

Matrix™ Chopped Glass Fibers

Alkali Resistant Glass Fibers



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PRODUCT OVERVIEW

Matrix™ Chopped Glass Fibers are manufactured from a specially formulated glass composition with an optimum level of Zirconia (ZrO₂) to be suitable for use in alkaline environments. Matrix™ Chopped Glass Fibers are particularly suitable for modified gypsum and GFRC concrete applications. They have high tensile strength and modulus, do not rust like steel, and are easily incorporated into mixes. They are ¾" (19mm) in length.

Matrix™ Chopped Glass Fibers enhance performance & durability, provide primary reinforcement, provide high tensile strength, and are alkali resistant & non-corrosive.

These fibers are ideal for reinforcing duoMatrix™ NEO or mixes made with duoMatrix™-G or duoMatrix™-C to make elements that are thin, lightweight, and exceptionally strong.

TECHNICAL OVERVIEW

MATRIX™ CHOPPED FIBER SPECIFICATIONS

Fiber length: ¾" (19 mm)

Fiber diameter: 18 microns

Material: Alkali Resistant Glass
200 filaments per bundle

Nominal tex (g/1000m): 138

Alkali Resistance: Excellent

Moisture Content: < 0.5%

Packaging: 1 lb (0.45 kg)
5 lb (2.27 kg)
44 lb (19.96 kg)

USING MATRIX CHOPPED GLASS FIBERS IN POLYMER MODIFIED GYPSUM

Typical Dosage - The chopped fiber is added as a percentage of the total weight. Fiber can be added in concentrations of 3% to 12%. For best results, 6% chopped fiber should be added. An accurate gram scale to weigh components is necessary.

Mixing - Blend the fibers into the mix later in the mixing process. While the bundles are designed to resist breaking down during mixing, care must be given not to overmix, which can filamentize or damage the fibers.

Gel Coat - Mix the duoMatrix™-G or duoMatrix™ NEO components without fiber and brush a surface or "gel" coat into mold. Let cure 15–20 minutes or until material gels.

Fiber Coat - Next, weigh out more duoMatrix™ material and add the recommended amount of chopped fiber. Mix thoroughly and apply mixture with gloved hand or spatula over gel coat. Another application may be required to attain ¾" (1 cm) thickness.

USING MATRIX CHOPPED GLASS FIBERS IN GFRC (GLASS FIBER REINFORCED CONCRETE)

Typical Dosage - 3% by weight of the total mix, or 1.5 lb. (0.68 kg) per 50 lb (22.7 kg) of concrete mix.

Mixing - Blend the fibers into the mix later in the mixing process. While the bundles are designed to resist breaking down during mixing, care must be given not to overmix, which can filamentize or damage the fibers.

Face Coat - Mix the duoMatrix™-C with the other mix ingredients without fiber and spray or brush a face coat into mold. Allow to partially cure enough that the material does not slump, but can still leave an impression when pressed with a finger.

Fiber Coat - Mix the materials for the backer or fiber coat and add the recommended amount of chopped fiber. Mix thoroughly and apply mixture over face coat. Another application may be required to attain ¾" (1.91 cm) thickness.



Call Us Anytime With Questions About Your Application.

Toll-free: (800) 381-1733 Fax: (610) 252-6200

www.smooth-on.com is loaded with information about mold making, casting and more.

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