Pre-Approved Product Evaluation Request & Summary

Product Evaluation Coordinator
Colorado Department of Transportation 4670 North Holly Street
Denver, Colorado 80216

APL Reference No. 2936-25

Material Code 709.04.02.00

Material Code description full name Concrete Reinforcing Fiber, Plastic

Part 1

Product Name: Tuf-Strand SF (Min 4 lbs/CuYd)

Product category: Concrete\Fiber\Macro Fiber

Product Representative / Distributer (name & address):

Bethany Booth

The Euclid Chemical Company
19320 Redwood Rd.
Cleveland, Ohio 44110

Phone: (216) 692-8357 **E-mail** bbooth@euclidchemical.com
Website address www.euclidchemical.com

Manufacturer (name & address):

The Euclid Chemical Company

Attn: Brian Lewis
The Euclid Chemical Company
19215 Redwood Road.
Cleveland, Ohio 44110

Phone: (216) 531-9222 **E-mail:** nfo@euclidchemical.com
Website address www.euclidchemical.com

Description of the product: **(Include specific quantifiable details from the tech data sheet. Advertising generalities are not appropriate.)**

TUF-STRAND SF is a patented polypropylene / polyethylene macro synthetic fiber successfully used to replace steel fibers, welded wire mesh and conventional reinforcing bars in a wide variety of applications. TUF-STRAND SF fibers comply with ASTM C1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete, and are specifically designed to provide equivalent tensile and bending resistance to conventional reinforcement requirements. Concrete reinforced with TUF-STRAND SF will have three-dimensional reinforcing with enhanced flexural toughness, impact and abrasion resistance and will also help mitigate the formation of plastic shrinkage cracking in concrete. Dosage rates will vary depending upon the reinforcing requirements and can range from 3.0 lbs/yd³ (1.8 kg/m³) to 20 lbs/yd (12 kg/m³). TUF-STRAND SF synthetic macro-fibers comply with applicable portions of the International Code Council (ICC) Acceptance Criteria AC383 for synthetic fibers, are UL certified for composite metal deck construction and are recognized within ACI 360 and SDI/ANSI-C1.0 as an alternative reinforcement.

Restrictions, (installation and/or use):

Fibers should never be added to a “zero-slump” concrete.

Use of the product, and Benefit to CDOT (be specific to CDOT highway activities only):

Equivalent strengths to WWM and rebar provided by engineering calculations • Controls and mitigates plastic shrinkage cracking and reduces segregation and bleed-water Reduction of in-place cost versus wire mesh for temperature / shrinkage crack control • Easily added to concrete mixture at any time prior to placement Certified for use by UL/ULC for D900 and F900 Series metal deck assemblies as alternate to WWF (CBXQ.R13773) Provides three-dimensional reinforcement against micro and macro-cracking

Specifications: (listing those applicable is required.)

☑	CDOT	709.04
☐	AASHTO	
☑	ASTM	C1609
☐	Other	
☐	Other	

☑ **Certificate of Compliance** ☐ **Certificate of Verification**

Product Testing: (National/independent laboratories or universities with Report Date.) **A certified Test Report** (CTR) is provided to validate all claims.

☐	**AASHTO Product Evaluation & Audit Solutions (NTPEP)**	
☐	**ASTM**	
☑	**Other**	TEC Services - TEC Project No.: 05-0545 - TEC Laboratory No.: 20-490-2
☐	**Other**	
☐	**Other**	

State DOT Approvals: **Expiration Date** 4 Year Cycle 04/09/2029

Sample Submitted ☐ **Yes** ☐ **No** ☐ **N/A** **Safety Data Sheets (SDS):** ☐ **Yes** ☐ **No** ☐ **N/A**

Alternate Product Category

CDOT Restrictions as per CDOT Approving Authority

Evaluators Signature: