Kratos Micro Plastic Shrinkage

Technical Data Sheet

DESCRIPTION

Kratos Micro PS is a high-performance polymer-based monofilament micro synthetic fiber reinforcement that provides effective crack control against short-term plastic shrinkage with its 3-dimensional homogeneous distribution property in concrete.

Kratos Micro PS is locally manufactured according to EN 14889-2 Class 1 standard with Kordsa engineering.

APPLICATION AREAS

Kratos Micro PS is used in all ready-mixed concrete and screed applications.

PHYSICAL PROPERTIES

Property	Unit	Value	Technical Specification
Length	mm	12	EN 14889-2
Filament Diameter	micron	17-21	
Tensile Strength	MPa	800-1100	
Melting Point	°C	255-265	
Num. of Fibers	~#/kg	200 Million	
Fiber Type	Multifilament		
ISO9001:2015			

PACKAGING

Kratos Micro PS is produced in special water-soluble packages. The standard package amount is 300 gr (±1.5%). 300 kg of product is shipped in one palette.

SHELF LIFE AND STORAGE

The suitable shelf life for unopened packages is 2 years. It is recommended to store the product in its original packaging in a closed environment, protected from moisture, water and direct sunlight.

DOSAGE

Kratos Micro PS is used in all ready mixed concrete and screed and applications at a dosage of 300 gr/m^3.

DIRECTIONS FOR USE / MIXING

Kratos Micro PS is produced in special water-soluble packages. It provides speed and convenience by mixing with concrete together with its pack during plant and on-site mixing. Kratos Microfibers are compatible with all types of concrete additives and classes.

FEATURES & BENEFITS

- Prevents shrinkage cracks in concrete up to 66.7% and limits the crack width by 43,8% at 300 gr/m^3 use
- Easy mixing and fast application
- Creates less labor and equipment cost advantage
- Easy to store. Provides advantageous logistics costs
- Does not affect magnetic fields with its polymer structure
- Prevents bleed in concrete by increasing the surface properties of concrete
- Reduces spalling of concrete by reducing the internal pressure stress during a fire

CONFORMITY / COMPLIANCE

For the performance to prevent shrinkage cracks; tests have been carried out and reported at Aachen University Building Materials Research Institute in Germany.

In line with the project needs, ASTM C1579-13 test can be done and reported in Kordsa Technology Center with samples taken from the project jobsites.

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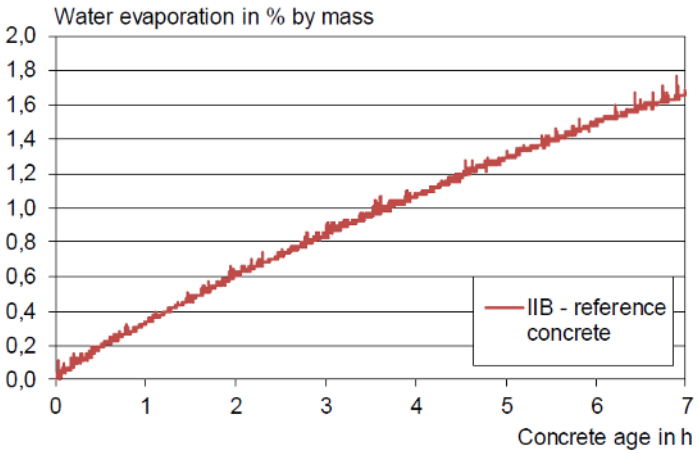
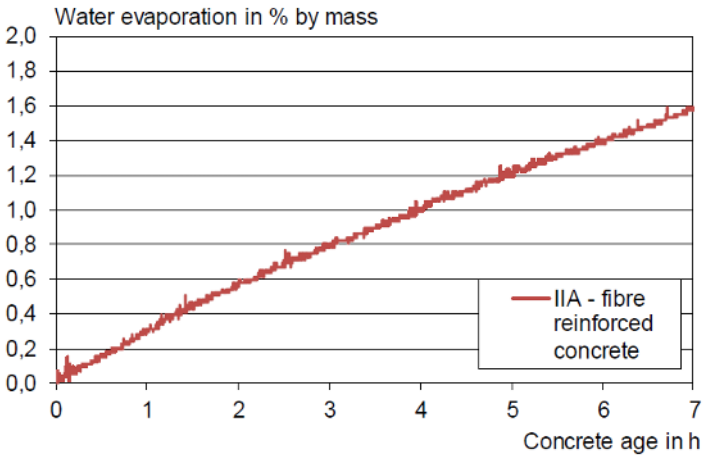
GRAPHS AND TABLES

As a result of the shrinkage tests carried out at Aachen University Building Materials Research Institute in Germany, Kratos Micro PS prevents shrinkage cracks in concrete by 66.7% and limits the crack width by 43.8%.

Table 1: Results of the tests on the reduction of plastic shrinkage

Parameter	Unit	Concrete Mixture	
		Plain Concrete	300 gr/m³ (0.5 lb/yd³) Kratos PS Reinforced Concrete
Number of cracks	-	5	8
Total crack length	mm	3,024.8	1,862
Maximum crack width	mm	1.60	0.90
Medium crack width	mm	0.69	0.37
Total crack area	mm²	2077.9	692.0
Water Evaporation	% by mass	1.67	1.59





LEGAL DISCLAIMER

The recommendations regarding the use of Kratos Micro PS product presented by Kordsa Teknik Tekstil A.Ş. under the document are only recommendations and may vary according to the customer's purpose of using the product and technical data. Since the customer has the expertise and knowledge regarding the intended use of the product and the products made from the product in question, regardless of whether the product is used alone or with other materials, the customer undertakes all the risks and responsibilities arising from the use of the product. Kordsa Teknik Tekstil A.Ş. expressly declares that it is not liable for any loss and/or expense that may arise in the eye of the customer, regardless of whether it is used in accordance with the usage recommendation offered to the customer.

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