



# SEAL-CONNECT®

## Arlon® Materials & Design

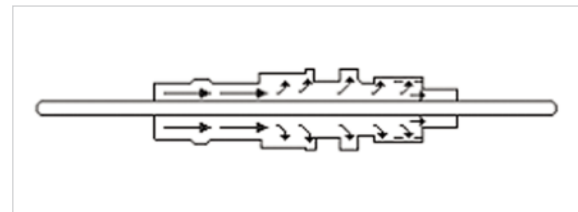
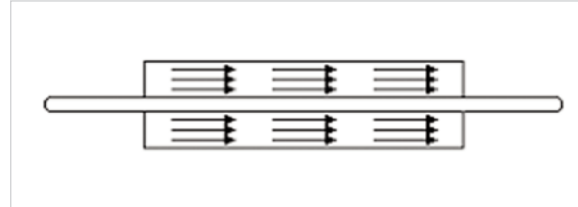
### THERMOPLASTIC MATERIAL

Greene, Tweed uses PEEK (Polyetheretherketone) and PEEK-HT(Polyetherketone) to produce the injection-molded outer connector body of Seal-Connect® connectors. Complete certification testing on each resin lot ensures full traceability and compliance to specifications.

In order to manufacture a repeatable high-quality part, injection molds are designed with simplicity and consistency in mind. While many parts could be molded completely to print, experience shows that an overmolding of Arlon® with subsequent machining provides more uniform physical properties and enables economic tooling. Proprietary stress relieving anneal cycles further alleviate inconsistencies. The figure on the right indicates differences in complexity of flow patterns in a detailed molding vs. an oversized blank molding.

For most applications Arlon 1000 injection molded PEEK performs adequately. Limitations of Arlon 1000 become evident at service temperatures above 350°F (175°C) or when the outer sealing diameter produces extreme loading. Arlon 1160, 30 percent glass-reinforced-grade PEEK, can be used for applications requiring higher mechanical properties, but it experiences some degradation above 350°F (175°C). For the most extreme temperature applications Arlon 2000 PEEK-HT should be considered because its higher glass transition temperature gives improved mechanical properties to 400°F (204°C). Please refer to Arlon Material Properties for a full listing.

Connector bodies can be machined to tolerances of .001 inch. (0.025 mm) total with excellent positional control of all machined diameters relative to the conductor. CNC machining centers produce parts quickly without sacrificing quality. Laser engraving to identify lot numbers or manufacturing dates can be provided at a minimal additional cost and, in most cases, the exposed conductors are gold plated at the end of the process to minimize damage during manufacture.



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