

SDG

STRONGER
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PRECAST ACCESSORIES

BAR CHIP 48 DATASHEET

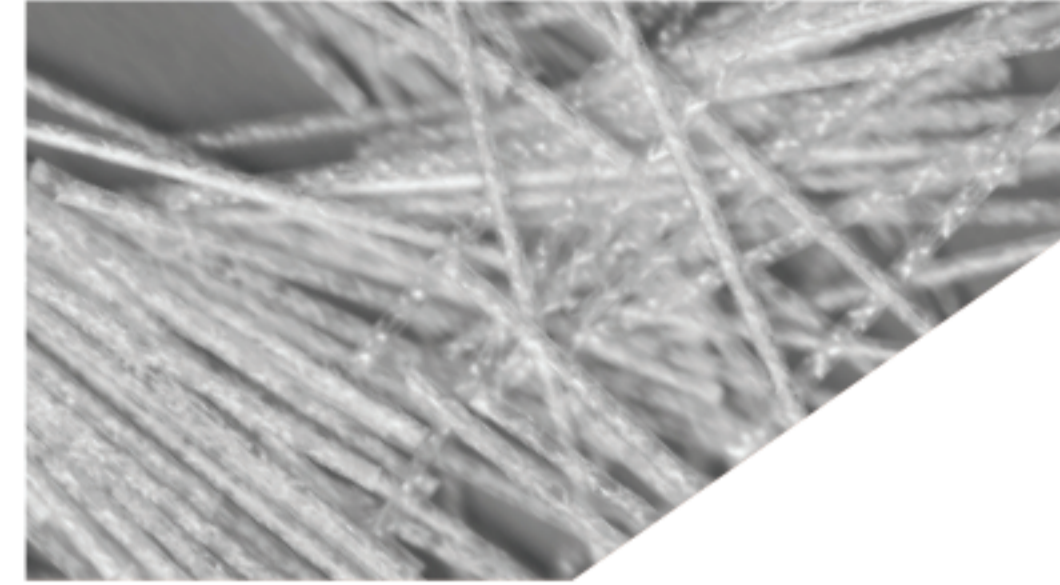
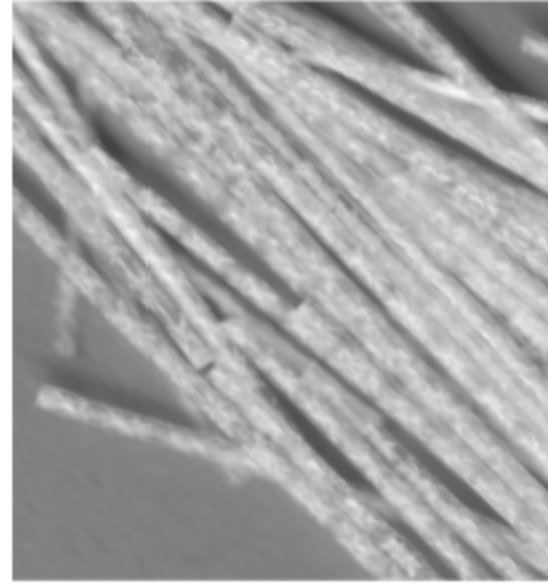
ESSENTIAL COMPONENTS FOR EVERY STAGE OF CONSTRUCTION



Concrete Fibre Reinforcement

BarChip 48 is a high performance structural synthetic fibre concrete reinforcement, optimised for pavements, industrial floors and precast elements.

Work with BarChip and together we'll unlock the full potential of your concrete mix.



Packaged in mulchable paper bags and big bags for automated dosing. Safely stacked 3 pallets high on recyclable HDPE pallets.



Benefits

- Comprehensive design and technical support
- Redistributes load - increased ductility / toughness
- Eliminates corrosion - long term durability
- Eliminates set-up of steel mesh
- Improves precast production speeds up to 50%
- Increases abrasion and impact protection
- 70% reduction in carbon footprint compared to steel
- Safer and lighter to handle than steel
- Reduced wear on concrete pumps and hoses
- BarChip fibre is UV stabilised to resist solar deterioration
- Weather proof packaging on multi-stack HDPE pallets

Product Features (see SDS for more details)

Characteristic	BarChip 48	Standard
Fibre Class II	For structural use in concrete, mortar and grout	EN 14889-2
Tensile Strength	640 MPa	JIS L 1013/ISO 2062
Young's Modulus	12 GPa	JIS L 1013/ISO 2062
Length	48 mm	
Anchorage	Continuous Embossing	
Base Material	Virgin Polypropylene	
Alkali Resistance	Excellent	
CE Certification		1029-CPR-GB19/964030
ISO 9001:2015 Certification		0044943

Dosage

BarChip 48 has a regular dosage rate of 2.5 kg to 5 kg per cubic metre. Dosage rate should be determined based on performance requirements. Regular dose rates may reduce measured slump.

Mixing

BarChip 48 is added "Bags and All" to the mixer with initial batch water. Follow with dry materials and mix at high speed for the required revolutions. Alternative batching techniques can be applied.

Undertake mix optimisation with BarChip specialists to ensure you're getting optimal output from your concrete mix. For more information view BarChip's batching and mixing guide.

Pumping

BarChip 48 can be pumped through 50 mm rubber hoses without difficulty. Precautions should be taken to ensure the fibres can pass freely through the hopper grate.

Handling and Storage

BarChip 48 is packed in 2.5 kg mulchable paper bags (440 kg per pallet) and supplied on durable, recyclable plastic pallets with a fitted rain hood to allow storage outdoors. Bags stored individually must be protected from water damage.

For more information contact your nearest BarChip representative.

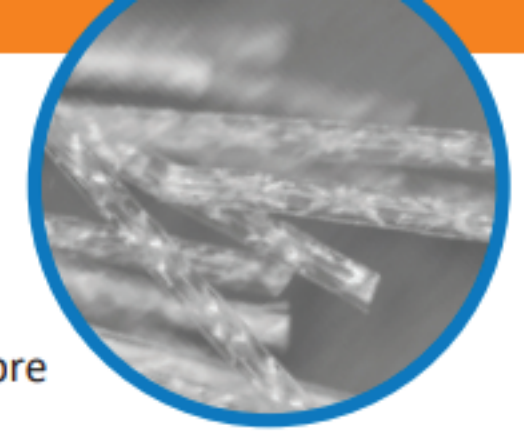
Conformity

Conforms to ASTM C 1116 - Type III
Conforms to EN 14889 - 2



The Synthetic Fibre Experts

www.barchip.com



Flexural Performance - ASTM C 1609 / C 1609 M

Residual Strength at 0.75 mm Displacement f_{600}^{150} [MPa]

f'_c [MPa]	Dosage Rate [kg/m ³]					
	2.5	3	3.5	4	5	6
25	1.10	1.35	1.60	1.85	2.35	2.85
32	1.30	1.55	1.80	2.10	2.60	3.15
40	1.50	1.80	2.05	2.35	2.90	3.50

Residual Strength at 3.0 mm Displacement f_{150}^{150} [MPa]

f'_c [MPa]	Dosage Rate [kg/m ³]					
	2.5	3	3.5	4	5	6
25	0.80	1.00	1.15	1.35	1.75	2.20
32	0.90	1.10	1.30	1.50	1.95	2.40
40	1.05	1.25	1.45	1.65	2.10	2.60

Flexural Performance - EN 14651, RILEM

Residual Strength at CMOD 0.5 mm f_{R1} [MPa]

Concrete Class	Dosage Rate [kg/m ³]				
	2.5	3	4	5	6
C25/30	1.30	1.55	1.90	2.20	2.60
C30/37	1.35	1.55	1.95	2.30	2.70
C35/45	1.40	1.60	2.05	2.35	2.80
C40/50	1.45	1.65	2.05	2.45	2.90

Residual Strength at CMOD 1.5 mm f_{R2} [MPa]

Concrete Class	Dosage Rate [kg/m ³]				
	2.5	3	4	5	6
C25/30	1.35	1.60	2.05	2.55	3.15
C30/37	1.35	1.60	2.15	2.80	3.40
C35/45	1.40	1.65	2.20	3.00	3.50
C40/50	1.45	1.75	2.30	3.05	3.60

Residual Strength at CMOD 2.5 mm f_{R3} [MPa]

Concrete Class	Dosage Rate [kg/m ³]				
	2.5	3	4	5	6
C25/30	1.45	1.65	2.10	2.70	3.55
C30/37	1.45	1.65	2.35	3.15	3.70
C35/45	1.50	1.70	2.40	3.20	3.80
C40/50	1.50	1.80	2.55	3.30	3.90

Residual Strength at CMOD 3.5 mm f_{R4} [MPa]

Concrete Class	Dosage Rate [kg/m ³]				
	2.5	3	4	5	6
C25/30	1.30	1.50	2.05	2.65	3.20
C30/37	1.30	1.55	2.15	2.80	3.45
C35/45	1.35	1.60	2.25	2.95	3.50
C40/50	1.35	1.70	2.40	3.05	3.75

These results are mean values based on samples cast and tested at 28 days of age in NATA and EMI TUV SUD certified laboratories.

Note: The values presented here are a proposal based on the experience of test results worldwide. The tables give an indication of expected performance and need to be verified in-situ by appropriate testing. The performance of FRC is achieved by the composite matrix and not only by the fibres. An ideal mix and application technology has to be applied in order to optimise the results. BarChip specialists are available to provide support.

The logo for SDG, consisting of the letters 'SDG' in a bold, sans-serif font. The 'S' and 'D' are connected, and the 'G' is separate. The logo is white and centered on a dark teal background.

SDG

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