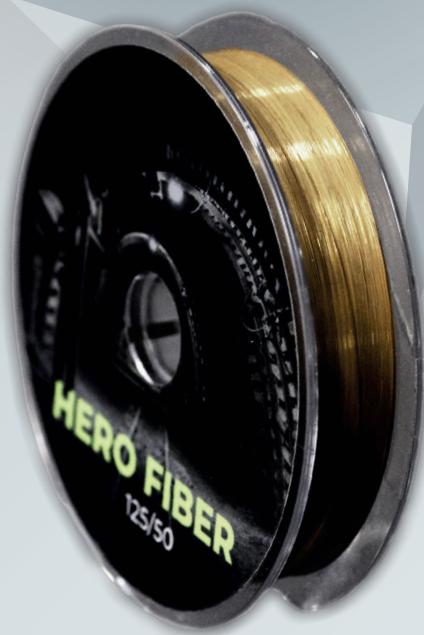




HERO Fiber

**MADE TO WITHSTAND
ANY CONDITIONS**

Metal-coated specialty fibers for hazardous environments
and the most demanding applications.

FEATURES

Operating temperatures from **-200°C to 1000°C**

Resistant to acids (sulphuric, nitric, hydrochloric, hydrofluoric)
and **alkalines** (sodium or potassium hydroxide)

Resilient to radiation (nuclear and cosmic)

Allows **distributed sensing** along the entire fiber length,
easy to install in the **most confined spaces**

Safe for explosive environment – **no electricity nor electromagnetic fields** present

Unique coating method allowing **low attenuation** and **high tensile strength**

Various metal coatings: **Cu, Au, Ag, Ni** (other materials available on request)

Enabling cold bonding to metallic structures

Highly **customizable coating thickness** (nm to mm)

Various **microstructure designs** available

Long lifespan



SPECS

HERO Fiber 600 125/50

- Operating temperature:
-200°C to 600°C (up to 1000°C short term)
- Fiber diameter with coating:
170 $\mu\text{m} \pm 10 \mu\text{m}$
- Bending radius:
10 mm short term, 25 mm long term
- Fiber type: multimode
- Proof test: 100 kpsi
- Chemical resistance:

H_2SO_4 >95% to 300°C	HF >40% to 100°C
HNO_3 65% to 100°C	NaOH >50% to 300°C
HCl 35% to 100°C	KOH >50% to 300°C



APPLICATIONS

- Measurements in extreme conditions for industrial process monitoring (temperature, strain, vibrations, flow, pressure, deformation)
- Oil & gas: down-hole sensing; sensing in refineries
- Metallurgy: continuous monitoring of smelter structure
- Energy: steam and liquids flow monitoring under extreme heat and radiation conditions
- Telecom and IT: resilient and high-capacity emergency and back-up networks
- Aviation and space: monitoring of rocket and jet engines; radiation-hardened elements
- Chemical industry: sensors for hazardous, corrosive and caustic environments; high and cryogenic temperature sensing
 - Ex areas: safe sensors and wiring
 - Structure and material fatigue sensing
 - High-vacuum and high-pressure devices
 - Radiation-resilient sensors

