Buddy Rhodes PVA Fibers Maximum Strength Fibers with Minimal Visibility

Product Overview

PVA Fibers (polyvinyl alcohol) are high-performance reinforcement fibers for concrete and mortar. PVA fibers are well-suited for a wide variety of applications because of their superior crack-fighting properties, high modulus of elasticity, excellent tensile and molecular bond strength, and high resistance to alkali, UV, chemicals, fatigue and abrasion. PVA fibers are unique in their ability to create a molecular bond with mortar and concrete that is 300% greater than other fibers. PVA fibers become viscosity modifiers, quickly changing the viscosity dependent on their size. The smaller the fiber the stiffer the mix will become.

These are monofilament fibers that are available in 3 different lengths and filament diameters:

	Fiber Length	Filament Diameter
PVA 100	0.5" (13 mm)	20 Denier (100 Microns)
PVA 15	o.375" (8 mm)	8 Denier (38 Microns)
PVA 7	0.25" (6 mm)	5 Denier (24 Microns)

Due to the fine nature of these fibers, and the fact that they disperse into monofilament fibers, they are less likely to be visible in finished surfaces. How visible they are in relation to each other is in direct proportion to their various diameters (7 is least visible, 100 is most visible). Equally true, the smaller the fiber, the more fibers there are for any given unit of measure, the more likely they are to choke mixes at higher dosage rates. Therefore, the PVA 100 are dosed at higher rates in the more flowable mixes than are the PVA 15 and PVA 7.

Dosage

PVA fibers can be dosed up to 2% of the total material weight. Not all size PVA fibers can be dosed at the maximum rate. It is recommended to perform an individual test to witness the limit of fiber for each application.

PVA 100's are favored for their ease of workability compared to the 7's and 15's. These are the most visible of the PVA fibers in finished surfaces due to their length. Ideal for use in flowable (SCC) ECC concrete mixes. PVA fibers can be used as a primary or secondary means of reinforcing artisan concrete objects, including concrete countertops, architectural concrete elements, concrete furniture, and many other applications.

PVA 15's are often used in conjunction with PVA 100's at a lesser amount. A good combination of PVA 100 and 15 fibers would be 1% PVA 100 and 0.75% PVA 15. This fiber load will exhibit greater strength while maintaining a mix which may still be castable.

PVA 7's are often used for impact resistance and to help control plastic shrinkage cracking. They are so fine that they may only be able to be dosed at less than 0.5%. These fibers are small enough to be sprayed through a hopper gun for GFRC applications and are often dosed at 0.1 -0.2% of total material weight.



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