

BasaFlex™ is an enhanced Basalt Rebar, engineered to add intrinsic value in a concrete structure. It is a sustainable and eco-friendly product, and significantly lighter than standard metal rebar products. BasaFlex™ complies with the intent of ICC Evaluation Service, Acceptance Criteria for Fiber-Reinforced Polymer (FRP) bars, and for Internal Reinforcement of Concrete Members [AC454] dated June of 2016.

BasaFlex™ is suited for multiple applications, has corrosion-proof properties, and possesses the following physical properties noted below.

PHYSICAL PROPERTIES of #3 (10mm) Rebar

Density	2.63g/c
Moisture Content	<0.1%
Ultimate Tensile Strength (MPa)*	1125.1
Modulus of Elasticity (MOE) (GPa)	56.7
Horizontal Shear Strength (MPa)	55.8
Traverse Shear Strength (MPa)	267
Peak Load (kN)	7.9
Ultimate Strain	2.0 %
Guaranteed Peak Load (kN)	7.4
Application Temperature Range (C)	-260 - +500

BasaFlex™ is an approved reinforcement product according to ACI 440R-07, which summarily addresses the present knowledge base of this material and its use in masonry and concrete structures. (ACI 440R-07 addresses basalt, glass, carbon, and aramid fiber reinforced products.) Further ACI requirements met by BasaFlex are noted below.

PRODUCT BY ACI REQUIREMENTS

ACI 440R-07	Addresses multiple FRP's for utilization
ACI 440.1R-06	Design and structural use of FRP bars
ACI 440.6-08	Directs assessment and acceptance of fiber-reinforced (FRP) bars sourced as reinforcement for concrete.

ASTM TESTING STANDARDS

ASTM D570	Water absorption of plastics
ASTM D619	Conditioning plastics for testing
ASTM D695	Compressive properties of rigid plastics

ASTM D7205	Tensile/Tensile Modulus
ASTM D790	Flex properties of unreinforced/reinforced plastics
ASTM D792	Density and specific gravity
ASTM D2734	Void content of reinforced plastics
ASTM D3410	Compressive properties of polymer matrix composite materials

ADDITIONAL STANDANDS

ISIS DESIGN MANUAL #3	Reinforcing concrete structures with fiber reinforced polymers (FRP's)
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GENERAL PROPERTIES:

BasaFlex™ BFRP Rebar is a sustainable, Patent Pending, rust proof alternative to traditional steel reinforcement. Comparatively, it is approximately 25% of the weight of steel, and has a Specific Tensile Strength that is 2.5 times greater. Less weight provides significant savings in transportation and handling costs.

BasaFlex™ is made from volcanic rock, and has a Coefficient of Thermal Expansion similar to concrete. This homogeneous behavior reduces the cracking mechanism during extreme temperature fluctuations and / or concurrent disparity.

BasaFlex™ is Engineered to last for >100 years, and may be used as a continuous reinforcement that will not rust, or require long-term maintenance. BasaFlex™ is completely impervious to attacks from alkali, chemicals or water.

Disclaimer: The information herein is to assist customers in determining whether BasaFlex is suitable for their applications. It is requested that customers inspect and test product before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The BasaFlex product must be used in accordance with applicable codes. The exclusive remedy for all proven claims is material replacement.

