FIBRAPLAS CONCRETE® · DATA SHEET

REPLACES WELDED WIRE MESH

and increases concrete strength, with savings of up to 50%*

FIBRAPLAS CONCRETE®

WHAT IS FIBRAPLAS CONCRETE®?

Fibraplas Concrete® is a structural synthetic macro fiber manufactured under ASTM C1116-10, Type 3. It is designed to be easily incorporated into concrete, improving its properties and replacing welded wire mesh and steel fibers, mainly in concrete floors and mezzanines.

BENEFITS

- Replaces welded wire mesh
- Three-dimensional structural reinforcement for floors and mezzanines
- Lower material and labor costs
- Greater durability: rust-free, alkali-resistant
- Made from recycled PET (approx. 50 bottles per kg)

APPLICATIONS

Precast concrete · Industrial floors · Steel deck · Rigid pavements · Shotcrete

PACKAGING

Water-soluble packs of approx. 5 oz (143 g), added directly to the mix. Boxes of 53 lb (24 kg) with approx. 168 packs. Box size: 9.8 × 19 × 12 in (25 × 48 × 30 cm).





TECHNICAL INFORMATION

Property	Unit	Value
Average diameter	µm	600
Macro fiber type	—	Synthetic
Length	in (mm)	2.16 (55)
Fibers per lb (average)	pcs	≈ 16,636
Typical dosage	lb/yd³ (kg/m³)	5.4 (3.2)
Specific gravity	lb/in³ (g/cm³)	0.046 (≈ 1.27)
Max. tensile strength	psi (MPa)	75,999 (≈ 524)
Average modulus of elasticity	ksi (GPa)	696 (≈ 4.8)
Surface texture	—	Maximum adhesion
Melting point	°F (°C)	500 (260)
Water-soluble packaging	—	Yes
Aspect ratio	—	92
Absorption	—	None
Resistance to salts and acids	—	High
Alkali resistance	—	High
Moisture and fungus resistance	—	High
Electrical / thermal conductivity	—	Low / Low

DOSAGE

Typical dosage is 5.4 lb/yd³ (3.2 kg/m³). Each project has a specific dosage, defined with the technical department.

Shovel method
Water + stone + sand + cement + Fibraplas. Disperse well while the concrete is fluid.

Portable mixer
Water + stone + sand + cement + Fibraplas. Mix for 2 minutes while rotating.

Ready-mix truck
Drum at full speed + Fibraplas per lb/yd³. Mix for 15 minutes on site.



Juan Pablo Constain
Business Development & Sales · Authorized Representative

📞 +1 (305) 903-4791 · WhatsApp
✉️ jp@juanpabloconstain.com
🌐 abacol.juanpabloconstain.com

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COMPARISON: FIBRAPLAS CONCRETE® VS. WELDED WIRE MESH

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JOB EXAMPLE

6,458 ft² slab (600 m²), 3.9 in (10 cm) thick, 78.5 yd³ (60 m³) of concrete.

	Fibraplas Concrete®	Welded wire mesh 4.5 mm
Quantity	**423 lb (8 boxes of 53 lb)**	47 sheets of 19.7 × 7.7 ft
Product weight	**423 lb**	≈ 2,432 lb
Material savings	**≈ 66%**	—
Total savings incl. installation	**≈ 68%**	—

Criteria	Fibraplas Concrete®	Welded wire mesh
Waste	**None: dose exactly what is needed in the truck.**	At least 9% from overlaps, plus cuts at columns and edges; ends up as scrap.
Transport	**2 boxes (106 lb) replace approx. 12 mesh sheets; fits in a small car.**	Requires a truck at least 20 ft long.
Storage	**Up to 80% less space: 13 ft² holds fiber for 32,000+ ft² of floor.**	At least 150 ft² for 19.7 × 7.7 ft sheets; hard to unload and move.
Application time	**1 person, 15 minutes per 10 yd³ truck (≈ 2 seconds per ft²). Up to 20× more efficient.**	0.10 to 0.15 man-hours per m² (≈ 11 ft²): carry, position, overlap, tie and cut.
PPE & tools	**Hard hat and safety boots.**	Hard hat, boots, glasses, gloves; grinder, rebar cutters, chairs/spacers and tie wire.
Risks	**Low.**	Higher risk of cuts, trips and fatigue.
Reinforcement type	**Three-dimensional, distributed throughout the concrete.**	Single plane; often not positioned in the upper third.
Cracking**	**Reduces approx. 80%.**	Reduces approx. 20%.
Durability	**Rust-free; synthetic and alkali-resistant. Increases concrete toughness.**	Steel subject to rust; may arrive rusted on site.

*Savings estimated from manufacturer comparisons; actual savings depend on each project's design, local pricing and labor. **Manufacturer data. Technical information is for guidance only and does not replace the project's structural design.



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