



**CATALYST  
ROOT-FORCE**

# OUT-PERFORMING ALL OTHER PHOSPHORUS INPUTS



For crops to reach their maximum potential, research has shown that plant-available Phosphorus is critical during the beginning stages of growth.

Most of the Phosphorus used in agriculture is inadequately protected from soil tie-up, leading to waste and reaction with Calcium, Aluminum, Iron and other positively-charged ions in the soil. The result is nutrient deficiency, lower crop yields and diminished quality.

Utilizing Carbon technology, **Catalyst Root-Force** protects Phosphorus from tie-up, while providing high-efficiency nutrition to plants when they most need it.

## **Plant-Available Nutrient For Superior Growth**

Carbon Ortho Phosphate Technology prevents tie-up reactions from happening for an extended period of time, keeping the Phosphate in plant available form and ready for immediate uptake and utilization.

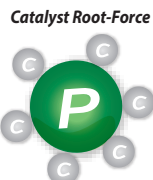
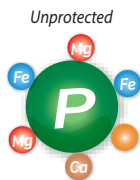
## **Low Inputs – High Return**

**Catalyst Root-Force** is the most plant-available, lowest input Phosphorus source in the industry because of the Carbon-Complex Protection of the nutrient. Most of traditional Phosphorus inputs are lost to soil tie-up.

## **Protect The Nutrient – And The Environment**

**Catalyst Root-Force** satisfies most phosphorus environmental regulations relating to pounds per acre, while still meeting or exceeding the plants' needs.





**Catalyst Root-Force protects the Phosphorus with carbon complexing, keeping the phosphorus free from soil tie-up and available to the grass all season.**

Fixation reactions in soils may only allow a small fraction [10-15%] of the phosphorus in fertilizers to be taken up by plants in the year of application, according to the Florida Institute of Phosphate Research.

**Catalyst Root-Force** incorporates amino acids and carbon to protect negatively charged phosphorus molecules from forming insoluble bonds with other ions in the soil, and ensures plant-availability for sustained growth and greater plant strength.



### GUARANTEED ANALYSIS

Available Phosphate [P<sub>2</sub>O<sub>5</sub>] .....8.00%

Soluble Potash [K<sub>2</sub>O] .....5.00%

Derived from: Protein Hydrolysate and Monopotassium Phosphate.

### Catalyst Root-Force Benefits

Highest availability phosphorus fertilizer

Ultra-Low application rates

Promotes quick, uniform emergence

Seed safe at recommended rates

### APPLICATION RECOMMENDATIONS:

**Catalyst Root-Force** can be soil or foliar applied. It may be tank mixed with other fertilizers or agricultural chemicals after conducting a jar test for compatibility. Always treat a small test area with any experimental blends to determine potential phototoxicity before making general applications.

**SOIL SPRAY application:** Applied by banding in or near the seed row or directly on the seed at a rate of 1-3 quarts per acre.

**CONTROLLED IRRIGATION:** Inject at a rate of 1-4 quarts per acre.

**FOLIAR application:** Foliar apply on all crops at a rate of 1-2 quarts per acre.

**ROOT DIP:** Mix 2 quarts per 10 gallons of water [2-5% solution] by weight. Dip plant prior to planting.

**ROOT DRENCH:** Mix 1 pint per 10 gallons of water [0.10-0.50% solution] by weight. Deliver solution to root zone.



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