

# SAFETY DATA SHEET

## SECTION I - IDENTIFICATION

**Product Identifier:** Greenfire®  
Pro Defense

**Recommended Use:**  
Apply in high risk areas to prevent the outbreak and spread of fires.



**Manufacturer:**  
Fire Suppression Innovations  
P.O. Box 189114 Charlotte NC 28218  
FSI Telephone number: +1 530-355-5032

**In case of emergency:**  
Call your physician or Poison Control  
Center 1-800-222-1222



## SECTION II - HAZARDS IDENTIFICATION

**Hazard Statements:**

-  **H302** Causes Eye Irritation  
(Category 2B — Least Concern)
-  **H303** May be Harmful if  
Swallowed  
(Category 4— Least Concern)

**H319** Suspected of damaging fertility or  
the unborn child  
(Category 2—Least Concern)

**Precautionary Statements:**

- P201:** Do not handle until all safety precautions have been read and understood.
- P264:** Wash thoroughly after handling.
- P280+281:** Wear personal protective equipment as required. Wear eye protection
- P305+P351:** If in eyes: Rinse cautiously with water for several minutes.
- P308+P313:** If exposed or concerned: Get medical advice or attention.

## SECTION III - COMPOSITION

**Ingredients:** Proprietary mixture/trade secret as defined by 29CFR 1910.1200  
Contains natural boron compounds, food grade wetting agents, anionic detergents.

## SECTION IV - FIRST AID MEASURES

**Skin Contact:** Wash with water. Prolonged exposure may cause dryness and irritation.

**Eye Contact:** Flush with water. Seek medical attention if irritation persists.

**Inhalation:** Remove person to fresh air. If symptoms such as nose or throat irritation are observed, seek medical attention.

**Ingestion:** If large amounts are swallowed (more than a tablespoons), give two glasses of water or milk to drink and seek medical attention. Never give anything by mouth to an unconscious person. In large amounts: likely to be emetic. If a victim is unconscious make sure that their airways are clear.

**Symptoms of eye contact:** Redness, tearing, burning.

**Symptoms of ingestion:** Nausea, Vomiting, diarrhea.

**Indication of immediate medical attention or special treatment needed:**  
No data available.

## **SECTION V - FIRE-FIGHTING MEASURES**

Product is non-flammable, non-combustible, non-explosive, intrinsically flame retardant. No special protective equipment, precautions, hazards, or extinguishing media

## **SECTION VI - ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment, and emergency procedures:**

Product can be very slippery! Use extreme caution walking on smooth surfaces that are wet with GreenFire®.

**Methods and materials for cleanup:**

Sorbents may be used. Prevent spills from reaching waterways. Disposal is to be performed in compliance with all federal, state and local laws. Solutions of detergents may be allowed to be flushed down sewer. First check with your local water treatment plant. In case of large spillage into water, advise local water authorities that the affected water should not be used for abstraction of potable water until natural dilution returns boron value to normal background environmental level.

## **SECTION VII - HANDLING AND STORAGE**

**Precautions for safe handling:** No unusual precautions necessary.

**Precautions for Storage:** No unusual precautions necessary

## **SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION**

The Derived No-Effect Level of exposure for workers and general public are as follows:

**Acute oral ingestion for systemic effect:**

8mg product/kg bw/day

**Long-term oral ingestion for systemic**

**effect:** 7mg product/kg bw/day

**Long-term dermal exposure for systemic**

**effect:** 3677mg product/kg bw/day

If product is used in a way that creates a mist of particles suspended in air, the DNELs are:

**Long-term inhalation for a systemic effect:** 61mg product/m<sup>3</sup>

**Acute or long-term inhalation for local effect:** 109mg product/m<sup>3</sup>

**Engineering controls and Personal Protective Equipment:**

Always use eye protection and suitable gloves. In circumstances where large amounts of mist is likely to be created, use appropriate ventilation and/or particulate respirator type N95 or better.

## **SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Transparent straw colored or clear liquid

**Odor:** Insignificant

**pH:** 6.8

**Freezing point:** -30F

**Boiling point:** ~215F

**Flash point/Flammability/Auto ignition temperature:** non-flammable

**Evaporation rate:** similar to water

**Vapor pressure:** similar to water

**Vapor density:** similar to water

**Relative density:** 1.08g/cc

**Solubility:** miscible in water and alcohols

**Partition coefficient:** hydrophilic

**Decomposition temperature:** dehydration begins at approximately 215F

**Viscosity:** variable non-Newtonian

## **SECTION X - STABILITY AND REACTIVITY**

**Reactivity:** No additional information.

**Chemical Stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Avoid contact with strong reducing agents such as metal hydrides or alkali metals. These can react to generate flammable hydrogen gas.

**Conditions to avoid:** Avoid incompatible materials.

**Incompatible materials:** Strong reducing agents such as alkali metals, metal hydrides.

**Hazardous decomposition products:** Hydrogen, boranes, ammonia.

## **SECTION XI - TOXICOLOGICAL INFORMATION**

**Acute toxicity:** Low acute toxicity: LD50 in rats is over 10,000 mg product/kg of body weight.

**Skin corrosion/irritation:** Low dermal toxicity, poorly absorbed through skin. Non-irritant.

**Serious eye damage/irritation:** Eye irritant.

**Respiratory or skin sensitization:** Not a skin sensitizer.

**Germ Cell mutagenicity/carcinogenicity:** No component in this product in concentrations of %0.1 or greater, is identified as a carcinogen, potential carcinogen, anticipated carcinogen, or probable carcinogen according to OSHA, NTP, ACGIH, and IARC.

**Reproductive Toxicity:** A recent epidemiology study under the conditions of normal occupational exposure indicated no effect of fertility. Animal feeding studies at high doses (doses that are many times those which humans would

normally be exposed to) have demonstrated effects on fertility and testis as well as developmental effects on the fetus including fetal weight loss and minor skeletal variations.

**Specific Target Organ Toxicity -single**

**exposure:** N.A. -repeated exposure: N.A.

**Aspiration hazard:** Low acute inhalation toxicity; LC50 in rats is greater than 9,800mg/m<sup>3</sup>

## **SECTION XII - ECOLOGICAL INFORMATION**

**Part 1: Non-naturally occurring portion of product**

**Persistence and biodegradability:** This portion of the product biodegrades rapidly with an average of 95% decomposition after 28 days.

**Bio-accumulating potential:** Not significantly bio-accumulative.

**Mobility in soil:** Water soluble and is leachable through normal soil.

**Other adverse Effects:** No data available.

**Part 2: Naturally occurring portion of the product**

**Persistence and biodegradability:** This portion of the product is a ubiquitous and naturally occurring compound. It does not biodegrade but rather naturally disperses until reaching normal environmental levels.

**Bio-accumulation potential:** Not significantly bio-accumulative

**Mobility in soil:** Water soluble and is leachable through normal soil.

**Other adverse effects:** No data available.

## **AQUATIC TOXICITY TEST RESULTS**

**Algal Toxicity:** OECD 201 Method, Pseudokirchneriella subcapitata, 72hrs, EC50=1,726 ppm

**Invertebrate Toxicity:** OECD 202 Method, Daphnia magna, 48hrs, LC50=1,542 ppm  
**Fish Toxicity:** OECD 203 Method, Pimephales promelas, 96hrs, LC50>212 ppm

### **SECTION XIII - DISPOSAL CONSIDERATIONS**

**Disposal considerations:** Always dispose of in accordance with all local, state, and federal regulations. Solutions of detergents may be allowed to be flushed down sewer. First check with your local water treatment plant.

### **SECTION XIV - TRANSPORT INFORMATION**

**US DOT:** Not dangerous goods.  
**IMDG:** Not dangerous goods.  
**IATA:** Not dangerous goods.

### **SECTION XV - REGULATORY INFORMATION**

**SARA 302:** No chemicals in this material are subject to the reporting requirements of Sara Title III section 302.

**Sara 313:** No chemicals in this material are subject to the reporting requirements of Sara Title III section 313.

**California Prop. 65 Components:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### **SECTION XVI - REGULATORY INFORMATION**

#### **Disclaimer of Liability**

The information in this SDS was obtained from sources which we believe are reliable. However, the information is

provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. Please note that the provision of this SDS being not mandatory, only an English version of this latter is available.

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