

# Basalt Fiber Products for Construction



*Basalt fiber is 21st century structural composite material, interest in which is rising every day all over the world. It has a set of enhanced features that distinguishes it from other fibers used in industry. Basalt is light weight, recyclable, non-toxic, non-corrosive and has a 100% yield ratio. Capabilities include ballistic resistance, a high fire rating, sound transmission control and low thermal conductivity. It is less expensive, stronger and more flexible than many composites and is now produced in the US by MAFIC, USA and distributed by Protective Technologies for All-Hazards solutions in construction.*



## WOVEN FABRICS

Conventional weaving techniques where the fibers bisect at 0°/90° creating a fabric which that does not stretch or elongate.

### USES

Ballistics, impact resistant, strength reinforcement, fire barrier

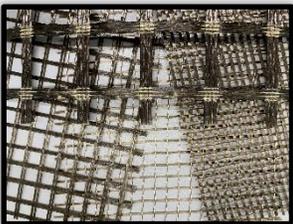


## MULTI-AXIAL FABRICS (NON-CRIMP FABRICS – NCF)

New technology for fabric creation of Unidirectional, Biaxial, Tri-directional and Quadraxial fabric structures. The stitch configuration allows the fabrics to conform to complex mold designs without creating wrinkles. These fabrics have natural corridors for improved resin transfer and can be stitched with a flow medium for use in dense composite design.

### USES

Complex composite structures



## GRID/SCRIM FABRICS

Fabrics made by either weaving or laid scrim application provide open porosity and so they can be embedded within a liquid phase (concrete or resin) or applied to a surface for impact resistance.

### USES

Concrete reinforcement, asphalt reinforcement, wall/gypsum impact



## BRAIDED TUBES/SLEEVES

Fabrics made by conventional braiding and knitting techniques allow the fabric to have cross directional and longitudinal stretch/elongation.

### USES

Composite tubes, thermal sleeving, thermal ropes and thermal gaskets



### NON-WOVEN SUBSTRATES

Nonwoven structures are not woven and created by the random positioning of fibers to specified thickness and density prior to bonding (physically, thermally, chemically, ultrasonically or a combination)

#### USES

Filtration media, sound insulation media, fire barrier, thermal insulation



### PULTRUSION

Composite structures created by the passing multiple fibers or rovings through a resin bath and assembly into a shaped profile before curing in a heating zone.

#### USES

Light weighting fiberglass structures, replacing steel structures



### CHOPPED FIBER

Fiber chopped to incremental lengths of 3mm (1/8"), 6mm (1/4"), 12mm (1/2"), 24mm (1"), 48mm (2"), 96mm (4")

#### USES

Reinforcement of cementitious applications, as a binder in 3D printing and base input for nonwoven fabrics



### MILLED FIBER

Fiber is heated and ground to a fine powder

**USES** Additive for resin or polymer systems for resistance to abrasion, corrosion and increased strength



### TAILORED FIBER PLACEMENT (TFP)

The newest and most advanced technique of fabric formation by strategic positioning of fiber onto a veil or film while controlling fiber thickness and orientation with Zero waste.

#### USES

Composites with complex shapes

### 3D PRINTING

Polymer combined with performance enhancement fillers are compounded prior to melt/flow positioning on complex composite parts

#### USES

Intricate and complex composite structures



Find out how basalt products can benefit your project:

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-OR-

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