FRC CS-1000

SPECIALIZING IN CRACK-CONTAINMENT

FRC INDUSTRIES

DESCRIPTION

FRC CS-1000 fibers are made of low carbon, cut sheet steel with a tensile strength from 50 to 100 ksi. They contain deformations that run down the fibers that give them an incredible mechanical bond to the concrete matrix. The CS-1000 fibers are the best crack-containment fibers on the market. They are 1" in length with a very small diameter which helps to insure that an individual fiber will cross a forming crack and hold that crack tightly.

SPECS

FIBER LENGTH	**1" (25mm)**
MATERIAL TYPE	**LOW CARBON CUT SHEET STEEL**
SPECIFIC GRAVITY	**7.85**
TENSILE STRENGTH	**345-700 MPA (50-100KSI)**
ASPCT RATIO	**40-50**
AVERAGE THICKNESS	**.55-.65mm**
MELTING POINT	**2760 F**
PACKAGING	**50LB BOXES**

MANUFACTURED TO THE REQUIREMENTS OF ASTM C-1116-10

MECHANICAL PROPERTIES

CRACK-CONTAINMENT

Depending on the dosage, CS-1000 fibers will increase the amount of crack-containment and decrease the size of the cracks in the concrete.

DURABILITY

CS-1000 steel fibers add durability to the concrete by increasing the tensile strength, impact resistance and abrasion resistance. They can also provide joint stability as well as excellent crack-containment.

COMPRESSION

Does not add compressive strength to the concrete.

FLEXURAL

At typical quantities, CS-1000 does not increase the first crack strength of the concrete (MOR). However, CS-1000 can affect the post crack strength and the ability to maintain load support.

DIRECT TENSION

CS-1000 can enhance the tensile strength depending on dosage rates.

TOUGHNESS

Toughness can be increased by adding CS-1000 fibers.

MINI SPECIFICATIONS

Fiber Reinforced Concrete shall consist of fibers made of low carbon cut sheet material conforming to ASTM A-820 Type II. Steel fibers shall be 1" (25mm) in length and have an aspect ratio between 40-50. Application rate shall be noted on structural drawings.

Steel fibers shall be FRC CS-1000 manufactured by FRC INDUSTRIES: 1655 North McFarland Blvd., Box 186 Tuscaloosa, AL 35406 - 888-783-2517 or Equal.

MIXING, PLACING & FINISHING

CS-1000 fibers can be added during or after batching of the concrete and in some instances can be added before the concrete is batched. Mixing should conform to ASTM C94 with a minimum of 75 revolutions of the drum at full mixing speed to ensure uniform distribution of the fibers.

These fibers can be pumped and placed using conventional equipment. Hand screeds can be used, but vibratory and laser screeds are recommended to minimize any surface fibers.

Normal finishing equipment and techniques can be used when working with CS-1000 fibers. Troweling blades should be kept at a flat angle for as long as possible to ensure a fiber free surface.

SAFETY

It is recommended that eye protection and hand protection be used when adding or handling CS-1000 steel fibers.

REFERENCE DOCUMENTS

ACI 302 Guide for Concrete Floor and Slab Construction
ACI 360 Design of Slabs on Ground
ACI 544 3R Guide for Specifying, Proportioning, Mixing, Placing, and Finishing Steel Fiber Reinforced Concrete
ACI 506 Guide for Shotcrete
ASTM A820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete
ASTM C 94 Standard Specification for Ready-Mixed Concrete
ASTM C 1609 Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete
ASTM C 1116 Standard Specification for Fiber-Reinforced Concrete and Shotcrete
ASTM C 1399 Standard Specification for Fiber-Reinforced Concrete and Shotcrete

WARRANTY & LIMITATION OF LIABILITY

Product sold herein is of merchantable quality to seller's standards and specifications. Seller's sole liability for claim shall be limited to replacement of defective or nonconforming product. In no event shall seller be liable for any special, incidental, consequential, or exemplary damages.

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