



### Specialty Fiber



Issue date: 12/09  
Supersedes: 09/09

For data transmission and communication in harsh environments

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



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



**Product Type: 9 / 125 µm, G.652.D**

**Coating Type: High Temperature Resistant Acrylate**

Draka's High Temperature Resistant Acrylate coated Single-Mode Fiber provides optimum transmission performance in both the 1310 nm and 1550 nm wavelength operating ranges.

In spite of their high intrinsic strength, optical fibers need coatings to ensure the protection and the maintenance of such strength throughout their lifetime, when exposed to all kinds of stresses which can cause optical fiber fatigue.

High temperature is one such cause, which can often be encountered in harsh environments.

The Acrylate coating used by Draka protects the optical fiber during installation and operation in applications exposed to high temperatures, up to 150°C.

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

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, especially when combined with a PCVD made fiber core section	Useful for application of fibers in harsh environments in presence of both elevated temperature and ionizing radiation
Fully compatible with other G.652 fibers in terms of transmission, connection and installation tools	Open standards for multi-sourcing worldwide
Excellent high temperature resistant Acrylate coating manufacturing process	Superior geometry, uniformity and homogeneity

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**Optical Specifications**
**Attenuation**

Attenuation Coefficient at 1310 nm	≤ 0.4 dB/km
Attenuation Coefficient at 1550 nm	≤ 0.25 dB/km

**Mode Field Diameter**

Wavelength (nm)	MFD (μm)
1310	9.0 ± 0.5
1550	10.1 ± 0.6

**Cutoff Wavelength**

Cable Cut off wavelength	≤ 1260 nm
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**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 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 ≥ 8.8 [N] ≥ 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)**

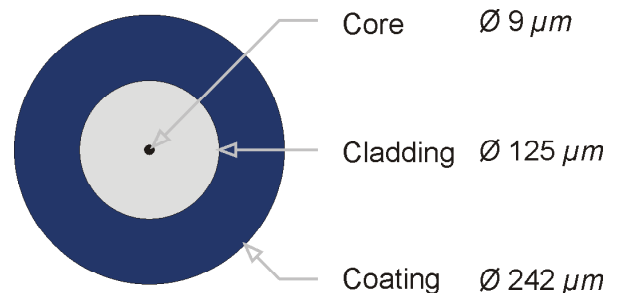
Cycling Induced Attenuation (-60°C to +150°C)	≤ 0.05 dB/km
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**Temperature and Humidity (1310 nm, 1550 nm)**

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**

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