Arlon® Products

Arlon® 1000 Grade

Arlon® 1000 is a tough, high-temperature, semi-crystalline thermoplastic offering a unique combination of mechanical, thermal, chemical, and electrical properties. Recognized as the leading proprietary Polyetheretherketone (PEEK) in terms of its physical properties, Arlon® 1000 is available in rod, tube and disc components as well as injection-molded and machined shapes.

Arlon® 2000 Grade

Because of its higher glass transition temperatures, Arlon® 2000 provides extreme temperature applications with improved mechanical properties to 400°F (204°C). Arlon® 2000 exhibits a higher melting point and a higher glass transition temperature (Tg) than Arlon® 1000. This has a significant beneficial impact on its mechanical properties at higher temperatures. Arlon® 2000 exhibits higher flexural and tensile properties at higher temperatures. Arlon® 2000 has yield stress values significantly higher than those for Arlon®1000. Arlon® 2000 is available in custom injection molded shapes, rods and tubes.

Arlon® 1160 Glass Reinforced Grade

Arlon® 1160 is a glass-reinforced version of Arlon® 1000 that delivers improved dimensional stability and reduced springing. When compared to Arlon® 1000, Arlon® 1160 has significantly higher tensile and flexural strength and increased shear strength. Arlon® 1160 is often selected when the operating temperature exceeds 302°F (150°C). The addition of glass raises the HDT (Heat Deformation Temperature) to 608°F (320°C), increases the modulus of the material, and reduces the coefficient of thermal expansion. Other benefits include a lower coefficient of friction and improved wear properties. Arlon® 1160 and related grades are successfully being used as sealing components, valve seats, bearings, compressor components, and high-temperature insulators.

Arlon® 1160 is available in custom injection-molded shapes, rods to 1 inch (25.4 mm) diameter, tubes from .5 inch (12.7 mm) ID to 6 inch (152.4 mm) OD with a maximum cross-section of .87 inch (22 mm), and discs to 15 inch (380 mm) diameter.

Arlon® 1260 Carbon-Fiber-Reinforced Grade

Arlon® 1260 is a carbon-fiber reinforced version of Arlon® 1000 and has the highest modulus, tensile strength, and shear of all the Arlon® grades. Designers often select Arlon® 1260 when they require a low coefficient of thermal expansion. Arlon® 1260 provides enhanced tribological properties, reduced friction values, and improved wear properties over Arlon® 1000. Arlon® 1260 delivers the most benefits in lubricated bearing and/or moist environments.

Arlon® 1260 is available in custom injection-molded shapes, rods to .75 inch (19 mm) diameter, tubes from .5 inch (12.7 mm) ID to 6 inch (152.4 mm) OD, and discs to 15 inch (380 mm).

Note: Arlon® 1260 is subject to some limitations regarding moldings. Arlon® 1260 is not recommended for shapes with a cross-section greater than .63 in. (16 mm).

PRODUCT OVERVIEW

Arlon® 1330 Lubricated Grade

Arlon® 1330 is a lubricated version of Arlon® 1000. Modifications have resulted in a “softer” material as demonstrated by the lower flexural modulus values. Friction values are also reduced. Arlon® 1330 is the material of choice for valve seats and sealing components where the reduced modulus values facilitate sealing.

Arlon® 1330 is available in custom injection-molded shapes, rods to 1 inch (25.4 mm) diameter, tubes from .5 inch (12.7 mm) ID to 6 inch (152.4 mm) OD, discs to 15 inch (380 mm) diameter, and rings to 13 in. (330 mm) diameter.

Arlon® 1555 Carbon-Fiber/ Lubricated Grade

The compounding of carbon fibers with a lubricated version of Arlon® 1000 results in a high HDT temperature, improved tensile and flexural properties at elevated temperatures, and a reduced coefficient of thermal expansion. The reduced coefficient of friction and improved wear properties are also evidence of improved tribological properties. Arlon® 1555 is most often used in nonlubricated or marginally lubricated bearing applications or wear surfaces.

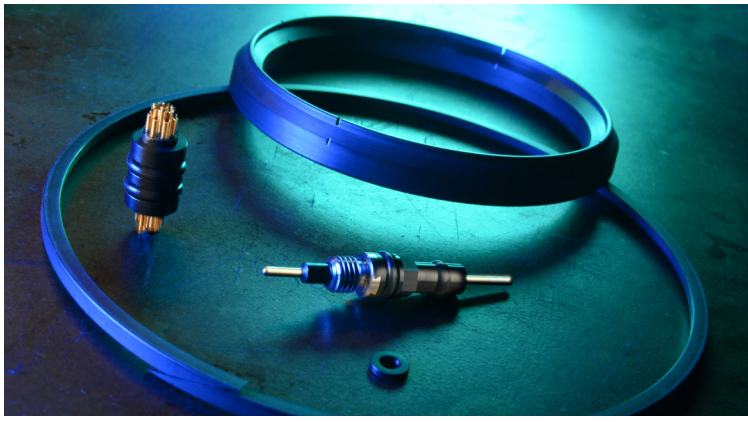
Arlon® 1555 is available in custom injection-molded shapes, rods to 1 inch (25.4 mm) diameter, tubes from .5 inch (12.7 mm) ID to 6 inch (152.4 mm) OD with a maximum cross-section of 1 inch (25.4 mm), and discs to 15 inch (380 mm) diameter.

Arlon® 2400 Grade

Arlon® 2400 provides the same broad chemical resistance of other Arlon® materials but with higher temperature capabilities and increased dimensional stability. Arlon® 2400 has the ability to replace metal parts in high-temperature applications due to its excellent strength-to-weight ratio. This high-performance material is compatible with all well fluids and gases, from reservoir fluids with high H_2S to amine-based inhibitors. Arlon® 2400 improves the performance of back-up rings, Vee rings, contact blocks, bearings, bushings and other custom geometries.

Arlon® 3000 XT Grade

Arlon® 3000 XT is the polymer of choice for extreme high-temperature environments. With improved creep and extrusion resistance, it outperforms both virgin and filled grades of PEEK and PEKEKK above 350°F (177°C). It has a glass transition temperature 35°F (20°C) higher than PEEK, providing superior mechanical property retention from 350°F (177°C) to 600°F (316°C). Arlon® 3000 XT has chemical resistance comparable to PEEK, resisting all common oilfield fluids. As back-up rings, connectors, or other custom shapes, Arlon® 3000 XT increases reliability and expands design headroom in high-temperature applications.



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