

fiberlite

reinforcement fibers

Technical Data Sheet

Green Umbrella Fiberlite™ is a uniquely designed concrete fiber that can be used as a powerful reinforcement. Fiberlite can be used as an alternative or combined with wire mesh to reduce cracking due to stress on the slab. When used in a polished concrete application, the fibers are transparent in the mix and can be dyed and polished.

FEATURES

- Enhances performance & durability
- Provides secondary reinforcement
- Eliminates plastic shrinkage cracking up to 100%
- Alkali resistant & non-corrosive
- Insoluble in water
- No fiber protrusion for easy finishing
- High impact resistance
- Excellent bond with concrete paste

BENEFITS

Green Umbrella Fiberlite™ is a uniquely designed concrete fiber that can be used as a powerful reinforcement. Fiberlite can be used as an alternative or combined with wire mesh to reduce cracking due to stress on the slab.

APPLICATIONS

Green Umbrella™ Fiberlite's characteristics lend itself to a variety of concrete applications including: slab-on-grade, precast concrete, shot-crete, stucco, decorative and other specialty concrete applications.

DOSAGE RATES

For general applications such as slab-on-grade, a standard dosage of (1) bag/yd³ is recommended. Other fibers require higher dosage rates to achieve similar performance. For other applications, consult with your Green Umbrella™ representative for recommended dosages.



PHYSICAL PROPERTIES

Material: Modified Acrylic
Specific Gravity (g/m³): 1.17
Elastic Modulus (GPa): >10.5
Tenacity (MPa): >650
Decomposition Temperature: 330C/626F
(Green Umbrella™ Fiberlite does not melt)
Acid & Alkali Resistance: Excellent
Color: White
Dispersity Rate: Excellent
Filament Diameter (μ): 10-15
Fiber Count (fiber/kg) approx: 794,000,000
Fiber Length (mm): 6
(other lengths available)

MIXING

Follow ASTM C-94 guidelines. Green Umbrella™ Fiberlite can be added directly to the mix at the jobsite or during batching of ingredients, but not as the first ingredient and should be mixed for a minimum of 5 minutes at full mixing speed.

PACKAGING

1 Carton/32 Bags; 36 Cartons/Pallet;
Truckloads are available. Bales are available upon request.

FINISHING

There is no surface protrusion when using Green Umbrella™ Fiberlite. Green Umbrella™ Fiberlite can be pumped or placed using conventional equipment and Green Umbrella™ Fiberlite can be used with all finishing techniques including power and hand troweling, broom finished and colored concrete.

TESTING

Introduction: This document presents the summary of the laboratory testing performed by TEC on samples of concrete containing Green Umbrella™ Fiberlite at different application rates. The scope of the testing was as follows: Perform laboratory batching of concrete with and without fibers according to ASTM C 1609:

- A. Flexural Strength (ASTM C 78-10)
- B. ASTM C 1609
- C. Resiliency
- D. ASTM C 1018

Summary of Test Results:

The following is a summary of the tests results:

Flexural	4.38 MPa (635 psi)	110% of Control
Bond Strength	89.02 kN (20,012 psi)	111% of Control
Impact Resistance	7 Days	225% of Control
Impact Resistance	28 Days	193% of Control
Plastic Shrinkage Cracking	Average Reduction:	90.4%

Conclusion:

Based on the test results, Green Umbrella™ Fiberlite used at a dosage rate of 0.66 lb/yd (0.39 kg/m) exceeded the test parameters required by ICC-ES AC32.

Warranty & Limitations

For a period of ten (10) years beginning the date on which the concrete surface described is treated with Green Umbrella™ products, Green Umbrella™ warrants to the owner that after the specified completed installation, the treated surface will remain water resistant, dust proof, hardened, and abrasion resistant. In the event the surface fails to perform, Green Umbrella™ will at its own expense and its own discretion, supply either sufficient product(s) to repair any such failure, or provide materials cost reimbursement. A manufacturer's representative must be on site to supervise installation.

It is the responsibility of the contractor to follow all directions and requirements as outlined in the Green Umbrella™ installation specifications. A completed Job Survey form must accompany this warranty request.

Green Umbrella™ Companies (GU) solely and expressly warrants that its products shall be free from defects in materials and workmanship for six months from the date of purchase. Unless authorized in writing by an officer of Green Umbrella™, no other representations or statements made by Green Umbrella™ or its representatives, in writing or orally, shall alter this warranty. GREEN UMBRELLA™ MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. GREEN UMBRELLA™ APPLIED TO SUBSTANDARD CONCRETE IS EXCLUDED FROM ANY KIND OF WARRANTY. If any Green Umbrella™ product fails to conform to this warranty, Green Umbrella™ will replace Green Umbrella™ product at no cost to the Buyer. Replacement of any product shall be the sole and exclusive remedy available and the buyer shall have no claim for incidental or consequential damages. Any installation of Green Umbrella™ products that fails to conform to such installation information and instructions shall void this warranty. Product demonstrations, if any are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining suitability of Green Umbrella™ products for the Buyers intended purposes.