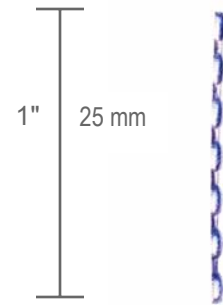


MATRIX CS-1.0 cut sheet steel fibres

PRODUCT DATA SHEET

TECHNICAL INFORMATION

FIBER	MATRIX – CS 1.0
ASTM Specification	ASTM A820 Type II
Material Type	Low Carbon, cut sheet steel
Tensile Strength	414 – 828 Mpa (60 – 120 ksi)
Fiber Length	25.0 mm (1.0") also available in 3/4", & 1.5"
Average Thickness	.33 – .60 mm (0.13 – .025")
Average Aspect Ratio	<60
Specific Gravity	7.85
Modulus of Elasticity	29.0 x 10 ⁸ @ 70° F (20° C)
Melting Point	2760° F (1516° C)
Deformations	Continuously deformed cut sheet fibres
Appearance	Bright and clean cut sheet steel
Packaging	50lb. boxes



SAFETY

FRC recommends that gloves and eye protection be used when handling or adding MATRIX cut sheet steel fibres.

REFERENCE DOCUMENTS

- ACI 302.1R** * Guide for Concrete Floor and Slab Construction.
- ACI 360R-92** * Design of Slabs on Grade.
- ACI 544-1R** * Fiber Reinforced Concrete
- 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 C94** * Standard Specification for Ready-Mixed Concrete.
- ASTM C1018** * Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete.
- ASTM C1116** * Standard Specification for Fiber-Reinforced Concrete and Shotcrete.

MIXING – PLACING – FINISHING – TESTING

- ◆ **Mixing** - MATRIX CS fibres can be added during or after the batching of concrete. In some instances CS can be added before the concrete is batched. Mixing should conform to ASTM C94 standard specification for ready-mixed concrete.
- ◆ **Placing** - MATRIX steel fibres can be pumped and placed using conventional equipment. Hand screeds can be used, but vibratory and laser screeds are recommended to provide added compaction and bury surface fibers
- ◆ **Finishing** - Normal finishing equipment & techniques can be used when finishing MATRIX fibres. Troweling blades should be kept at a flat angle for as long as possible to insure a fibre free surface.
- ◆ **Testing** - Sample testing on jobsite shall conform to ASTM C1072. Measuring materials, toughness, and workability shall be governed by ASTM C1116 & ASTM C1018



MATRIX CS-1.0 “Cut Sheet Steel Fibres”

CS-1.0 Fibres are made of low carbon, cut sheet steel and have a minimum tensile strength over 60,000 psi. They contain deformations that run the full length of the fibres and give an incredible mechanical bond to the concrete matrix. CS-1.0 Fibres provide a uniform distribution of reinforcement throughout the concrete that increase the tensile strength, impact resistance, shear strength, and ductility of the concrete. Below are the benefits of using and specifying FRC cut sheet fibres.

MATRIX CS 1.0 Steel Fibre Reinforced Concrete Mini-Specification: Section 03452

MATRIX CS-1.0 Fibers

1.01 A. MATERIALS:

Fibrous concrete shall consist of fibers made of low carbon cut sheet material conforming to ASTM A-820 Type II. Manufactured by FRC Industries.

Steel fibers shall be 1” (25 mm) in length and have an aspect ratio between 50 – 60.

B. MANUFACTURER:

Steel Fibers shall be *MATRIX CS-1.0 Fibers* manufactured by FRC Industries, or approved equal. FRC Industries * P.O. Box 5504 * Destin, FL 32540 * 888-763-2517

C. APPLICATION RATE:

Application rate shall be as noted on structural drawings

WARRANTY AND LIMITATION OF LIABILITY

MATRIX Cut Sheet (CS-1.0) Fibres shall conform to FRC standards and specifications. FRC’s sole liability for claim shall be limited to replacement of defective or nonconforming fibres. In no event shall FRC be liable for any incidental, consequential, or special damages.

FRC INDUSTRIES

FREEPORT, FL

(888) 783-2517

www.frcindustries.com

- Complies with ASTM A 820 Type
- Provides Uniform reinforcement
- Excellent reinforcing for restrained shrinkage
- Provides superb crack control