



SAFETY DATA SHEET

SECTION 1, PRODUCT AND COMPANY IDENTIFICATION

Product Name: TPR² Fireshell IB4, IB, JM IC, BMS IC
Effective Date: April 28, 2015
Product Use/Class: Fire Retardant Coating
Manufacturer: TPR² Corporation
36 Plains Road
Essex, CT 06426 USA
1-860-767-8772
Preparer: Chemistry Department, TPR² Corporation
In Case of Emergency: CHEMTREC
1-800-424-9300
Supersedes: New

SECTION 2, HAZARDS IDENTIFICATION

GHS Classification:	Hazard Category	Route of Exposure
Hazard Class 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	21645-51-2	1-5
Kaolin	1332-58-7	1-5

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



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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.

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 ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust)	10 mg/m ³ (total dust) 5 mg/m ³ 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 ³ TWA	10 mg/m ³ TWA	5000 mg/m ³ IDLH
Aluminum Trihydrate	21645-51-2	15 mg/m ³ TWA (total dust) 5 mg/m ³ (respirable dust)	10 mg/m ³ TWA (total dust) 3 mg/m ³ (respirable dust)	
Kaolin	1332-58-7	15 mg/m ³ TWA (total dust) 5 mg/m ³ (respirable dust)	15 mg/m ³ TWA (total dust) 2 mg/m ³ (respirable dust)	10 mg/m ³ TWA (total dust) 5 mg/m ³ (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

Appearance:	white liquid
Odor:	mild odor
pH:	7-9
Melting Point:	N/A
Boiling Point:	>212°F
Flash Point:	>200°F
Evaporation Rate:	>1 (water=1)
Flammability:	N/A
Lower Exposure Limit:	N/A
Upper Exposure Limit:	N/A
Vapor Pressure (mm Hg):	N/A
Relative Density (kg/mm³):	N/A
Solubility in Water:	N/A
Specific Gravity (H₂O=1):	1.3 +/- 0.1



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Physical State: White Liquid
% Volatiles: 30-40%
Viscosity: 1500-3000 CPS
Auto Ignition Temperature: N/A

Section 10, Stability and Reactivity

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
Kaolin	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



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SARA 311/312 – U.S. Federal Regulations

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

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

Prepared by: Chemistry Department, TPR² Corporation, USA
Phone: (860)767-8772

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by TPR² Corporation to be accurate at the time of preparation. TPR² Corporation does not assume any legal responsibility for use or reliance upon same.