



M-MACRO

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

PRODUCT FEATURES

- Enhances durability, fatigue and flexural performance
- Provides secondary reinforcement with equal strength to WWM & light rebar
- Three dimensional reinforcement to prohibit cracking
- Alkali resistant & non-corrosive
- Reduces in place costs
- High impact e and wear resistance
- 4 times the macro fiber count

APPLICATIONS

- Slab-on-grade
- Precast concrete (thin wall application such as septic tank & burial vaults)
- Shot-crete (tunnel linings, slope stabilization, & pool construction)
- UTW (Ultra-thin White Toppings)
- Paving & elevated deck concrete applications
- Other specialty applications

BENEFITS

M-Macro fiber added to concrete mechanically locks in the fresh concrete matrix, controlling cracking. M-Macro provides secondary reinforcement for WWM and light rebar replacement, which eliminates crack formation that causes permanent weakening of the concrete. With M-Macro, concrete is more durable, fatigue resistant, adds flexural toughness and is highly impact resistant and improves your Bottom Line.

MIXING

Follow ASTM C-94 guidelines. M-Macro can be added directly to the mix at the jobsite or during batching of ingredients, but not as the first ingredient and should be mixed for a minimum of 5 minutes at full mixing speed.

PACKAGING

3lb , 4lb or 5lb bag
10 bags/case

DOSAGE RATES

Dosage rates will vary and there is usually an ARS (Average Residual Strength) requirement that needs to be met. Dosage rates can range from 3.0 lbs. per cubic yard (1.8 kg per cubic meter) to 20.0 lbs. per cubic yard (12 kg. per cubic meter). M-Macro fibers comply with ASTM C 1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete.

FINISHING

M-Macro can be placed by using several methods such as by chute, pumping or shotcrete and can be finished with a hand trowel, power trowel, laser screed or broom finished. A slight slump loss will occur with a 3-5 lb. dosage and larger doses will give a greater slump loss. (See recommendations)

PHYSICAL PROPERTIES

Material	100% Virgin Polypropylene
Specific gravity (g/m ³)	0.91
Tensile Strength	75 ksi (517 Mpa)
UV Resistance	Excellent
Absorption	Nil
Acid & Alkali Resistance	Excellent
Color & Type	Gray & Embossed
Dispersity Rate	Excellent
Aspect Ratio	60
Fiber Length (mm)	50
Melting Point	320° F (160°C)
Ignition Point	1094° F (590°C)

QUESTIONS? CONTACT US!

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All information, recommendations and advice provided by ICF Concrete regarding fiber products and their use and application is based on ICF Concrete's experience with such products when properly stored, handled and applied under normal conditions. ICF Concrete reserves the right to change the properties of fiber products without prior notice. No offer or solicitation of sale or purchase is made under or with this information sheet.



F-MACRO

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

PRODUCT FEATURES

- Enhances durability, fatigue and flexural performance
- Provides secondary reinforcement with equal strength to WWM & light rebar
- Three dimensional reinforcement to prohibit cracking
- Alkali resistant & non-corrosive
- Reduces in place costs
- High impact and wear resistance
- 4 times the macro fiber count

APPLICATIONS

- Slab-on-grade
- Precast concrete (thin wall application such as septic tank & burial vaults)
- Shot-crete (tunnel linings, slope stabilization, & pool construction)
- UTW (Ultra-thin White Toppings)
- Paving & elevated deck concrete applications
- Other specialty applications

BENEFITS

F-Macro fiber added to concrete mechanically locks in the fresh concrete matrix, controlling cracking. F-Macro provides secondary reinforcement for WWM and light rebar replacement which eliminates crack formation that causes permanent weakening of the concrete. With F-Macro, concrete is more durable, fatigue resistant, adds flexural toughness and is highly impact resistant and improves your Bottom Line.

MIXING

Follow ASTM C-94 guidelines. F-Macro can be added directly to the mix at the jobsite or during batching of ingredients, but not as the first ingredient and should be mixed for a minimum of 5 minutes at full mixing speed.

PACKAGING

3lb bag	8 bags/ carton
4lb bag	6 bags/ carton
5lb bag	5 bags/ carton

DOSAGE RATES

Dosage rates will vary and there is usually an ARS (Average Residual Strength) requirement that needs to be met. Dosage rates can range from 3.0 lbs. per cubic yard (1.8 kg per cubic meter) to 20.0 lbs. per cubic yard (12 kg. per cubic meter). F-Macro fibers comply with ASTM C 1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete.

FINISHING

F-Macro can be placed by using several methods such as by chute, pumping or shotcrete and can be finished with a hand trowel, power trowel, laser screed or broom finished. A slight slump loss will occur with a 3-5 lb. dosage and larger doses will give a greater slump loss. (See recommendations)

PHYSICAL PROPERTIES

Material	Polypropylene/Polyethylene
Specific gravity (g/m ³)	0.91
Tensile Strength	70 ksi
UV Resistance	Excellent
Absorption	Nil
Acid & Alkali Resistance	Excellent
Type	Fibrillated
Dispersity Rate	Excellent
Fiber Length inch (mm)	1.5" (38mm) & 2.0" (50mm)
Electrical Conductivity	Low
Melting Point	330° F (165° C)
Ignition Point	1100° F (590° C)

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HIPERLON™

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

PRODUCT FEATURES

- Enhances performance & durability
- Provides secondary reinforcement
- True replacement to rebar
- Alkali resistant & non-corrosive
- Insoluble in water
- Mixes well in concrete
- High impact resistance
- Excellent finish-ability

APPLICATIONS

- Slab-on-grade
- Precast concrete
- Shot-crete
- Paving
- Corrosive area placements
- Other specialty applications

BENEFITS

HiperLon™ fiber added to concrete mechanically locks in the fresh concrete matrix and adds flexural strength. HiperLon™ provides secondary reinforcement and rebar replacement without the worry of corrosion. With HiperLon™, concrete is quicker to place, cuts labor costs, is highly impact resistant and improves your Bottom Line.

MIXING

Follow ASTM C-94 guidelines. HiperLon™ can be added directly to the mix at the jobsite or during batching of ingredients, but not as the first ingredient and should be mixed for a minimum of 5 minutes at full mixing speed.

PACKAGING

30lb/ carton
18 carton / pallet
Container quantities available

DOSAGE RATES

For general applications such as slab-on-grade, a standard dosage of 5 lbs. /yd³ is recommended. Other fibers require higher dosage rates or cannot meet requirements to achieve similar performance. For other applications, consult with your ICF representative for recommended dosages.

FINISHING

There is little surface protrusion when using HiperLon™. HiperLon™ can be pumped or placed using conventional equipment and HiperLon™ can be used with most finishing techniques including power or hand troweling and broom finished concrete.

PHYSICAL PROPERTIES

Material	Modified Nylon
Specific gravity (g/m ³)	1.15
Impact Resistance	High
Blast Resistance	High
Tensile Strength	116 ksi
Acid & Alkali Resistance	Excellent
Color	Off White
Dispersy Rate	Excellent
Fiber Diameter (mm)	1.0
Fiber Count (Fiber/lb)	7500
Fiber Length inch (mm)	3" (76mm) (other lengths available)

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