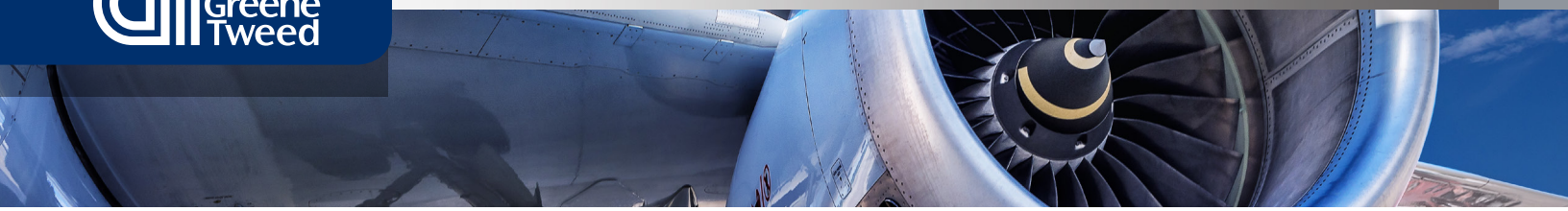

Arlon® 1263 Sealing Solutions

Compound No./Material Name:	Material Description:	Manufacturing Method:	Color:
Arlon® 1263	PEEK, Carbon-Filled MIL-P-46183, Type III, Class 2	Injection Molded	Black

Description (ASTM Standard)	Typical
Physical & Mechanical Properties	
Specific Gravity (D792)	1.41
Hardness, Shore D (D2240)	92
Hardness, Rockwell M (D785)	108
Tensile Strength @ Break, psi [MPa] (D638)	33,400 [230.3]
Tensile 0.5% Secant Modulus, psi [MPa] (D638)	3,150,000 [21,718.4]
Elongation, % (D638)	1.9
Flexural Strength, psi [MPa] (D790)	50,300 [346.8]
Flexural 0.5% Secant Modulus, psi [MPa] (D790)	2,750,000 [18,960.5]
Shear Strength, Axial, psi [MPa] (D732)	17,400 [120.0]
Shear Strength, Transverse, psi [MPa] (D732)	13,900 [95.8]
Compressive Strength @ Break, psi [MPa] (D695)	38,000 [262.0]
Deformation Under Load, % (D621)	0.06
Heat Deflection Temperature @ 264 psi [1.82 MPa], °F [°C] (D648)	> 600 [>316]
Coefficient of Dynamic Friction, PV=12,600 psi-ft/min (G77)	0.18
Wear Factor, 10^{-10}in.^{3}-min/ (lb-ft-hr) (Modified ASTM G77)	230
Coefficient of Thermal Expansion, Axial (Mold Direction) < 300°F [149°C], µin/in-°F [µm/m-°C] (E831)	9.96 [17.93]
Coefficient of Thermal Expansion, Axial (Mold Direction) > 300°F [149°C], µin/in-°F [µm/m-°C] (E831)	50.90 [91.62]
Coefficient of Thermal Expansion, Transverse < 300°F [149°C], µin/in-°F [µm/m-°C] (E831)	32.59 [58.66]
Coefficient of Thermal Expansion, Transverse > 300°F [149°C], µin/in-°F [µm/m-°C] (E831)	102.67 [184.8]

Notes:

1. *Specification: MIL-P-46183, Type III, Class 2.*
2. *Reference GT Stock/Solid Code: 326.*
3. *Properties of Arlon® 1263 are anisotropic. The published properties, unless otherwise noted, are measured in the axial flow direction of molded test specimens. Strength and stiffness, therefore, are at a maximum while elongation and thermal coefficient of expansion are at a minimum.*