



## ForceField® UV SunBlock for Fabrics

### SAFETY DATA SHEET

#### SECTION 1 – CHEMICAL AND COMPANY IDENTIFICATION:

Product Name:	ForceField UV SunBlock for Fabrics	Date Printed:	12/9/2015
Product Use/Class:	Ultraviolet Filtering Color Protectant for Fabric	Product ID:	F UVSB
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:

<b>Physical hazards:</b>	Flammable liquids and vapour	Category 3
<b>Health hazards:</b>	Aspiration hazard	Category 1
	Skin irritation	Category 3
	Specific target organ toxicity, single exposure	Category 3

**Environmental hazards:** Not classified.

**OSHA defined hazards:** Not classified.

#### Label elements:



**Signal word:** Danger

**Hazard statement** Flammable liquid and vapour. (H226)  
May be fatal if swallowed and enters airways.(H304)  
Causes skin irritation. (H315)  
May cause drowsiness or dizziness. (H336)  
Toxic to aquatic life. (H401)  
Toxic to aquatic life with long lasting effects. (H411)

**Precautionary statements:**

- Prevention:** Keep away from heat/sparks/open flames/hot surfaces. –  
No smoking. (P210)  
Take Precautionary measures against static discharge. (P243)  
Wear protective gloves/protective clothing/eye protection/face protection. (P280)  
Ground/bond container and receiving equipment. (P240)  
Use only non-sparking tools. (P242)  
Keep container tightly closed. (P233)  
Wear protective glove/protective clothing/eye protection/face protection. (P280)  
Use only outdoors or in a well-ventilated area. (P271)  
Avoid breathing vapours. (P261)  
Was hands and exposed skin thoroughly after handling. (P264)
- Response:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. (P301 + P310)  
Do NOT induce vomiting. (P331)  
In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction. (P370 + P378)
- Storage:** Store in a well-ventilated place. Keep cool. (P403 + P235)  
Store locked up. (P405)
- Disposal:** Dispose of contents/container to an approved waste disposal plant. (P501)
- Hazard(s) not otherwise classified (HNOC):** None.
- Supplemental information:** None.

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**SECTION 3 COMPOSITION/INFORMATION ON COMPONENTS**

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>%</u>
Alkanes, C9-11-iso	68551-16-6	90 - 95 %
Isoparaffinic hydrocarbon	64742-48-9	4 - 5 %
Propylene Glycol Methyl Ether	107-98-2	0.1 - 0.2 %
Triazine UV Absorber	Proprietary*	0.1 - 0.5 %

\* 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

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#### **SECTION 4 FIRST AID MEASURES**

- Inhalation:** Move person to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If systems persist, 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:** Keep respiratory tract clear. Do NOT induce vomiting. Do NOT give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

**Most important symptoms/effects, acute and delayed:**

May cause drowsiness and dizziness. Aspiration of liquid may cause pulmonary oedema.

**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. Symptoms may be delayed.

**General information:**

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

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#### **SECTION 5 FIRE FIGHTING MEASURES**

**Suitable extinguishing media:**

Alcohol resistant foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:**

Combustion or thermal decomposition will evolve toxic and/or irritant vapours. Forms fumes of carbon oxides. Do not allow run-off from fire-fighting to enter drains or water courses.

**Special protective equipment and precautions for firefighters:**

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and self-contained breathing apparatus (SCBA).

**Fire-fighting equipment/instructions:**

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:**

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. 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:**

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

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## **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. Do not breathe vapours. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. 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. Avoid discharge into drains, water courses or onto the ground. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel and authorities of all environmental releases.

**Methods and materials for containment and cleaning up:**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the containers to a safe and open area if the leak is irreparable. Isolate area until vapours have dispersed. Prevent entry into waterways, sewer, basements or confined areas.

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.

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## **SECTION 7 HANDLING AND STORAGE**

**Precautions for safe handling:**

**Do not aerosolize this product. If this product is to be sprayed, use ONLY LOW PRESSURE (less than 60 psi) SPRAYER.** Do not breathe vapours/dust. Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as contents may be under

pressure. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

**Advice on protection against fire and explosion:**

Take precautionary measures against static discharges. Keep away from open flames, hot surfaces and sources of ignition.

**Conditions for safe storage, including any incompatibilities:**

Store locked up. No smoking. Keep container tightly closed in a dry and well-ventilated place. Keep cool. Store at temperatures not exceeding 50 °C (122 °F). Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations/working materials must comply with the technological safety standards. Avoid storing in the presence of oxidizing agents or water.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Occupational exposure limits:**

**US. ACGIH Threshold Limit Values**

<u>Components</u>	<u>CAS</u>	<u>Type</u>	<u>Value</u>
Iso-alkanes (C9-C11)	68551-16-6	TWA	100 ppm
Alkanes and cycloalkanes (C5-C8)	-----	TLV	1500 mg/m3
Alkanes and cycloalkanes (C9-C15)	-----	TLV	1200 mg/m3
Propylene glycol	107-98-2	TWA	100 ppm
Methyl ether		STEL	150 ppm

**Appropriate engineering controls:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:**

Wear safety glasses with side shields (or goggles). Eye wash bottle with pure water.

**Hand protection:**

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

**Skin protection/Other:**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection:**

Not normally required. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

**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.

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:**

**Physical state:** Liquid  
**Form:** Liquid  
**Color:** Clear to slightly hazy, pale yellow color

**Odor:** Characteristic, Mild, Hydrocarbon

**Odor threshold:** Not available.

**pH:** Not available.

**Melting point/freezing point:** Not available.

**Initial boiling point and boiling range** 160 °C estimated

**Flash point:** 102.9 °F (39.4 °C) Method: Tag closed cup

**Evaporation rate:** 1

**Flammability (solid, gas):** Not available.

**Upper/lower flammability or explosive limits:**

**Flammability limit – lower (%):** Not available.

**Flammability limit – upper (%):** Not available.

**Explosive limit - lower (%):** 0.7 v/v (Isoparaffic hydrocarbons)

**Explosive limit - upper (%):** 5.6 v/v (Isoparaffic hydrocarbons)

**Vapor pressure:** 6.18 mm Hg @100 °F estimated

**Relative Vapor density:** 4.5 (Air = 1.0)

**Relative density:** 0.75 +/- 0.04 @ 60.1 °F

**Solubility (water):** Negligible

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

**Auto-ignition temperature:** 637 °F (336 °C) estimated

**Decomposition temperature:** Not available.

**Viscosity (kinematic cSt @ 40 °C):** 1.1 +/- 0.1

**Other information:**

**Evaporation rate:** 1

**Percent volatile:** >99 %

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**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:**

Hazardous polymerization is not anticipated to occur.

**Conditions to avoid:**

Avoid contact with heat, flame, ignition sources and incompatible materials.

**Incompatible materials:**

Strong oxidizing agents and water.

**Hazardous decomposition products:**

At temperatures over 200 C, or under fire conditions, oxides of carbon can form.

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## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

**Ingestion:** May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

**Inhalation:** May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.

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

**Eye contact:** Vapors may cause irritation to the eyes

### Symptoms related to the physical, chemical and toxicological characteristics:

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and/or degreasing of skin.

### Information on toxicological effects:

**Acute toxicity:** May be fatal if swallowed and enters airways.

<b>Components</b>	<b>CAS#</b>	<b>Test</b>	<b>Species</b>	<b>Test Results</b>
Isoparaffinic Hydrocarbon	64742-48-9	Rat Acute Dermal LD50	> 5000 mg/kg Rabbit	> 2000 mg/kg
Alkanes, C9-11-iso	68551-16-6	Acute Oral LD50 Acute Inhalation LC50 Acute Dermal LD50	Rat Rat Rabbit	34,600 mg/kg 12.4 mg/l, 4 Hours 15,400 mg/kg
Propylene glycol methy ether	107-98-2	Acute Oral LD50 Acute Inhalation LC50 Acute Dermal LD50	Rat Rat Rabbit	6,100 mg/kg 36,400 mg/m <sup>3</sup> 13,000 mg/kg

**Skin corrosion/irritation:** May cause skin irritation and/or dermatitis.

**Serious eye damage/eye irritation:** Vapours may cause eye irritation.

**Respiratory or skin sensitization:**

**Respiratory sensitization:**

Vapours may cause irritation.

**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:**

by

This product is not considered to be a carcinogen

IARC, ACGIH, NTP, or OSHA.

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

Not listed.

**Repeated dose toxicity:**

Component: Alkanes, C9-11-iso

Species: Rat

Application Route: Inhalation

Dose: 0, 314, 922 ppm

Exposure Time: 12 weeks

Number of exposures: 6 h/d, 5 d/week

NOEL: >922 ppm

Component: Propylene glycol methyl ether

Species: Rat

Application Route: Inhalation

Exposure Time: 13 weeks

NOEL: 300 ppm

**Specific target organ toxicity - single exposure:**

May cause drowsiness and dizziness.

**Teratogenicity:**

Component: Alkanes, C9-11-iso

Species: Rat

Application Route: Inhalation

Dose: 0, 291, 817 ppm

Number of exposures: 6 h/d

Test Period: GD 6-15

NOAEL Teratogenicity: > 817 ppm

NOAEL Maternal: > 817 ppm

**Aspiration hazard:**

May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

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**SECTION 12 ECOLOGICAL INFORMATION**

**Ecotoxicity:** Toxic to aquatic life with long lasting effects.



**Acute Toxicity:**

<b>Components/CAS</b>	<b>Test</b>	<b>Species</b>	<b>Test Results</b>
Alkanes, C9-11-iso/ 68551-16-6	Aquatic Fish LC50 Aquatic Crustacea EC50	Rainbow trout Water flea (Daphnia magna)	1,000 mg/l, 96 hr. 1,000 mg/l, 48 hr.
Isoparaffinic Hydrocarbon/ 64742-48-9	Aquatic Fish LC50 Aquatic Crustacea EL50	Fathead minnow Water flea (Daphnia magna)	8.2 mg/l, 96 hr. 4.5 mg/l, 48 hr.
Propylene glycol Methyl ether/ 107-98-2	Aquatic Fish LC50 Aquatic Crustacea EC50	Rainbow trout Water flea (Daphnia magna)	4,600 - 10,000 mg/l, 96 hr. 23,300 mg/l, 48 hr.

**Long Term Toxicity:**

<b>Components/CAS</b>	<b>Test</b>	<b>Species</b>	<b>Test Results</b>
Isoparaffinic Hydrocarbon/ 64742-48-9	NOELR NOELR	Water flea (Daphnia magna) Pseudokirchnerella subcapitata	2.6 mg/l, 21 days 0.5 mg/l, 72 hr.

**Persistence and degradability:**

According to OECD criteria the substance is not readily biodegradable but inherently biodegradable.

**Bioaccumulative potential:**

No data available.

**Mobility in soil:**

No data available.

**Results of PBT and vPvB assessment:**

Not classified as PBT or vPvB.

**Other adverse effects:**

None known.

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**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment/disposal instructions:**

This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

**Waste from residues / unused products:**

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of in accordance with 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. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14 TRANSPORT INFORMATION

### DOT

**UN number:** NA1993  
**UN proper shipping name:** Combustible liquid, n.o.s.  
**Transport hazard class(es):**  
**Class:** Combustible Liquid  
**Subsidiary risk:** -  
**Label(s):** Combustible Liquid  
**Packing group:** III  
**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:**  
**Packaging non bulk:**  
Reclassified as a “combustible liquid” according to 49 CFR 173.120 (b)(2).  
Not regulated for ground shipment in the U.S. in non-bulk packaging (<119 gallons).  
**Packaging bulk:**  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

### IATA

**UN number:** UN1268  
**UN proper shipping name:** Petroleum Distillates, n.o.s.  
**Transport hazard class(es):**  
**Class** 3  
**Subsidiary risk** -  
**Label(s)** Flammable liquid  
**Packing group** III  
**Environmental hazards** No  
**ERG Code** 10L  
**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:** UN1268  
**UN proper shipping name:** Petroleum Distillates, n.o.s.  
**Transport hazard class(es):**  
**Class:** 3  
**Subsidiary risk:** -

**Label(s):** Flammable Liquid  
**Packing group:** III  
**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

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## SECTION 15 REGULATORY INFORMATION

### US federal regulations:

This product is 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 12(b) Export Notification (40 CFR 707, Subpt. D):

Not regulated.

### 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	Yes
Fire Hazard	Yes

### 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.

### International Inventories

Country(s) or region (yes/no)*	Inventory name	On inventory
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Canada	Domestic Substances List (DSL)	
Yes		
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

- A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## SECTION 16 OTHER INFORMATION

NFPA RATING: HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

HMIS RATING: HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

Personal protection rating to be supplied by user depending on use conditions.

### PREPARATION INFORMATION:

DATE CREATED: 01/01/06 LAST REVISION: 10/9/2015

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**