

Steel Fiber

Steel fibers for concrete and mortars with hardening behavior and very high mechanical resistance.

Steel Fiber is made of steel fibres obtained by cold drawing of high resistance and high carbon content steel wire. Compliant with standard EN 14889-1 on steel fibres for structural use.



PRODUCT STRENGTHS

- They improve the ductility and mechanical characteristics of high-performance mortars and concrete
- Excellent adhesion and anchoring
- Excellent mixing properties and dispersion
- When mixed with GeoLite® Magma Xenon or GeoLite® Magma, they are specific for structural strengthening by means of low thickness interventions without the use of additional rebars

AREAS OF USE

Use

When mixed with GeoLite® Magma Xenon or GeoLite® Magma, they allow for the preparation of GeoLite® FRC systems: high ductility, ultra-high performance, pourable, fibre-reinforced mortars for the repair and strengthening of reinforced concrete and prestressed reinforced concrete structural and infrastructural elements, by means of low thickness interventions without the use of additional rebars.

Creation of low-thickness extrados slabs on any type of floor.

Creation of low-thickness "jackets" on reinforced concrete and prestressed reinforced concrete structures such as beams, pillars, nodes, walls and foundations.

Repair of structural elements and floorings.

INSTRUCTIONS FOR USE

Preparation

Steel Fiber are ready-to-use.

Application

Steel Fiber are added to concrete and mortars directly on site.

A ready-to-cast mortar is prepared pouring the powder into the cement mixer and adding mixing water as indicated in the technical data sheet. Once the ready-to-use mix is obtained, slowly add the fibres in the chosen amount and mix in order to ensure perfect distribution of Steel Fiber in the binder matrix.

When using with GeoLite® Magma Xenon or GeoLite® Magma, mix Steel Fiber in the amount of 6.5 % of the weight of the powder (1 packaging every 4 bags).

TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Shape	shiny straight rigid fibres		
Nature of material	cold drawn steel with a high carbon content		
Density of the material	ρ_f	7.85 g/cm ³	EN 14889
Fibre length	l_f	13 mm	EN 14889
Fibre diameter	d_f	0.20 mm	EN 14889
Form ratio		65	EN 14889
Shelf life	unlimited		
Pack	6.5 kg boxes		
Number of fibres per kg	≈ 314,000		
Recommended dosage *	1 packaging of Steel Fiber every 4 bags of GeoLite® Magma Xenon or GeoLite® Magma (6.5% of the weight of the powder)		

* for dosing with other types of mortar, carry out the appropriate checks

PERFORMANCE

HIGH-TECH

Tensile strength	f_{ft}	≥ 3100 MPa	EN 14889
Elastic modulus	E_f	≥ 200 GPa	EN 14889
Elongation at break	A_{ft}	>1%	EN 14889

WARNING

- **Product for professional use**
- abide by any standards and national regulations
- when handling the material wear protective clothing and goggles, and follow the instructions regarding methods for applying the material
- storage on the work site: store under cover in a dry place, well away from substances that might damage it or its ability to adhere to the chosen matrix
- the product is an item according to the definitions of the EC Regulation No. 1907/2006 and therefore does not require a Safety Data Sheet
- for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516

The Rating classifications refer to the GreenBuilding Rating® Manual 2013. This information was last updated in June 2020; please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see www.kerakoll.com. KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.



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