# SikaFiber® Force XR
## Steel Fiber

### Description
SikaFiber® Force XR is a low carbon, cold drawn steel wire fiber designed to produce steel fiber reinforced concrete used for shotcrete, precast and cast-in-place concrete. SikaFiber® Force XR meets the requirements of ASTM A820, Type V fiber and ASTM C-1116-10.

### Applications
SikaFiber® Force XR can be used in various concrete applications such as:
- Industrial and commercial slab on grade
- Precast elements
- Composite metal decks
- Pavements, foundations, etc.

### Benefits
- Improves the tensile strength of concrete.
- Helps control plastic shrinkage cracking in concrete.
- Helps reduce or eliminate need for conventional reinforcement.
- Provides three dimensional reinforcement.
- Improves fatigue strength.
- Easy to use and work with.

### Typical Data
- **Fiber Length:** 1.5" and 2"
- **Average equivalent diameter:** 0.047" (1.2 mm)
- **Aspect ratio:** Between 30 and 35
- **Tensile Strength:** > 140 ksi
- **Deformation:** Full length segment

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
The dosage of SikaFiber® Force XR will vary according to the type of application, concrete mix design, and the performance/toughness requirements of project. The typical addition rate of SikaFiber® Force XR is between 25-75 lbs per cu.yd of concrete. Dosage outside the recommended range can be used to meet specific project requirements. If this is the case, please contact your Sika representative for technical support.
### Mixing

**Adding SikaFiber® Force XR into the weight hopper:** Add SikaFiber® Force XR directly into the hopper. When possible the fiber should be added between the sand and coarse aggregate.

**Adding SikaFiber® Force XR into the mixer:** SikaFiber® Force XR should be added into the running mixer after adding the aggregates. Do not place SikaFiber® Force XR as first component. Fibers can be introduced to the moving conveyor belt or by automated dosing system together with sand and aggregate or directly in freshly mixed concrete.

**Adding SikaFiber® Force XR into the ready mix truck:** Introduce SikaFiber® Force XR by hand or automated system with sand or stone or directly into running mixing drum. Fibers can be also discharged in freshly mixed concrete. After fiber introduction keep mixing at full speed. Mix for 4-5 minutes to allow fibers to distribute evenly through the entire mix. Add 1/2-1 minute if fiber distribution in concrete is not uniform.

### Surface Prep

When concrete is pumped keep discharging chute approximately 12-20 inches (30-50 cm) above the grate of pump hopper to minimize the risk of constricting flow through the grate. Optimum flowability must be provided to ensure continuous concrete flow.

### Packaging

SikaFiber® Force XR is available in 25 lb repulpable bags.

### Storage

SikaFiber® Force XR should be stored in dry warehouse. Protect product from the rain and snow.

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**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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