

High-Performance Cables & Sutures

Precision in Motion

Integer's high-performance cables and sutures redefine control, strength, and flexibility in next-gen robotic and catheter-based systems. These biostable cables and sutures deliver the strength of metal with the flexibility required for tortuous path navigation. With minimal elongation, they ensure reliable, precise actuation where control and responsiveness are critical.

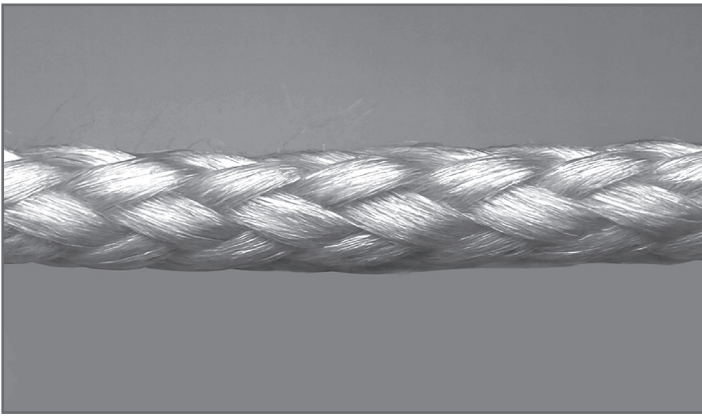
- **A high-tensile, flexible, biocompatible polymer** delivers 30 to 400 Newtons of strength across configurations, rivaling metal's performance without the added weight.
- **With minimal elongation**, this material exhibits only 1–3% stretch under load, ensuring precise one-to-one actuation with no slip or lag.
- **Excellent lubricity and naturally low friction** enable smooth movement through tortuous anatomical paths.
- **Biocompatibility ensures stable performance** and alleviates concerns about metal leaching or formaldehyde-based additives.
- **Low profile and high flexibility** allow compact geometry that supports tight device designs and robotic applications without compromising strength or control.



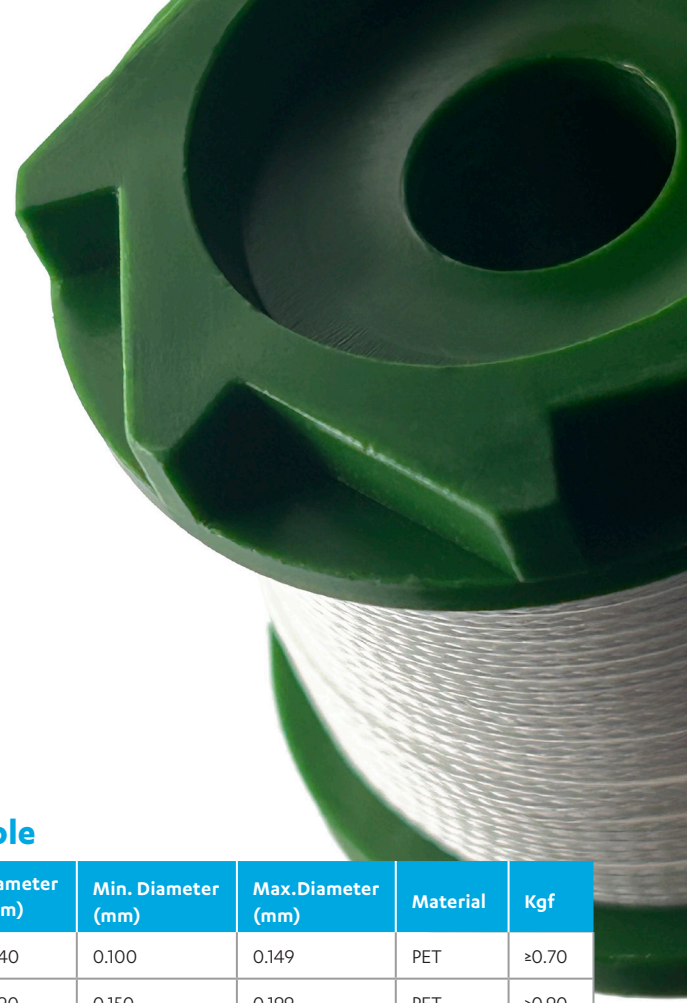
Where Strength Meets Precision

- **Robotic Surgical Systems:** UHMWPE or PET cables replace metal cables in robotic arms, delivering strength and minimal elongation for smooth, precise articulation.
- **Catheter Deflection & Actuation:** UHMWPE or PET cables are engineered for tight distal control and precise actuation, even through tortuous anatomy. Ideal for ICE catheter deflection wires and pulse field ablation devices in electrophysiology and interventional cardiology.

A Closer Look at Precision Engineering



Tightly braided UHMWPE or PET fibers deliver strength, flexibility, and a smooth, low-profile cable or suture for advanced medical devices.



UHMWPE Cable

USP	Diameter (mm)	Min. Diameter (mm)	Max.Diameter (mm)	Material	Kgf
5-0	0.140	0.100	0.149	UHMWPE	≈1.20
4-0	0.190	0.150	0.199	UHMWPE	≈1.80
3-0	0.240	0.200	0.249	UHMWPE	≈2.20
2-0	0.330	0.300	0.339	UHMWPE	≈4.00
0	0.380	0.350	0.399	UHMWPE	≈7.56
1	0.450	0.400	0.499	UHMWPE	≈9.50
2	0.550	0.500	0.599	UHMWPE	≈12.00
3/4	0.650	0.600	0.699	UHMWPE	≈10.00
5	0.750	0.700	0.799	UHMWPE	≈25.00

PET Cable

USP	Diameter (mm)	Min. Diameter (mm)	Max.Diameter (mm)	Material	Kgf
5-0	0.140	0.100	0.149	PET	≈0.70
4-0	0.190	0.150	0.199	PET	≈0.90
3-0	0.240	0.200	0.249	PET	≈1.20
2-0	0.330	0.300	0.339	PET	≈2.10
0	0.380	0.350	0.399	PET	≈3.00
1	0.450	0.400	0.499	PET	≈4.10
2	0.550	0.500	0.599	PET	≈6.20
3/4	0.650	0.600	0.699	PET	≈7.50
5	0.750	0.700	0.799	PET	≈9.00

Ready to refine or redefine device performance?

Partner with Integer's technical team and tap into decades of medical textile expertise, including a decade specializing in UHMWPE and PET braiding and high-performance cable solutions. Let's start building what's next.

E-mail CV-Solutions@integer.net to speak directly with a technical expert.



Integer | Corporate Headquarters
 5830 Granite Parkway, Suite 1150
 Plano, TX 75024
 CV-Solutions@Integer.net | Integer.net