

# TUF-STRAND™ SUPERMIX 41F

**SYNTHETIC MACRO/MICROFIBER BLEND****EUCLID CHEMICAL**

## PRODUCT INFORMATION

### PACKAGING

5.0 lb (2.3 kg) water soluble bags

### SHELF LIFE

3 years in original, unopened package

### SPECIFICATIONS / COMPLIANCES

ASTM C1116

ASTM D7508

UDOT Concrete Specification  
Section 03055M

### TECHNICAL INFORMATION

**Material:** Blend of polypropylene/  
polyethylene macrofiber and fibrillated  
polypropylene microfiber**Specific Gravity:** 0.91**Available Lengths:**

Macro - 2 in (50 mm)

Micro - ¾ in (19 mm)

**Aspect Ratio:**

Macro - 74

Micro - N/A\*

**Tensile Strength:**

Macro - 87-94 ksi (600 to 650 MPa)

Micro - N/A\*

**Melt Point:** 320°F (160°C)**Electrical/Thermal Conductivity:** Low**Water Absorption:** Negligible**Acid and Alkali Resistance:** Excellent\* Tensile strength and aspect ratio are not  
applicable for micro fibers based on ASTM  
D7508.

## DESCRIPTION

TUF-STRAND SUPERMIX 41F is a synthetic macro/micro fiber blend successfully used as an alternative to steel fibers and welded wire mesh in a wide variety of secondary reinforcement applications. TUF-STRAND SuperMix 41F fibers comply with ASTM C1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete, and are specifically used for the reduction of plastic shrinkage cracks, to improve impact, shatter and abrasion resistance, to increase fatigue resistance, to increase toughness of concrete and provide long term durability of concrete and cement based building products. This product has a blend of 4 lbs (1.8 kg) synthetic macrofiber and 1 lb (0.45 kg) of fibrillated synthetic microfiber. TUF-STRAND SuperMix 41F can save time and money on construction projects by eliminating the purchase, storage, handling, cutting, placing, and waste of welded wire mesh. These fibers are chemically inert and will not corrode.

## PRODUCT CHARACTERISTICS

### FEATURES & BENEFITS

- Reduces segregation, plastic settlement, and shrinkage cracking of concrete
- Increases overall durability, fatigue resistance and flexural toughness
- Easily added to concrete mixture at any time prior to placement
- Reduction of in-place cost versus wire mesh

### PRIMARY APPLICATIONS

- Bridge decks and overlays
- Pavements
- White-toppings
- Precast

## PRECAUTIONS/LIMITATIONS

- Use of fibers may cause an apparent loss in measured slump of concrete. This may be offset with the use of a water reducing admixture if necessary.
- Fibers should never be added to a "zero-slump" concrete. Ensure a minimum concrete slump of 3" (80 mm) prior to addition of any fiber material. Fibers may also be added in loose form to aggregate charging devices.
- In all cases, consult the Safety Data Sheet before use.

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## DIRECTIONS FOR USE

TUF-STRAND SuperMix 41F fibers can be added to the concrete mixture at any time prior to placement of the concrete. It is generally recommended to add any fiber material at the ready-mix concrete plant during batching. Fibers must be mixed with concrete for a minimum of three (3) to five (5) minutes at maximum mixing speed, depending on the mixer type, to ensure complete dispersion and uniformity. When adding 5 lbs/yd<sup>3</sup> (3.0 kg/m<sup>3</sup>), a slump loss of up to 3" (80 mm) can be expected for a typical ready-mix concrete design. For higher dosages, increased loss in slump can be expected depending upon the mixture design. The use of water reducers and/or superplasticizers, such as the Eucon series or Plastol series of admixtures may be necessary to maintain desired workability.

Add other admixtures independently from fiber addition. TUF-STRAND SuperMix 41F fibers are compatible with all Euclid Chemical admixtures. When used properly, and placed in a concrete mix of sufficient workability, the fibers will not adversely alter the compressive or flexural strength of concrete or shotcrete.

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## CLEAN UP

Loose fiber material should be disposed in proper receptacles for refuse. Finishing equipment with fibers embedded in concrete should be thoroughly cleaned.

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