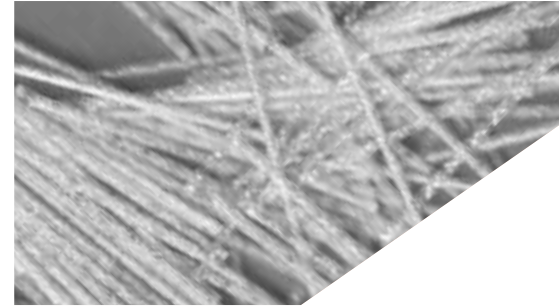
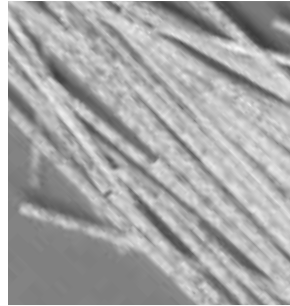


BarChip 48

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 UPVC 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 UPVC 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		0120 - GB10/79678
ISO 9001:2008 Certification		JKT0402914

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.

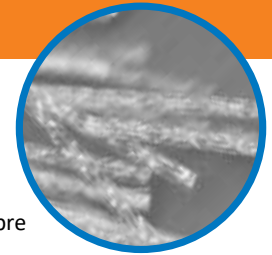
For more information contact your nearest BarChip representative.

Conformity

Conforms to ASTM C 1116 - Type III

Conforms to EN 14889 - 2

BarChip 48
Performance Testing



BarChip 48
Concrete Fibre

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/m³]					
	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/m³]					
	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/m³]				
	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/m³]				
	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/m³]				
	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/m³]				
	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 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 orientation 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.

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Distributors are located in other regions. For contact details visit www.barchip.com.

Disclaimer: This information has been provided as a guide to performance only, for specific and supervised conditions. The user is advised to undertake their own evaluation and use the services of professionals to determine the product suitability for any particular project or application prior to commercial use. ISO 9001:2008 © BarChip 2018. PS48_2018_1

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