

FiberWorx P4500

Synthetic Macro-Fiber Reinforcement



The Product

FiberWorx P4500 is a macrosynthetic fiber created from a blend of polyolefin resins complying with ASTM C 1116 Type III fibers. FiberWorx P4500 is a more rigid stick type fiber, and contains a crimped pattern to enhance the bond with hardened concrete. It is specifically designed and produced to minimize shrinkage in hardened concrete and to enhance fatigue resistance and concrete toughness, as well as impact resistance. Recent independent ASTM C1609 testing confirms that FiberWorx P4500 may exceed the performance of other macrosynthetic fibers available in the market.

The Benefits

- 3-Dimensional Reinforcement
- Reduces Bleed Water
- Reduces Plastic Settlement
- Reduced Plastic Concrete Shrinkage
- Reduces Hardened Concrete Shrinkage
- Reduces Fatigue Due to Multiple Axle Loadings
- Eliminates Shipping, Receiving, Offloading, Placement of Wire Mesh and Rebar
- Reduces Permeability
- Increases Impact Resistance
- Increases Surface Abrasion Resistance
- Increases Post-First Crack Load Carrying Capacity
- Increases Ductility/Modulus of Elasticity
- Reduces Labor Costs

The Applications

Applications include both cast-in place and precast concrete elements, which include:

- Slabs-on-Ground
- Slabs-on Metal Deck
- Topping Slabs on both Concrete and Asphalt
- Shotcrete
- Septic Tanks
- Burial Vaults
- Burial Vaults
- Bridge Decks

The Mixing Instructions

Loading and Mixing of the FiberWorx P4500 include:

- Adding the fiber to introducing the conventional materials. Make sure the drum is rotating at mixing speed prior to introducing the conventional concrete materials.
- Adding the fibers in the pre-weighed degradable bags after all conventional materials have been added and thoroughly mixed is the standard. Bags may be added manually at the throat of the drum or with the use of a conveyor belt. Mixing time is 70 mixing revolutions or approximately 5 minutes.
- Central Mixers require the pre-weighed bags be added with the conventional materials. Mixing times needs to be increased to insure thorough distribution of the fibers.

General Dosage Information

Being a macrosynthetic fiber, the standard dosage rate ranges from 3 pcy to 7.5 pcy for typical cast-in-place concrete, as well as precast. For shotcrete and special applications the range will extend to approximately 11 pcy. The Steel Deck Institute has a special for use in Composite Metal Deck. The minimum dosage is 4 pcy.

Packaging

Fiber is 1.5" lg./4.0 lb. bags/ 10 bags per box/48 boxes per pallet/1920 lbs. per pallet

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FiberWorx hopes the information given herein is helpful. All information is based on test data and knowledge considered to be true and accurate, and is offered for the user's consideration, investigation and verification.

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Customer Service 888.833.1097 www.Fiber-Worx.com

