

MINIFIBERS, INC.

Technical Data Sheet

POLYETHYLENE FIBERS
Bio-Based Dyneema® SK75A
Product Code Prefix: PE75A-020NLH

General Description: A high strength, light weight, high modulus fiber produced from ultra high molecular weight polyethylene, which has one of the highest strength-to-weight ratios of any man-made fiber.

Standard Filament Size: 2.0 denier per filament (dpf)

Standard Cut Lengths: 1/8", 1/4", 1/2", 3/4", and 1"
(3mm, 6mm, 13mm, 19mm, and 26mm)
Other lengths available upon request.

Shrinkage, Boiling Water: <1.0%

Tenacity: ~38 to 45 g/den; 3.3 to 3.9 GPa

Elongation: <4.0%

Modulus: 1267 to 1552 g/den; 109 to 132 GPa

Specific Gravity: 0.97 g/cm³

Average Moisture Regain: Does not absorb moisture.

Effect of Heat: Melts at 144-152°C / 290-306°F.
Decomposes at >300°C / 572°F.
The strength and modulus decrease at higher temperatures;
recommended continuous use temperature is 70°C or lower. Will burn slowly if ignited in atmospheric conditions, and is qualified as being self-extinguishing upon removal of flame.

Chemical Resistance: Excellent resistance to acids, alkalis, and most chemicals.
Ultra high molecular weight polyethylene does not contain any aromatic rings or amide, hydroxylic or other chemical groups that are susceptible to attack by aggressive agents. Only strong oxidizers are able to attack the mechanical properties.

Durability: Excellent resistance to sunlight and UV degradation; excellent biological resistance; highly resistant to abrasion and flex fatigue. In air, the fiber is stable for many years.

Other Characteristics: Excellent vibration dampening; high sonic velocity; low coefficient of friction; high thermal conductivity.

Packaging: Standard packaging is corrugated boxes with polyethylene liners. Custom packaging available upon request.

Dyneema® is a trademark of Avient Protective Materials.

The above information is provided to describe typical values and does not constitute a product specification. MiniFIBERS warrants that for each Product sold, such Product will meet the standard specifications provided for that Product and will be of a quality consistent with the standard specifications. This is the sole warranty given with respect to the Product, and is given expressly in lieu of any other warranties, expressed or implied, including without limitation any implied or general warranty of merchantability or of fitness for a particular purpose. It is expressly understood that any technical advice or assistance that may be provided by MiniFIBERS is rendered without compensation, and MiniFIBERS assumes no obligation or liability for such advice or assistance given, or for results obtained.