

## KARRIKAID®-PRO LIQUID NUTRIENT SUPPLEMENT

### 1) PRODUCT DESCRIPTION

**Karrikaid-PRO** is a professional-grade plant and soil enhancer formulated to contain Karrikin molecules. Karrikins, derived from plant smoke and first discovered in 2004, are potent signaling compounds that stimulate seeds to germinate and plants to develop quickly and vigorously in post-fire conditions. **Karrikaid-PRO** helps mimic these conditions when applied to soil and plants.

**Karrikaid-PRO** combines beneficial organic acids and phenols with a unique biochar extract. The proprietary blending process concentrates the Karrikins, creating a synergistic liquid product that promotes a strong germination response and robust plant development.

Karrikaid's organic acids, including acetic, propionic, lactic, succinic, citric, and pyruvic acid, naturally improve the bioavailability of essential plant nutrients. Additionally, microbes metabolize these organic acids, which in turn enhances the natural biology of the soil. **Karrikaid-PRO** is also rich in phenols that improve plants' natural responses to stress, including excessive heat, drought, UV exposure, insects, pathogens, heavy metals, and salinity pressure.



### 2) CERTIFICATIONS AND APPROVALS



<https://persistproducts.com/karrikaid>

## TECHNICAL DATA SHEET

# KARRIKAID®

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VGrid Energy Systems, Inc.  
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### 3) APPLICATION RATES AND TIMING

#### Turfgrass - Warm Season Grasses

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:200 (0.50%)
- **Timing:** Apply six times during the spring and summer growing season. Allow a minimum of two weeks between applications.

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#### Seasonal Crops - Leafy Greens, Brassicas

- **Rate:** 2-4 fl oz / 1,000 sq ft (0.67-1.33 gal/acre)
- **Dilution:** 1:200 (0.50%)
- **Timing:** Apply once at planting using half of the above rate. Follow up with two additional applications at the full rate. Allow two-four weeks between each application.

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#### Seasonal Crop - Potato, Onion, Carrot, Beet

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:200 (0.50%)
- **Timing:** Apply once at planting using half the above rate. Follow up with two additional applications at the full rate. Allow two-four weeks between each application.

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#### Permanent Crop - Citrus

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:100 (0.50%)
- **Timing:** Apply six times during the growing season. Allow a minimum of three weeks between applications.

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#### Flowers and Ornamental Plants

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:300 (0.33%)
- **Timing:** Apply once at planting using half of the above rate. Follow up with two additional applications at the full rate. Allow three-five weeks between each application.

#### Turfgrass - Cool Season Grasses

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:200 (0.50%)
- **Timing:** Apply three times during spring growing season and three times in the fall. Allow a minimum of two weeks between applications.

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#### Seasonal Crops - Strawberry, Pepper, Tomato

- **Rate:** 3-4.5 fl oz / 1,000 sq ft (1.0-1.5 gal / acre)
- **Dilution:** 1:200 (0.50%)
- **Timing:** Apply once at planting using half of the above rate. Follow up with three additional applications at the full rate. Allow two-four weeks between each application.

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#### Seasonal Crops - Corn, Soybean, Oats, Wheat

- **Rate:** 4.5-6 fl oz / 1,000 sq ft (1.5-2.0 gal/acre)
- **Dilution:** 1:100 (1%)
- **Timing:** Apply once at planting using half the indicated rate. Make a second application about four to six weeks after planting. For best results, make a third application four weeks later.

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#### Permanent Crop - Fruit and Nut Trees

- **Rate:** 4.5-6 fl oz / 1,000 sq ft (1.5-2.0 gal/acre)
- **Dilution:** 1:100 (1%)
- **Timing:** Apply six times during the growing season. Allow a minimum of three weeks between applications.

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#### Seed Treatment (pre-soak)

- **Rate:** 8 fl oz per hundredweight (CWT)
- **Dilution:** 1:500 (0.20%)
- **Timing:** Soak seeds in diluted solution (**2.5 fluid ounces in ten gallons of water**) for four-six hours before planting.

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### 4) INSTRUCTIONS FOR USE

Stir or shake well before use. Where higher water rates are required for good foliar coverage, do not exceed the maximum application rate.

**Karrikaid-PRO** must be diluted prior to use (refer to the previous page). The product can be applied through several different methods, including soil drenching, foliar spray, and injection into fertigation systems.

Ensure suitable spray conditions (e.g. temperature, humidity, wind-speed), prior to foliar application.

**Karrikaid-PRO** will stain clothing and certain surfaces. Spray away from buildings.

The product can be used together with pesticides/fungicides to improve efficacy. (Always conduct a jar test to ensure compatibility and spray test on a small area before wide-spread use.)

For best results, use **Karrikaid-PRO** in combination with Persist® Micronized Biochar. Visit the Persist website for details.

([persistproducts.com/micronized-biochar](https://persistproducts.com/micronized-biochar))

### 5) CHEMICAL COMPATIBILITY

**Always conduct a jar test** to ensure compatibility and spray test on a small area before wide-spread use.

***Incompatible materials:** chlorine; certain acids; ozone; liquid oxygen. (This list is not exhaustive. Please contact VGrid for specific questions regarding compatibility)*

### 6) STORAGE AND HANDLING

**DO NOT CONSUME.** Store in a sealed container and away from foodstuff. Do not allow pets or livestock access to this material. Always transport in sealed containers. Avoid use in confined and non-ventilated spaces. Adequate ventilation required.

**Personal Protective Equipment: Overalls, gloves and covered footwear are recommended when loading, mixing or applying this product.**

Keep containers tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store in direct sunlight.

Karrikaid may be disposed at an authorized waste management facility. Appropriate volumes may be applied onto a vegetated land area away from drainage zones or waterways.

Refer to the MSDS Sheet for complete requirements.

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### 7) LABORATORY ANALYSIS

Water Content: 90.0%

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Acetic Acid: 7.0%

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Propionic Acid: 0.5%

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Other Organic Acids: 0.3%

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Phenols: 1,300 mg/kg

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Bulk Density: 1.05 g/ml

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pH: 4.0-4.5

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*Karrikin testing and evaluation conducted by  
Palacký University Olomouc (Olomouc, Czechia).  
Contact VGrid Energy Systems for details.*

### 8) PRODUCT AVAILABILITY

**Karrikaid-PRO** is offered through a network of distribution partners in 275-gallon IBC totes, 55-gallon drums, and 2.5-gallon bottles.

Your Local Distributor

Karrikaid is also available directly to consumers through [www.karrikaid.com](http://www.karrikaid.com) and from popular online retailers, including Amazon.

## DISCOVER THE KARRIKAID ADVANTAGE

- ✔ Provides an additional layer of critical protection from biotic and abiotic stress.
- ✔ Improves the bio-availability of key nutrients and stimulates plant uptake.
- ✔ Increases microbial levels in soil which enhances nutrient cycling.
- ✔ Karrikin molecules accelerate seed germination and early plant development.
- ✔ The result is significant yield increases in third-party crop trials.

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