



SAFETY DATA SHEET

SECTION 1, PRODUCT AND COMPANY IDENTIFICATION

Product Name: TPR² Fireshell Ultra F1E, F1EP, ICP, F1ES
Effective Date: May 22, 2015
Product Use/Class: Fire Retardant Coating
Manufacturer: TPR² Corporation
36 Plains Road
Essex, CT 06426 USA
1-860-767-8772
In Case of Emergency: CHEMTREC
1-800-424-9300
Preparer: Chemistry Department, TPR² Corporation
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:

Page 1 of 5

TPR² Corporation
Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200 and prepared to GHS



SAFETY DATA SHEET

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

Section 3, Composition / Information on Ingredients

Chemical Name	CAS Number	Wt. %
Aluminum Trihydrate	21645-51-2	20-50
Titanium Dioxide	13463-67-7	1-10
Expandable Flake Graphite	12777-87-6	5-10

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.



SAFETY DATA SHEET

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
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)	N/A
Titanium Dioxide	13463-67-7	15 mg/m ³ TWA	10 mg/m ³ TWA	5000 mg/m ³ IDLH
Expandable Flake Graphite	12777-87-6	N/A	None Listed use 2.0 mg/m ³ TWA 3 mg/m ³ nuisance dust	N/A

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:	Grey Liquid
Odor:	mild odor
pH:	6-7
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):	1.25 +/- 0.1
Physical State:	Grey 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.



SAFETY DATA SHEET

Hazardous Decomposition Products: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, sulfuric vapor and oxides of titanium, 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	
Titanium Dioxide	No	No	Yes	No	No	No
Aluminum Trihydrate	No	No	No	No	No	No
Expandable Flake Graphite	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

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

Expandable Flake Graphite
 Not Available

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.
 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:

Persistence and degradability: N/E

