D-LR Microfiber (1&2)

Dry-Process, Low Resistivity Shotcrete for Civil Construction

1. PRODUCT NAMES

Tenon® D-LR1 Microfiber & Tenon® D-LR2 Microfiber

2. MANUFACTURER

TCC Materials
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA
Phone: 1.651.688.9116
Web: Tenonpro.com

3. PRODUCT DESCRIPTION

Tenon® D-LR1 Microfiber is a dry-process shotcrete containing a pre-blended Portland cement, air-entraining admixture, set time accelerator, synthetic fibers, selectively blended aggregates, and propriety performance enhancing components.

Tenon® D-LR2 Microfiber is specifically designed to provide low resistivity values complimenting preplaced cathodic protection systems.

Features and Benefits

- Pre-blended to meet ACI 506 Table 1.1 Gradation No. 1 or 2
- Low resistivity, enhances cathodic protection performance
- Freeze-thaw and salt-scaling resistant

When/Where to Use

- Induced current applications in new and rehabilitation construction
- Air entrained for freeze-thaw durability
- Vertical and overhead repairs

Cautions

Read complete cautionary information printed on product container prior to use.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Tenon brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA

Representative of typical values using proper application spray techniques as outlined in ACI 506 “Guide to Shotcrete”. The data was obtained during project field testing and internal evaluations.

Typical Values • Tech-Mix D-LR1 Microfiber	
Compressive Strength, psi (ASTM C1604 / C109)	
1 day	>3000 psi (20.7 MPa)
3 days	>4000 psi (27.6 MPa)
7 days	>5000 psi (34.5 MPa)
28 days	>6000 psi (41.4 MPa)
Air Content, percent (ASTM C457)	
6% ± 2%	
Set Times, (ASTM C1117)	
Initial 4 hrs, Final 6 hrs	

Typical Values • Tech-Mix D-LR1 Microfiber
Electrical Resistivity
6500 Ω•cm
Maximum Volume of Permeable Voids, (ASTM C642)
15%
Boiled Absorption, ASTM C642)
6%
Maximum Air Void Spacing Factor, (ASTM C457)
300 um/m

Available Sizes

- 80 lb. (36 kg.) bag (D-LR1 BOM #112865)
- 80 lb. (36 kg) bag (D-LR2 BOM #112866)
- 3,000 lb. (1,360 kg) bag (D-LR1 BOM #110258)
- 3,000 lb. (1,360 kg) bag (D-LR2 BOM #112864)

Yield.

- Each 80 lb. (33 kg.) bag will yield approximately 0.6 cu. ft. (0.017 cu. m.)
- Each 3,000 lb. (1,360 kg.) bag will yield approximately 50 cu. ft. (1.4 cu. m.)

5. INSTALLATION

Preparation Surface (Restoration or Repair)

All surfaces to accept D-LR1 Microfiber and D-LR2 Microfiber must be free from all dust, laitance, oils, or surface contamination that may interfere with the bond adhesion. Remove all loose or fractured concrete allowing for a profiled surface, creating a minimum 1inch (25mm) clearance around all reinforcing and structural elements. Repair edges must be sawcut to reveal a minimum ¾ inch (20mm) depth. Repair surface should be cleaned and moistened to a saturated surface dry (SSD) appearance.

Application

Apply D-LR1 Microfiber and D-LR2 Microfiber in accordance with ACI 506 “Guide to Shotcrete” publication.

Curing

To reduce shrinkage and optimize physical performance properties, curing techniques to include moist cure or film forming curing compounds must be used. After initial set time D-LR1 Microfiber and D-LR2 Microfiber must be wet cured for a minimum of 7 days or a spray applied acrylic curing compound that meets ASTM C309 moisture retention must be used. Shotcrete applications in high temperature and low humidity environments require special attention if designed performance is required.

Limitations

- Do not add aggregate.
- Applications are not recommended when ambient and substrate temperatures are below 40°F(5°C) or above 95°F (35°C)
- Follow all industry standard safety procedures when working with concrete products including wearing impervious gloves, such as nitrile when handling.
- Qualified shotcrete applicators are recommended.

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: Tenonpro.com

6. AVAILABILITY

To locate Tech-Mix products in your area, please contact:
Phone: 1.651.688.9116
Website: Tenonpro.com

7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

Shelf Life	Best when used within one year in original, unopened bags
Storage Conditions	Store dry, cool, out of direct elements. Best to condition material to 40-85°F (4°-29°C) before using.
Color	Gray

WARNING: INJURIOUS TO EYES

KEEP OUT OF REACH OF CHILDREN

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