

Arkaz Microfibers

Synthetic Fiber for concrete

DESCRIPTION

Arkaz Microfibers are synthetic fibers for concrete, manufactured from 100% polypropylene in collated, fibrillated form. Designed specifically for use in concrete, they are alkali resistant, nonabsorptive and completely noncorrosive. Their use protects concrete from stresses which cause cracking while it is most vulnerable during the first 24 hours after placement. **Arkaz Microfibers** comply with ASTM Designation C1116, Standard Specification for Fiber-Reinforced Concrete and Shotcrete, Type III Synthetic Fiber-Reinforced Concrete or Shotcrete. They are available in 6-, 8,12 and 18 mm length.

USES

Arkaz Microfibers may be used in any application where decreased plastic shrinkage cracking and improved durability are desired. Specifically, such applications include but are not limited to, slabs on grade, pavements, over-lays, sloped walls, pools, shotcrete, stucco, precast and prestressed products. It is suggested that this product be used in conjunction with properly compacted base.

TYPICAL PROPERTIES

Specific gravity	0.91
Absorption	None
Modulus of Elasticity	500 ksi
Tensile Strength	≥ 450 Mpa
diameter	~ 32 μm
Melt Point	320°F (160°C)
Ignition Point	1094°F (590°C)

Arkaz Microfibers may be used as an alternative to welded wire fabric, depending on the application. **Arkaz Microfibers** may not be used as a replacement for structural or post crack control steel reinforcement. For temperature or shrinkage post-crack control, please consult a Arkaz representative regarding our synthetic macro fibers.

ADVANTAGES

Arkaz Microfibers uniformly distribute multi- dimensionally throughout the concrete mixture. The small fibrillated fibers mechanically lock in the fresh concrete matrix providing reinforcement for the mixture while its tensile strength is the weakest. This reinforcement reduces the formation of plastic shrinkage cracking that may otherwise permanently weaken the resulting concrete. The concrete permeability is decreased, while the surface characteristics, impact and toughness properties are improved. Together these effects work synergistically to produce a long-term better quality, more durable and serviceable concrete.

ADDITION RATES

Arkaz Microfibers may be added to concrete at any point during the batching or mixing process. **Arkaz Microfibers** may be added to the aggregate during weighing or charging, or to the central mixer or truck before, during, or after charging. The load must be mixed at high speed for 5 minutes, or 70 revolutions, after the addition of the **Arkaz Microfibers** to ensure uniform distribution. The standard range of addition for **Arkaz Microfibers** is 450 to 1800 g/m³ of concrete. Typically, 900 gm/m³ of **Arkaz Microfibers** provides excellent results. Higher addition rates may be used to produce concrete when special properties are required.

PACKAGING & HANDLING

Arkaz Microfibers are available in convenient Bags which are added, unopened, to the truck drum or central mixer. The specially designed cellulose fiber bag disintegrates and disperses its contents of **Arkaz Microfibers**, throughout the mix.

COMPATIBILITY WITH ADMIXTURES

Arkaz Microfibers are compatible with all Arkaz admixtures. Their action in concrete is purely mechanical and will not affect the hydration process. Each admixture should be added separately.

SPECIFICATIONS

Fibers shall be 6,8,12&18 mm collated, fibrillated polypropylene fibers as supplied by Arkaz. Required dosage rate shall be as specified by the design engineer or architect. **Arkaz Microfibers** shall be used in strict accordance with the supplier's recommendations and within time as specified in ASTM C94 and BS EN 14889-2. The fibers shall comply with ASTM Designation C1116 Type III 4.1.3 and with applicable building codes. Certification of compliance shall be made available on request. Standard ACI 302 procedures for placing, finishing and curing shall be followed when using **Arkaz Microfibers**.

HEALTH AND SAFETY

For more Safety information you can check Product Material Safety Data Sheet, drop an email to Arkaz Concrete Doctor at ConcreteDoctor@arkaz.com or Contact Arkaz Technical Service Department.

TECHNICAL SERVICE

The technical service department of Arkaz is available to assist in the correct and best use of our products, these resources and advice are at your disposal entirely without obligation.

Please contact:
concretedoctor@arkaz.com

LEGAL DISCLAIMER

The information given is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification. Since the conditions of use are beyond our control, we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale including those limiting warranties and remedies which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would violate or infringe statutory obligations or any rights belonging to a third party.

These products may be covered by patents or patents pending.



Copyright 2023
Printed in K.S.A. Version 2.0
22-March-2021