



Innegra™ S Fiber

The lightest and toughest high performance fiber

Lighter and tougher composites can be made with Innegra S fiber at a lower cost than alternatives. Innegra S combines synergistically with carbon, glass, quartz, or aramid fiber in multiple applications.

Product Characteristics:

- Lower density than the polymer (0.84g/cm³ Innegra S density compared to polymer density of 0.93 g/cm³)
- High tensile modulus, tenacity, and dimensional stability
- Ultra tough in tension, shear, and compression
- Excellent dielectric properties
- Lower creep than other polyolefin fibers
- Highly resistant to chemicals, water
- Excellent performance under cryogenic and high speed impact conditions

Applications:

- Police and military vests and helmets
- Composite armor for aircraft and vehicles
- Ropes and cordage
- Composites including marine, sporting goods, automotive and aerospace structures
- Composite pressure vessels, tubes and rolls
- Industrial/apparel thread

Innegra S Property Chart		
Weight per Unit Length (Denier) (Decitex)	940 1045	2800 3110
Denier per filament	12.5	12.5
Filaments per tow	75	225
Density (g/cm ³)	0.84	0.84
Ult. Tensile Strength* (gf/denier) MPa (ksi)	8.0 590 (87)	8.0 590 (87)
Elongation at Break* (%)	7.2%	8.6%
Tensile Modulus* (gf/denier) GPa (ksi)	240 18 (2700)	200 15 (2200)
Dielectric Constant	2.2	2.2
Dielectric Loss	0.0002	0.0002
Max. processing/use temp. (°C) (°F)	150 302	150 302

* ASTM D2256-02

US Patents 7074483, 7445843 and 7445842. Additional patents pending

For Materials Safety Data Sheet see:
www.innegrity.com

Hazard Statement:

Innegra S is not considered to be or contain hazardous chemicals based on evaluations made under the OSHA Hazard Communication Standard 29 CFR 1910.1200

Innegrity Europe GmbH
 Im Pfarrgrund 5
 (Industriegebiet Im Steinböhl)
 69518 Abtsteinach
 Germany
 Tel: +49 (0) 6207 / 92495 – 0
 Fax: +49 (0) 6207 / 92495 – 39

Innegrity LLC
 1312 Old Stage Road
 Simpsonville, SC 29681
 USA
 +1 864-373-7070

Innegrity Europe GmbH

High Performance Fibers for a High Performance World

