



TUF-STRAND MACRO-SYNTHETIC FIBERS

# FIBER-REINFORCED CONCRETE COMPOSITE DECK TECHNOLOGY



## APPLICATIONS

- Multi-Story Buildings
- Mezzanine Levels
- Schools and Educational Centers
- Hospitals and Medical Buildings
- Hotels and Recreational Facilities
- Retail Stores and Show Rooms

## ENGINEERING SERVICES

- Professional Engineers on Staff
- Available R&D Laboratories
- Carbon Footprint Analysis
- Specification Review
- On-site Consultation and Support
- UL Certified Macro Fiber for Deck Construction
- National Account Program Coordination
- Floor Software Design Assistance
- SDI/ANSI-C1.0
- ACI 544
- IBC (2015)
- fib Model Code
- ASTM C1609, 1550, 1399

## FEATURES & BENEFITS

TUF-STRAND SF is a patented, macro-synthetic fiber specifically engineered for use as a replacement to conventional reinforcing such as wire mesh and steel rebar for slabs on ground, precast concrete, composite steel decks, shotcrete, and wall applications. Engineered dosage rates are based on strength-to-strength calculations and supported by standardized test methods and industry practices. This non-corroding, three dimensional reinforcement will also provide abrasion, fatigue and impact resistance while increasing service life through improved toughness and durability. Steel Deck Institute (SDI/ANSI-C1.0) provides guidance to use "macro synthetic fibers" at a minimum dosage rate of 4 lb/yd<sup>3</sup> (2.4 kg/m<sup>3</sup>) to replace wire mesh as a means of crack control in concrete filling of composite steel decks. Higher dosage rates may become necessary depending on the load levels and seismic considerations.

- UL/ULC approval (fire rating)
- Elimination of tripping hazard
- Project time and cost savings
- Carbon Footprint reduction
- Engineered floor calculations
- Reduced cracking and maintenance

## A PARTNERSHIP WITH EUCLID CHEMICAL MEANS...

**Concrete Mix Design Assistance** – Euclid Chemical's technical sales team is experienced in concrete mix design and how fibers work in combination with chemical admixtures, cement additives, air entrainment and other specialty products.

**Specification and Business Development** – Let our team of specification experts ensure that the right fiber offers the right performance for the application.

**Fiber Training** – One-on-one training and educational materials are available from Euclid Chemical with a full Technical and Marketing package suited towards owners, engineers, contractors and ready-mix producers ensuring a successful fiber project.

**Engineered Fiber Calculations** – Design aids and other tools are available to all Euclid customers to help them correctly determine and specify appropriate engineered dosage rates for each individual application ensuring project compliance.

**Industry Association Involvement** – Euclid Chemical is actively involved in promoting and advancing the state-of-the-art in FRC through participation in other trade associations such as ACI, NRMCA, FRCA, ASA, NPCA and ASTM.