

# SAFETY DATA SHEET

## 1. 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  
101 S. Kraemer Blvd. Suite 100 Placentia, CA.  
91024  
Telephone number: +1 (888) 766 7327

**In case of emergency:**

Call your physician or Poison Control Center  
1-800-222-1222



## 2. HAZARDS IDENTIFICATION

**Hazard Statements:**

**H320 Warning:** Causes Eye Irritation (GHS Category 2B – Least Concern)



**H361 Warning:** Suspected of damaging fertility or the unborn child (GHS Category 2 - Least Concern). See section 11 for more details.

**Precautionary Statements:**

**P102:** Keep out of reach of children.

**P103:** Read label before use.

**P264:** Wash hands thoroughly after handling.

**P305+P351+P338:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

**P337+P313:** If irritation persists: Get medical advice/attention.

**P202:** Do not handle until all safety precautions have been read and understood.

**P281:** Wear personal protective equipment as required. (See Section 8)

**P308+P313:** If exposed or concerned: Get medical advice/attention

**P501:** Dispose of contents/container in accordance with local regulations. (See section 13)

## 3. COMPOSITION

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

## **4. FIRST AID MEASURES**

**Skin Contact:** Wash with water. Prolonged exposure may cause dryness or mild 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:** Swallowing small amounts (less than a tablespoon) will cause no harm to healthy adults. If larger amounts are swallowed, drink two glasses of water and seek medical attention.

**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.

## **5. FIREFIGHTING MEASURES**

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

## **6. 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. In most municipalities product may simply be flushed into sewer or storm drain. 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.

## **7. HANDLING AND STORAGE**

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

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

## **8. 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:** 1487mg 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:** 32mg 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 a large amount of mist is likely to be created, use appropriate ventilation and/or particulate respirator type N95 or better.

## **9 . PHYSICAL AND CHEMICAL PROPERTIES**

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

**Odor:** Insignificant

**pH:** 6.8-7.6

**Freezing point:** ~30°F

**Boiling point:** ~215°F

**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:** 1.11g/cc

**Solubility:** miscible in water and alcohols

**Partition coefficient:** hydrophilic

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

**Viscosity:** ~14 cps @ 18°C

## **10 . 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.

## **11 . TOXICOLOGICAL INFORMATION**

**Acute toxicity:** Low acute toxicity - LD50 in rats is over 29,000 mg product/kg of body weight.

**Skin corrosion/irritation:** Prolonged exposure may cause dryness or mild irritation.

**Serious eye damage/irritation:** GHS Category 2b Eye Irritant. Direct exposure to undiluted product may cause mild transient eye irritation.

**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:** Recent epidemiology studies under the conditions of normal occupational exposure indicated no effect on fertility. Animal feeding studies at extremely high doses (doses equivalent to drinking more than 2 liters of this product per day, every day for 6 weeks) have demonstrated effects on fertility and testes 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>

## 12 . 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 leachable through normal soil.

**Other adverse Effects:** If sprayed on green foliage, this portion of the product contains soaps that will interfere with the natural waxy coating of plant leaves. This will cause the leaves to dehydrate, wither, and die. Do not spray this product on green foliage.

### 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.

### Part 3: Aquatic Toxicity Test Results

**Algal Toxicity:** OECD 201 Method,  
Pseudokirchneriella subcapitata, 72hrs, EC50= 961 ppm

**Invertebrate Toxicity:** OECD 202 Method, Daphnia magna, 48hrs, LC50=1,261 ppm

**Fish Toxicity:** OECD 203 Method, Pimephales promelas, 96hrs, LC50=231 ppm

## 13 . DISPOSAL CONSIDERATIONS

**Disposal considerations:** Always dispose of in accordance with all local, state, and federal regulations. In most municipalities, contents may simply be flushed down the drain and container may be recycled or disposed of as solid waste.

## 14. TRANSPORT INFORMATION

**US DOT:** Not dangerous goods.

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

## 15. 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.

## 16. OTHER INFORMATION

### Disclaimer of Liability

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