SikaFiber® Force MS 20
Macro-Synthetic Fiber

Description
SikaFiber® Force MS 20 is a macro-synthetic, 100% virgin copolymer fiber, consisting of a twisted bundle of non-fibrillating monofilament and a fibrillating network fiber, designed to provide a high performing reinforcement system for concrete. SikaFiber® Force MS 20 is specifically engineered and manufactured to reduce plastic and hardened concrete shrinkage, increase fatigue resistance and concrete toughness, and improve impact strength. SikaFiber® Force MS 20 meets the material specifications of ASTM C-1116, Type III. SikaFiber® Force MS 20 is UL certified and approved for usage in all D700, D800 and D900 series decks as an alternate to welded wire fabric at a dosage rate up to 5.0 pounds per cubic yard.

Applications
SikaFiber® Force MS 20 macro-synthetic fibers can significantly enhance the performance of all types of concrete and cement based building products. SikaFiber® Force MS 20 is excellent for use in industrial floors, bridge decks, loading docks, precast products like septic tanks, burial vaults, manholes, and architectural panels, and shotcrete applications.

Benefits
- Provides multi-dimensional reinforcement
- Reduces and/or replaces non-structural steel reinforcement-steel fibers or welded wire fabric reinforcement.
- Improves concrete toughness, fatigue resistance and long term durability.
- Increases impact, shatter and abrasion resistance of concrete.
- Reduces segregation, plastic settlement and plastic and hardened shrinkage cracking.
- Saves time and money when compared to alternate reinforcing systems.
- Easy to use and work with.

Typical Data
- Material: Virgin Copolymer
- Fiber type: Monofilament / Fibrillated Fiber System
- Fiber length: 2 1/4” (54 mm) or 1 1/2” (38 mm)
- Specific gravity: 0.91
- Tensile strength: 83-96 ksi (572-662 MPa)
- Alkali/Acid resistance: Excellent

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.
How to Use

Dosage
Standard recommended dosage rate of SikaFiber® Force MS 20 is 3-12 lbs./cu.yd. (1.8-7.1 kg/m³) of concrete or as required by specific mix design.

Mixing
SikaFiber® Force MS 20 can be added directly to the concrete mixing system, during or after the batching of the ingredients and mixed at high speed for four to five minutes. Additional mixing does not adversely affect the distribution or overall performance of SikaFiber® Force MS 20. The addition of SikaFiber® Force MS 20 at the recommended dosage rates to a given mix will decrease the slump; however, additional water should not be added. Only a water reducing admixture should be used to adjust concrete to the desired workability required for placement.

Application
The addition of SikaFiber® Force MS 20 at the normal recommended dosage rate does not require any mix design or application changes. A mid range or high range water reducer is recommended in concrete placements where improved workability and finishability are desired.

Tooling & Finishing
Fiber reinforced concrete can be finished by most finishing techniques. SikaFiber® Force MS 20 does not affect the finishing characteristics of concrete. SikaFiber® Force MS 20 can be used in power/hand troweled concrete, colored and broom finished concrete.

Packaging
1 lb (0.45 kg), 2 lb (0.9 kg), 2.5 lb (1.13 kg) and 3 lb (1.36 kg) pack sizes

Storage and Shelf Life
SikaFiber® Force MS 20 should be stored in a dry warehouse. Protect product from the rain.

If stored in dry conditions shelf life is 5 years.

Concrete

KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY • FOR PROFESSIONAL USE ONLY

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Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9000), FM 70421 (QS 9000), Marion: FM 69715, Kansas City: FM 69107, Santa Fe Springs: FM 69408

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