

## DrakaElite™ High Temperature Acrylate BendBright-XS

Bend-Insensitive Fiber for optimum performance in low or high temperature environments (from -60°C to 150°C)



Specialty Fiber



Issue date: 11/10  
Supersedes: 12/09

**Product Type:** 9 / 125  $\mu\text{m}$ , G.652.D, G.657.A2 and G.657.B2

**Coating Type:** High Temperature Resistant Acrylate

Datacom and Telecom in harsh environments for:

- Aeronautics and Transport
- Military/Defense/Aerospace
- Marine, Oil and Gas

Draka's High Temperature Resistant Acrylate coated BendBright-XS Single-Mode Fiber aims at providing premium transmission performances, in all bands from 1310 to 1625 nm, in temperature range from -60°C up to 150°C.

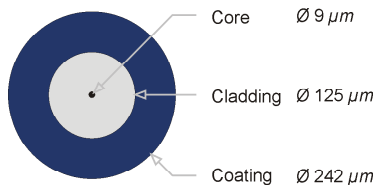
Taking benefit of Draka patented trench design, being made with Draka proprietary PCVD process, Draka's BendBright-XS fibers offer unrivalled resistance to micro-bendings even at the highest wavelengths. It makes them the favourite fibers for low temperature operations when the coating shrinkage could limit the transmission performances.

The specific acrylate coating used by Draka extends BendBright-XS performance to the high temperature end. It protects the optical fiber during installation and operation in applications exposed to temperature up to 150°C.

This fiber can be used in all cable constructions designed for high temperature environments, including loose tube, metal tube and central tube designs.



Value Innovation is a way of looking at the world. How we can help our customers do more, make more, save more, achieve more.



Features	Benefits
High temperature resistant Acrylate coating	Supports application in environments with both constant high temperature (up to 150°C) and fluctuating temperature
Low sensitivity to ionizing radiation, thanks to its PCVD made fiber core section	Useful for application of fibers in a harsh environment in presence of both elevated temperature and ionizing radiation
Fully compatible with other G.652 fibers in terms of transmission, connections and installation tools	Open standards for multi-sourcing worldwide
Excellent high temperature resistant Acrylate coating manufacturing process	Superior geometry, uniformity and homogeneity
Low macro-bending loss in the 7 to 15 mm radius range	Allows shorter radius storage of fiber over-length to more compact installation
Low micro-bending loss	Allows low temperature operation and highly demanding cable designs including ribbons

**Optical Specifications**
**Attenuation**

Attenuation Coefficient from 1310 nm to 1625 nm*	≤ 0.40 dB/km
Attenuation Coefficient at 1550 nm	≤ 0.25 dB/km

\* Including H2-aging according to IEC 60793-2-50, type B.1.3

**Mode Field Diameter**

Wavelength (nm)	MFD (µm)
1310	8.8 ± 0.4
1550	9.8 ± 0.5

**Cutoff Wavelength**

Cable Cut off wavelength (λ <sub>ccf</sub> )	≤ 1260 nm
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**Bending Loss**

Number of Turns	Mandrel Radius (mm)	Wavelength (nm)	Induced Attenuation (dB)
10	15	1550	≤ 0.03
10	15	1625	≤ 0.1
1	10	1550	≤ 0.1
1	10	1625	≤ 0.2
1	7.5	1550	≤ 0.5
1	7.5	1625	≤ 1.0

**Geometrical Specifications**

Core/Cladding Concentricity Error	≤ 0.7 µm
Cladding Diameter	125.0 ± 1.0 µm
Cladding Non-Circularity	≤ 1.0 %

**Coating Material (High Temp Resistant Acrylate Coating)**

Coating Diameter	242 ± 7 µm
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Length	Standard Lengths up to 8.8 km
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**Mechanical Specifications**

Proof test <sup>1</sup>	Off Line	≥ 1.0 [%] ≥ 100 kpsi ≥ 0.7 GPa
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**Dynamic Stress Corrosion**

Susceptibility Parameter	Typical	≥ 20
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**Coating Performance**

Coating Strip Force	Typical Average Force	2.7 N
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**Environmental Specifications**

Operating Temperature	≥ -60 to ≤ +150 °C
Long Term Operating Temperature	≤ +150 °C

**Temperature Dependence (1310 nm, 1550 nm)**

Cycling Induced Attenuation (-60°C to +150°C)	≤ 0.05 dB/km
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**Temperature and Humidity (1310 nm, 1550 nm)**

Induced Attenuation (85°C, 85% R.H, 30 days)	≤ 0.05 dB/km
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**Heat Dependence (1310 nm, 1550 nm)**

Induced Attenuation (150°C, 3000h)	≤ 0.05 dB/km
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<sup>1</sup> Higher proof test level upon request

## How can we be of service to you?

Value Innovation is a way of looking at the world. How can we help our customers do more, make more, save more, achieve more?

Take DrakaElite™. Based on our proprietary manufacturing process and our control of all technological building blocks, we offer an extensive portfolio of specialized optical fibers that have been designed, developed, manufactured

and tested for every environment. Whether you want to guide, amplify, transmit, process, control or sense light, Draka has the fiber you need, whatever your environment. And if for some reason we don't have exactly what you need, well, we'll just make it.

That's Value Innovation in action.

**Draka Communications**

fibersales@draka.com  
www.drakafiber.com | www.draka.com

The Draka Communications policy of continuous improvement may cause in changed specifications without prior notice