

## Maximum Temperature for Endure brand Fittings - Tech Information

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### Overview

Endure™ fittings are MICROSOLV's enhanced-durability carbon-PEEK fittings engineered for use in demanding chromatographic environments. Their formulation allows higher thermal stability than standard PEEK fittings while maintaining chemical resistance and mechanical strength.

Knowing their temperature limits helps ensure reliable sealing and long-term performance under varied HPLC conditions.

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### Temperature Limits of Endure™ brand of Carbon-PEEK Fittings

#### Maximum Operating Temperature

- The Endure™ brand of carbon-PEEK fittings can be used up to 150 °C.

#### Comparison to Standard PEEK Fittings

- Most standard PEEK tubing connector fittings ("male nuts") are limited to **100 °C**.
- The Endure™ material extends that limit by an additional **50 °C**, making it suitable for elevated-temperature column compartments and specialized applications.

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### Why Endure™ Fittings Tolerate Higher Heat

#### Material Advantages

- Carbon-filled PEEK composite provides:
  - Enhanced temperature resistance
  - Improved structural rigidity
  - Better long-term performance under repeated heating cycles
  - Reduced creep and deformation compared to unfilled PEEK

These advantages help prevent leaks, dimensional drift, and fitting relaxation at elevated temperatures.

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### When to Use Endure™ Fittings

#### Recommended Scenarios

- Applications requiring column oven temperatures above 100 °C
- High-temperature methods using water, mixed aqueous-organics, or aggressive eluents

- Situations where fittings must withstand heavy solvent exposure and mechanical tightening

### **When Standard PEEK May Be Sufficient**

- Ambient or moderate-temperature separations
- Standard analytical HPLC with upper system limits  $\leq 100$  °C

Click [HERE](#) for ordering information for tubing connectors

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**MicroSolv Technology Corporation**

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)

Website: [www.mtc-usa.com](http://www.mtc-usa.com)