



ForceField® FireGuard™ Flame Retardant for Fabric

SAFETY DATA SHEET

SECTION 1 – CHEMICAL AND COMPANY IDENTIFICATION:

Product Name: ForceField FireGuard Flame Retardant for Fabric	Date Printed: 8/28/2018
Product Use/Class: Water-Based Flame Retardant for Fabric	Product ID: F FG
Supplier: Shield Industries, Inc.	Manufacturer: Shield Industries, Inc.
Address: 131 Smokehill Lane Woodstock, GA 30188 - USA	Address: 131 Smokehill Lane Woodstock, GA 30188 - USA
Telephone: 770-517-6869	24 Hour Emergency Hotline: 800-535-5053

SECTION 2 – HAZARD/ IDENTIFICATION:

Physical hazards:	Not applicable	Not applicable
Health hazards:	Acute toxicity	Not applicable
	Eye irritation	Category 2B
	Skin irritation	Not applicable
	Specific target organ toxicity, single exposure	Not applicable

Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

Label elements:



Signal word: Warning

Hazard statement Causes eye irritation. (H320)

Precautionary statements:

Prevention: Read label before use. (P103)
Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Wash hands and exposed skin thoroughly after handling. (P264)

- Response:** IF SWALLOWED: Get medical advice/attention. (P301 + P313)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305 + P351 + P338)
- Storage:** Keep out of reach of children. (P102)
- Disposal:** Dispose of contents/container to an approved waste disposal plant. (P501)
- Hazard(s) not otherwise classified (HNOC):** None.

Supplemental information:

TOXICITY STATEMENT: This product is a mixture containing up to 55% of ingredients with unknown toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS:

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>%</u>
Water	7732-18-5	< 75 %
Pentaerythritol tetraphosphate ammonium salt (Proprietary)	Trade Secret*	< 40 %

* Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Additional Information:

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below:
None

SECTION 4 FIRST AID MEASURES

- Inhalation:** Move person to fresh air and keep at rest in a position comfortable for breathing. If systems develop, contact a POISON CENTER or doctor/physician..
- Skin contact:** If on skin, wash thoroughly with soap and water. If on clothes, remove clothing. Get medical attention if irritation develops and persists.
- Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Keep eyes wide open and continue rinsing. Get medical attention if irritation develops and persists.
- Ingestion:** Seek medical attention immediately and follow instructions given. Effects of ingestion are unknown. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

May cause stinging of eyes and/or irritation. Prolonged and repeated skin exposure may be irritating to some people.

Indication of immediate medical attention and special treatment needed:

If ingested: Immediately seek medical attention. Provide general supportive measures and treat symptomatically. Keep victim under observation.

General information:

More affected persons from dangerous area. Do not leave victim unattended. Ensure that medical personnel are aware of the material(s) involved. Show this safety data sheet to the doctor in attendance.

SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing media:

Non-combustible. Use media appropriate for surrounding fire.

Unsuitable extinguishing media:

None known.

Specific hazards arising from the chemical:

Combustion or thermal decomposition will evolve toxic and/or irritant vapours. Forms fumes of oxides of carbon, nitrogen, and phosphorus.

Special protective equipment and precautions for firefighters:

None known. Use personal protective equipment appropriate for surrounding fire.

Fire-fighting equipment/instructions:

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up.

Specific methods:

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards:

None known.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

Environmental precautions:

Avoid release to the environment. Contain spillages and then collect with sand, earth, or any other suitable adsorbent material. Avoid discharge into drains, sewers, or waterways. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel of all environmental releases.

Methods and materials for containment and cleaning up:

Contain spillages and then collect with sand, earth, diatomaceous earth, vermiculite, or any other suitable adsorbent material. Collect spillage. Transfer to a container for disposal or recovery. Following product recovery, flush area with water. If possible prevent water running into sewers. For waste disposal, see section 13 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Smoking, eating and drinking should be prohibited in the application area. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. When opening containers, do so slowly to vent slight pressure that may build up after prolonged storage.

Advice on protection against fire and explosion:

None – Product is non-combustible

Conditions for safe storage, including any incompatibilities:

Keep out of reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep cool. Do not store in temperatures below 0° C or above 50° C. Containers which are opened must be carefully resealed and kept upright to prevent leakage. When opening containers, do so slowly to vent slight pressure that may build-up after prolonged storage. Observe label precautions.
Incompatible materials: Strong oxidizing agents and reducing agents.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits:

U.S. ACGIH Threshold Limit Values

<u>Components</u>	<u>CAS</u>	<u>Type</u>	<u>Value</u>
-------------------	------------	-------------	--------------

No exposure limits have been established for this product or components.

U.S. OSHA

<u>Components</u>	<u>CAS</u>	<u>Type</u>	<u>Value</u>
-------------------	------------	-------------	--------------

No exposure limits have been established for this product or components.

U.S. NIOSH

<u>Components</u>	<u>CAS</u>	<u>Type</u>	<u>Value</u>
-------------------	------------	-------------	--------------

No exposure limits have been established for this product or components.

Appropriate engineering controls:

Not normally required with adequate local ventilation.

Individual protection measures, such as personal protective equipment:

Eye/face protection:

Wear safety glasses with side shields (or goggles) where splashing is likely.

Hand protection:

Wear appropriate chemical resistant gloves to minimize physical contact (Butyl rubber, Neoprene, or Natural rubber). Check with protective equipment manufacturer's data.

Skin protection/Other:

Not normally required.

Respiratory protection:

Not normally required with adequate local ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.

Thermal hazards:

Not normally required.

General hygiene considerations:

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid release to the environment.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Physical state: Liquid
Form: Liquid emulsion.
Color: Clear to slightly hazy.

Odor: Characteristic, Mild

Odor threshold: Not available.

pH: 7.0 – 7.3 +/- 0.2

Melting point/freezing point: Not available.

Initial boiling point and boiling range > 100 °C estimated

Flash point: No flashpoint below 200°F (93.33°C)

Evaporation rate: Approximately 1 (water = 1)

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits:

Flammability limit – lower (%): Not available.

Flammability limit – upper (%): Not available.

Explosive limit - lower (%): Not available.

Explosive limit - upper (%): Not available.

Vapor pressure: Not available.

Relative Vapor density: Not available.

Relative density: 1.08 +/- 0.02

Solubility (water): Soluble.

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not applicable.

Decomposition temperature: Not available.

Viscosity (kinematic cSt @ 40 °C): Not available.

Explosive properties: Not explosive.

Oxidizing properties: Not oxidizing.

Other information:

VOC: 0.00 %

LVP: 0.00 %

Ionic nature: Non-Ionic

SECTION 10 STABILITY AND REACTIVITY

Reactivity:

The product is stable and non-reactive under normal ambient conditions of use, storage and transport.

Chemical stability:

Material is stable under normal conditions.

Possibility of hazardous reactions:

None anticipated.

Conditions to avoid:

Avoid contact with incompatible materials. Avoid contact with heat and ignition sources. Do not freeze.

Incompatible materials:

Strong oxidizing agents and reducing agents.

Hazardous decomposition products:

At temperatures over 200 C, or under fire conditions, thermal decomposition may evolve toxic and/or irritant vapours. Forms: oxides of carbon, nitrogen, and phosphorus; smoke of unknown toxicity.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Inhalation: No effects expected, however, may cause mild irritation to respiratory tract.

Skin contact: May cause skin irritation and/or dermatitis.

Eye contact: Vapors may cause irritation to the eyes

Ingestion: Not a likely route of exposure. Effects are not known.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye irritation: Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Skin irritation. Prolonged and repeated skin exposure may be irritating to some people.

Ingestion: Not a likely route of exposure. Effects are not known. Seek medical attention if ingested

Information on toxicological effects:

Acute toxicity:

<u>Components</u>	<u>CAS#</u>	<u>Test</u>	<u>Species</u>	<u>Test Results</u>
Pentaerythritol tetraphosphate, ammonium salt	Trade Secret	Oral LD50	Rat	>2,000 mg/kg

Skin corrosion/irritation: Prolonged and repeated skin exposure may be irritating to some people.

Serious eye damage/eye irritation: Causes eye irritation.

Respiratory or skin sensitization:

Respiratory sensitization: No effects expected.

Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity:

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity:

No data available to indicate that this product is considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

Not listed.

Repeated dose toxicity:

No data available for this product.

Specific target organ toxicity - single exposure:

No data available for this product.

Teratogenicity:

No data available for this product.

Aspiration hazard:

No data available for this product.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: By analogy with similar materials:

Acute Toxicity:

Components/CAS	Test	Species	Test Results
Pentaerythritol	LC50	Fish	>100 mg/l (96 hr.)
tetraphosphate,	EC50	Aquatic invertebrates	>100 mg/l (48 hr.)
ammonium salt	EC50	Algae	>100 mg/l (96 hr.)

Long Term Toxicity:

No data available.

Persistence and degradability:

Not readily biodegradable.

Bioaccumulative potential:

This product has low potential for bioaccumulation.

Mobility in soil:

This product has low mobility in soil.

Results of PBT and vPvB assessment:

Not classified as PBT or vPvB.

Other adverse effects:

None known.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment/disposal instructions:

Disposal should be in accordance with local, state, or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Waste from residues / unused products:

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging:

Exercise caution as empty containers or liners may retain some product residues. Do not re-use empty containers. Do not burn, or use a cutting torch on, empty containers. Dispose of empty containers in accordance with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

DOT

UN number: Not applicable
UN proper shipping name: Cleaning compounds N.O.S.
Transport hazard class(es):
 Class: Not applicable
 Subsidiary risk: -
 Label(s): Not applicable
 Packing group: Not applicable
 Special precautions for user:
 Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Environmental hazards: No
Special provisions: None Assigned
Packaging exceptions:
 None – Not classified as dangerous for transportation
Packaging bulk:
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
 Not applicable

IATA

UN number: Not applicable
UN proper shipping name: Cleaning compounds N.O.S.
Transport hazard class(es):
 Class Not applicable
 Subsidiary risk -
 Label(s) Not applicable
Packing group Not applicable
Environmental hazards No
ERG Code Not applicable

Special precautions for user:
 Read safety instructions, SDS and emergency procedures before handling. Read Safety instructions, SDS and emergency procedures before handling.

Packaging bulk:

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable

IMDG

UN number: Not applicable
UN proper shipping name: Cleaning compounds, n.o.s.
Transport hazard class(es):
Class: Not applicable
Subsidiary risk: -
Label(s): Not applicable
Packing group: Not applicable
Environmental hazards:
Marine pollutant: No

Special precautions for user:

Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Packaging bulk:

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable

SECTION 15 REGULATORY INFORMATION

US federal regulations:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List or polymer exempt.

TSCA Section 5 SNUR: (40 CFR 721.10536.

No Listed materials.

CERCLA Hazardous Substance List (40 CFR 302.4)

No Listed materials.

SARA 311/312 – Superfund Amendments and Reauthorization Act of 1986:

Hazard categories:

Immediate Hazard	Yes
Delayed Hazard	No
Fire Hazard	No
Reactivity Hazard	No

SARA 313 – Toxic Chemicals (40 CFR 372):

No Listed materials.

SARA 302 Threshold Planning Quantity:

Not regulated.

Other federal regulations:

Clean Air Act (CAA) Ozone-Depletion Potential:

This product neither contains, nor was manufactured with a Class I, or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A+B).

US state regulations

U.S. California Proposition 65:

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive effects.

SECTION 16 OTHER INFORMATION

NFPA RATING: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

PREPARATION INFORMATION:

DATE CREATED: 01/01/2006 LAST REVISION: 08/28/2018
CREATED/REVISED BY: R. Lasnik

This information relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of this information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

End of SDS