

## The Fibre That Changed An Industry

BarChip Shogun is an industry changing structural synthetic fibre shotcrete and concrete reinforcement. BarChip Shogun delivered unheard of toughness performance, opening up reinforcement opportunities for synthetic fibre in underground rock support. Shogun set the standard for nearly a decade and remains one of the most widely used, and the most successful synthetic fibre in the world. The performance of BarChip is matched only by its proven versatility. While designed and used mainly as shotcrete reinforcement, Shogun has been successfully used in slab on grade, precast and many other applications.

### Product Features

Characteristic	Material Property
Base Resin	Modified Olefin
Length	48 mm
Tensile Strength	550 MPa
Surface Texture	Continuously Embossed
No. Fibres per kg	> 35,000
Specific Gravity	0.90 - 0.92
Youngs Modulus	10 GPa
Melting Point	150°C - 165°C
Ignition Point	Greater than 450°C
CE Certification	0120 - GB10/79678

### Benefits

- Comprehensive design and technical support
- Redistributes load - increased ductility / toughness
- Eliminates corrosion - long term durability
- Eliminates set-up of steel mesh
- 70% reduction in carbon footprint compared to steel
- Safer and lighter to handle than steel
- Reduced wear on concrete pumps and hoses
- Reduced cycle times and maintenance closure
- BarChip fibre is UV stabilised to resist solar deterioration
- Weather proof packaging on multi-stack UPVC pallets

### Dosage

BarChip Shogun has a regular dosage rate of 3 kg to 10 kg per cubic metre. Dosage rate should be determined based on performance requirements.

### Mixing

BarChip Shogun is added “Bags and All” to the mixer with initial batch water. Follow with dry materials and mix at high speed for 5 minutes. Dose rates in the range of 7 kg/m<sup>3</sup> may reduce slump by approximately 20 mm. For more details, refer to BarChip’s “Batching and Mixing” guide, available from the BarChip website.

### Pumping

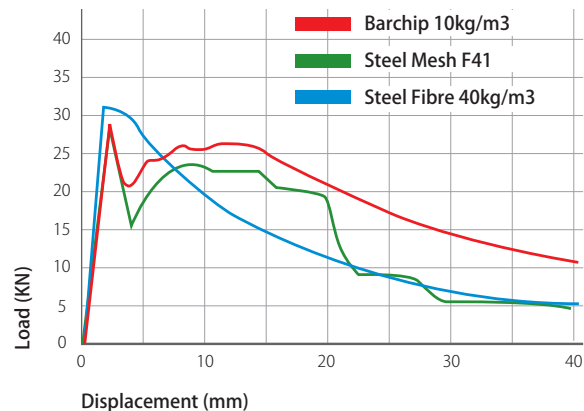
BarChip Shogun can be safely pumped through 50 mm rubber hoses without difficulty. Precautions should be taken to ensure the fibres can pass freely through the hopper grate.

### Handling and Storage

BarChip Shogun is packed in 5 kg mulchable paper bags (390 kgs 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 full safety refer to BarChip Shogun SDS available for download at: [www.barchip.com](http://www.barchip.com)

### Results



Reinforcing Material	ASTM C1550 / RDP	EFNARC
EPC Shogun @ 10 kg/m <sup>3</sup>	687 Joules	1717 Joules
Steel Mesh (500 MPa 4 mm wire 100 mm centres)	475 Joules	1187 Joules
Steel Fibre @ 40 kg/m <sup>3</sup>	522 Joules	1110 Joules

(Average Results Over 5 Panel Tests)

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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 9001:2015 © BarChip Inc. 2019. PSSHO\_2019\_3.



The Synthetic Fibre Experts

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