**TUF-STRAND MACRO-SYNTHETIC FIBERS**

**FIBER-REINFORCED CONCRETE SHOTCRETE TECHNOLOGY**

**APPLICATIONS**
- Slope stabilizations
- Structural rehabilitation
- Pools and tanks
- Channel linings
- Retaining walls
- Mining & underground support

**ENGINEERING SERVICES**
- Professional engineers on staff
- Available R&D laboratories
- Carbon footprint analysis
- Specification review
- On-site consultation and support
- UL-Certified fiber for deck construction
- National account program coordination
- Floor software design assistance
  - ACI 360
  - ACI 544
  - TR34
  - fib Model Code
  - ASTM C1609, 1550, 1399

**FEATURES & BENEFITS**

**TUF-STRAND SF** and **TUF-STRAND PX54** are macro-synthetic fibers specifically engineered to replace conventional reinforcing, such as wire mesh and steel rebar for shotcrete applications and can also be used for slabs on ground, precast concrete, and composite steel decks. Engineered dosage rates are based on strength-to-strength calculations and supported by standardized test methods and industry practices. These non-corroding fibers will provide abrasion, fatigue and impact resistance while increasing service life through improved toughness and durability. **TUF-STRAND SF** and **TUF-STRAND PX54** will also provide shotcrete with increased flexural toughness impact and fatigue resistance with the added benefit of shrinkage crack control.

- Patented fiber designs
- Carbon footprint reduction
- Reduced cracking and maintenance
- Project time and cost savings
- Engineered shotcrete calculations
- UL/ULC approval (fire rating)

**A PARTNERSHIP WITH EUCLID CHEMICAL MEANS...**

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

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

**Fiber Training** – To ensure a successful fiber project, one-on-one training and educational materials are available from Euclid Chemical with a full technical and marketing package suited for owners, engineers, contractors and ready-mix producers.

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