



ARLON® PRODUCTS

ARLON® 1000

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 (T_g) 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 which 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 in. (25.4 mm) diameter, tubes from .5 in. (12.7 mm) ID to 6 in. (152.4 mm) OD with a maximum cross-section of .87 in. (22 mm), and discs to 15 in. (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 in. (19 mm) diameter, tubes from .5 in. (12.7 mm) ID to 6 in. (152.4 mm) OD, and discs to 15 in. (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).

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 in. (25.4 mm) diameter, tubes from .5 in. (12.7 mm) ID to 6 in. (152.4 mm) OD, discs to 15 in. (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 in. (25.4 mm) diameter, tubes from .5 in. (12.7 mm) ID to 6 in. (152.4 mm) OD with a maximum cross-section of 1 in. (25.4 mm) and discs to 15 in. (380 mm) diameter.

ARLON 2400

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 H₂S 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

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) – 600°F (316°C). And it 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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