST AID FOR EYES: Flush with clean, lukewarm water (low pressure) for 15 minutes, occasionally lifting eyelids. Get medical attention.

FIRST AID FOR SKIN: Wash affected areas thoroughly with soap and water. Wash contaminated clothing before reuse. Do not wash with organic solvents.

FIRST AID FOR INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given by qualified personnel if breathing is difficult. Get medical attention.

FIRST AID FOR INGESTION: Consult physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES:

FLASH POINT: This material was analyzed by test method 16 CFR 1500.44 and the results showed that the compound would temporarily ignite when heated, but would not sustain a flame.

EXTINGUISHING MEDIA: Dry Chemical; Carbon Dioxide; Foam; Water. Treat as Class B fire.

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion (See Section 10)

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTIONS: Wear dust mask, gloves and coveralls.

SPILL OR LEAK PROCEDURES: Sweep or place into waste disposal container.
7. HANDLING AND STORAGE:

STORAGE TEMPERATURE: 90°F Maximum.

SHELF LIFE: 6 Months in original, sealed container at 10°F or below.

SPECIAL SENSITIVITY: Heat, Sparks, Open Flame, Moisture.

HANDLING AND STORAGE PRECAUTIONS: Long-term storage at 10°F or below to maintain good molding characteristics.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS: Safety glasses.

SKIN PROTECTION REQUIREMENTS: Lint free gloves, to minimize skin contact.

RESPIRATORY/VENTILATION REQUIREMENTS: Local exhaust in handling and fabrication areas. Use NIOSH/MSHA approved respirator for organic vapors if ventilation system does not maintain atmosphere below PELs.

EXPOSURE LIMITS: Not established for product as whole. Refer to section 2.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM: Sheet

ODOR: Sweet, Pungent Odor

SOLUBILITY IN WATER: Insoluble

SPECIFIC GRAVITY: 1.0 – 1.2

% VOLATILE BY VOLUME: 3 - 5%

VAPOR PRESSURE: < 1mm Hg @ 75°F

VAPOR DENSITY (Air=1): 2.0

10. REACTIVITY:

STABILITY: This is a stable material. Polymerization will slowly occur at temperatures above 220°F.

HAZARDOUS POLYMERIZATION: Will not occur.

DECOMPOSITION PRODUCTS: Nitrogen oxides, carbon monoxide, carbon dioxide

11. TOXICOLOGICAL INFORMATION:

Toxicology of this material has not been studied. Avoid any unnecessary exposure.

12. ECOLOGICAL INFORMATION:

The ecological properties of this material have not been fully investigated. It is presumed to be dangerous in the environment; toxic to aquatic organisms.
13. **DISPOSAL METHOD:**

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with state, federal, and local environmental control regulations. Class II Landfill is acceptable in many areas. This material can also be incinerated in approved facilities.

14. **TRANSPORTATION INFORMATION:**

D.O.T. SHIPPING NAME ..........: Not Regulated
D.O.T. HAZARD CLASS ..........: None
D.O.T. LABEL ....................: None
D.O.T. PLACARD ..................: None
FREIGHT CLASS BULK ..........: Not Applicable
FREIGHT CLASS PACKAGE ....: Compounds, molding, containing chopped fibers and resin
PRODUCT LABEL ............: HTC-9593

15. **REGULATORY INFORMATION:**

INVENTORY INFORMATION: All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U.S. C. 2601 et. seq.

OTHER ENVIRONMENTAL INFORMATION: This product does not contain any components regulated under Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or to release reporting requirements (40 CFR 307, 40 CFR 311, etc.)

**OTHER INFORMATION:**

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