



SAFETY DATA SHEET

**SECTION 1, PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** TPR<sup>2</sup> Fireshell Series - F10E, BMS TC, TB, JM TC  
**Effective Date:** April 28, 2015  
**Product Use/Class:** Fire Retardant Coating  
**Manufacturer:** TPR<sup>2</sup> Corporation  
36 Plains Road  
Essex, CT 06426 USA  
1-860-767-8772  
**Preparer:** Chemistry Department, TPR<sup>2</sup> Corporation  
**In Case of Emergency:** CHEMTREC  
1-800-424-9300  
**Supersedes:** New

**SECTION 2, HAZARDS IDENTIFICATION**

GHS Classification:	Hazard Category	Route of Exposure
<b>Hazard Class</b> Acute Toxicity – Inhalation	4	Inhalation
Eye Irritation	2B	Eye
Skin Irritation	2	Skin

**Signal word:** Warning

**Symbol(s):**



**Hazard Statements:**  
Harmful if inhaled  
Causes eye irritation Causes skin irritation

**Precautionary Statements:**  
Avoid breathing mist/spray  
Wear eye protection  
Avoid contact with exposed skin  
Wear protective gloves  
Wash thoroughly after handling

**Response:**  
If inhaled: Remove person to fresh air  
If in eyes: Rinse with water for several minutes  
If eye irritation persists: Get medical attention  
If on skin: Wash with soap and water  
If skin irritation persists: Get medical attention

**Storage:**  
Store material in cool dry place

**Disposal:**



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Dispose of contents and container in accordance with local/regional/national regulations

### Section 3, Composition / Information on Ingredients

Chemical Name	CAS Number	Wt. %
Ammonium Polyphosphate	68333-79-9	15-35
Pentaerythritol	115-77-5	7-13
Melamine	108-78-1	7-13
Titanium Dioxide	13463-67-7	5-10
Aluminum Trihydrate	8064-00-4	0-5

### Section 4, First Aid Measures

**General** – If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area; get medical attention

**First Aid – Skin Contact:** Wash with soap and water. Remove contaminated clothing. If persistent irritation occurs, seek medical attention.

**First Aid – Eye Contact:** Flush eyes for at least 15 minutes. Seek medical attention if irritation persists.

**First Aid – Ingestion:** If swallowed: Do not induce vomiting. Rinse mouth out with water. If irritation persists: seek medical attention.

### Section 5, Fire Fighting Measures

**Extinguishing Media:** Use ABC dry chemical, foam or carbon dioxide.

**Unusual Fire & Explosion Hazards:** Closed container may rupture (due to a buildup of pressure) when exposed to extreme heat. Carbon monoxide and/or carbon dioxide may be released when exposed to very high temperatures.

**Special Protective Equipment and Precautions for Fire-Fighters:** Wear positive pressure self-contained NIOSH approved breathing equipment and approved protective equipment if necessary.

### Section 6, Accidental Release Measures

**Personal precautions, Protective Equipment, and Emergency Response:** Use personal protective equipment as recommended in section 8.

**Environmental Precautions:** Do not allow material to be released into waterways.

**Methods and materials for containment and cleaning up:** If spilled, absorb with vermiculate or other inert material (i.e. sand). Collect up and place in an appropriate container.

### Section 7, Handling and Storage

**Precautions for safe handling:** When working with any chemical product, use good workplace procedures. Do not cut, puncture, or weld on or near the container. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well ventilated conditions. Avoid skin and eye contact. Avoid inhalation of mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse.



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**Conditions for safe storage:** Keep away from heat, sparks and open flames. Avoid extreme heat or cold. Store above freezing. Do not store in open, unlabeled or mislabeled containers. Keep containers closed when not in use. Empty container contains residual product which may exhibit hazards of product. Do not reuse empty containers.

**Section 8, Exposure Controls / Personal Protection**

Chemical Name	CAS Number	OSHA PEL	ACGIH TLV	NIOSH
Pentaerythritol	115-77-5	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/ m <sup>3</sup> TWA (respirable fraction)	10 mg/m <sup>3</sup> TWA (total dust)	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> TWA (respirable dust)
Melamine	108-78-1	N/A	N/A	N/A
Ammonium Polyphosphate	68333-79-9	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	15 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	5000 mg/m <sup>3</sup> IDLH
Aluminum Trihydrate	21645-51-2	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> (respirable dust)	10 mg/m <sup>3</sup> TWA (total dust) 3 mg/m <sup>3</sup> (respirable dust)	

**Engineering Controls:** Use mechanical ventilation (cross, dilution and local exhaust) to control exposure. Local exhaust as required by job conditions to keep TLV below acceptable limits. Refer to OSHA Regulations 29 CFR 1910.94

**Respiration Protection:** A dust mask should be used in cases where individual are exposed to airborne mists of the material.

**Skin Protection:** Wear cloth, rubber, or latex gloves. Use long sleeve work cloth or a polypropylene suit.

**Eye Protection:** Wear proper eye protection; at minimum, safety glasses with side shields.

**Section 9, Physical and Chemical Properties**

<b>Appearance:</b>	white liquid
<b>Odor:</b>	mild odor
<b>pH:</b>	7-9
<b>Melting Point:</b>	N/A
<b>Boiling Point:</b>	>212°F
<b>Flash Point:</b>	>200°F
<b>Evaporation Rate:</b>	>1 (water=1)
<b>Flammability:</b>	N/A
<b>Lower Exposure Limit:</b>	N/A
<b>Upper Exposure Limit:</b>	N/A
<b>Vapor Pressure (mm Hg):</b>	N/A
<b>Relative Density (kg/mm<sup>3</sup>):</b>	N/A
<b>Solubility in Water:</b>	N/A
<b>Specific Gravity (H2O=1):</b>	1.3 +/- 0.1
<b>Physical State:</b>	White Liquid
<b>% Volatiles:</b>	20-30%
<b>Viscosity:</b>	2300-3500 CPS
<b>Auto Ignition Temperature:</b>	N/A

**Section 10, Stability and Reactivity**



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Chemical Stability: Stable (normal temperature and conditions)  
 Possibility of Hazardous Reactions: None  
 Conditions to Avoid: Avoid high temperatures or freezing. Avoid strong acid, bases and oxidizing agents.  
 Incompatibility: Strong acid, bases and oxidizing agents.  
 Hazardous Decomposition Products: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide and oxides of titanium, oxides of phosphorous, and other products of incomplete combustion.  
 Hazardous Polymerization: None

### Section 11, Toxicological Information

Information on likely exposure:

General: Use personal protective equipment to minimize exposure.

Eyes: May cause eye irritation.

Skin: Causes skin irritation.

Inhalation: Protect from high airborne concentrations of mist resulting from spray. May cause irritation of the respiratory tract and mucous membranes.

Ingestions: May cause irritation.

Carcinogenicity	IARC			NTP		OSHA
	Group 1	Group 2A	Group 2B	Known	Suspect	
Chemical Name						
Pentaerythritol	No	No	No	No	No	No
Melamine	No	No	No	No	No	No
Ammonium Polyphosphate	No	No	No	No	No	No
Titanium Dioxide	No	No	Yes	No	No	No
Aluminum Trihydrate	No	No	No	No	No	No

Acute Toxicity:  
 No toxicity studies have been conducted on this product.

Titanium Dioxide:  
 LD50 Oral Rat >10,000 mg/kg  
 LD50 Inhalation Rat >6.8 mg/L  
 LD50 Dermal Rat >10,000 mg/kg

Melamine:  
 LD50 Oral Rat 3161 mg/kg  
 LD50 Dermal Rabbit >1,000 mg/kg

Ammonium Polyphosphate:  
 LD50 Rat >2,000 mg/kg

Aluminum Trihydrate:  
 LD50 Oral Rat >5,000 mg/kg

Chronic effects: For this category no toxicological test data is available for the whole product.  
 Carcinogenicity: For this category no toxicological test data is available for the whole product.



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Mutagenicity: For this category no toxicological test data is available for the whole product.  
 Teratogenicity: For this category no toxicological test data is available for the whole product.  
 Developmental effects: For this category no toxicological test data is available for the whole product.  
 Fertility effects: For this category no toxicological test data is available for the whole product.  
 Target Organs: For this category no toxicological test data is available for the whole product.

### Section 12, Ecological Information

Ecological Information: No ecological testing has been conducted on this product.

#### Ecotoxicity:

Ammonium Polyphosphate		
Fish(Brachydanio reno) 96 hour LC50	>	500 mg/L
Melamine		
Fish (Poecilia reticulata) 96 hour LC50	>	3,000 mg/L
Invertebrate (Daphnia) 48 hours LC50	>	2,000 mg/L
Pentaerythritol		
Invertebrate (Daphnia) 24 hour EC50	>	50,000 mg/L
Invertebrate (Daphnia) 48 hour EC50	>	30477-37043 mg/L

Persistence and degradability: N/E

Bioaccumulative Potential: N/E

Mobility in Soil: N/E

### Section 13, Disposal Considerations

**Disposal Information:** For waste disposal purposes, this product is not known to be designated as hazardous. Incinerate waste products in accordance with federal, state and local regulations. Liquids cannot be disposed of in a landfill.

### Section 14, Transportation Information

Proper Shipping Name:	Not regulated
Technical Name:	Not regulated
Hazard Class:	Not regulated
UN/NA Number:	Not regulated
Freight Class:	
Skid(s):	55
Drum(s):	50
Additional Notes:	None

### Section 15, Regulatory Information

US Regulations  
 HCS Classification                                  Irritating material, Sensitizing material

**SARA 313 – Supplier Notification**                                  None per 40 CFR Part 372

**SARA 311/312 – U.S. Federal Regulations**

Immediate Health (Acute):	Yes (Irritant)
Delayed Health (Chronic):	No
Fire:	No
Pressure:	No
Reactive:	No



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**Chemical Inventory List:**

**U.S. TSCA** - All chemicals in this product are listed or exempt from listing.

**HMIS Ratings:****Health: 1****Flammability: 0****Reactivity: 0****Personal Protection: G**

**Volatile Organic Compounds (VOC):** <50 g/L

**NFPA:****Health: 1****Flammability: 0****Reactivity: 0****Section 16, Other Information**

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To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by TPR<sup>2</sup> Corporation to be accurate at the time of preparation. TPR<sup>2</sup> Corporation does not assume any legal responsibility for use or reliance upon same.