



TYPICAL PROPERTIES

Reference Document No. GTS-0013S

Compound No./Material Name:	Material Description:	Manufacturing Method:
ARLON® 1555	PEEK, Carbon, Graphite and PTFE Filled	Injection Molded

DESCRIPTION (ASTM Standards)	TYPICAL
Physical & Mechanical Properties	
Color	Black
Specific Gravity (D792)	1.46
Hardness, Shore D, Points (D2240)	87
Hardness, Rockwell M, Points (D785)	98
Tensile Yield Strength, psi [MPa] (D638)	– [–]
Tensile Break Strength, psi [MPa] (D638)	21,200 [146.2]
Tensile 0.5% Secant Modulus, psi [MPa] (D638)	1,650,000 [11,376.3]
Elongation, % (D638)	2.2
Flexural Strength, psi [MPa] (D790)	33,000 [227.5]
Flexural 0.5% Secant Modulus, psi [MPa] (D790)	1,400,000 [9,652.6]
Shear Strength, Axial, psi [MPa] (D732)	13,000 [89.6]
Shear Strength, Transverse, psi [MPa] (D732)	10,000 [68.9]
Compressive Strength @ Break, psi [MPa] (D695)	24,600 [169.6]
Deformation Under Load, % (D621)	0.10
Heat Deflection Temperature @ 264 psi (1.8 MPa), °F [°C] (D648)	> 600 [>316]
Coefficient of Dynamic Friction, PV=12,600 psi-ft./min [2250.1 kg/cm] (G77)	0.17
Wear Factor, Modified ASTM G77, 10 ⁻¹⁰ in. ³ -min/(lb.-ft.-hr.) [10 ⁻⁷ cm ³ -min/(kg.-m.-hr.)] (G77)	65 [7.7]
Coefficient of Thermal Expansion < 300°F (149°C) 10 ⁻⁶ in./in.°F [10 ⁻⁶ cm/(cm°C)] (D696)	8 [14.4]
Coefficient of Thermal Expansion > 300°F (149°C) 10 ⁻⁶ in./in.°F [10 ⁻⁶ cm/(cm°C)] (D696)	17 [30.6]

Note

Properties of Arlon 1555 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.

Reference GTC Material Code Numbers. Solid Code: 036; Split Code: 035; AGT Code: P22.



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ARLON® 1555

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Manufacturing Method:

Injection Molded

DESCRIPTION (ASTM Standards)		TYPICAL		
High Temperature Properties				
Temperature °F [°C]	Flexural Strength, psi [MPa] (D790)	Flexural Strain, % (D790)	Flexural Modulus, psi [MPa] (D790)	Shear Strength, psi [MPa] (D732)
75°F [24°C]	28,000 [193.1]	2.8	1,380,000 [9,514.7]	11,200 [77.2]
150°F [66°C]	27,260 [188.0]	3.1	– [–]	9,900 [68.3]
200°F [93°C]	26,600 [183.4]	3.0	1,250,000 [8,618.4]	8,900 [61.4]
250°F [121°C]	20,390 [140.6]	2.5	1,220,000 [8,411.6]	8,100 [55.8]
300°F [149°C]	18,390 [126.8]	3.4	950,000 [6,550.0]	7,300 [50.3]
350°F [177°C]	– [–]	–	390,000 [2,689.0]	5,500 [37.9]
400°F [204°C]	– [–]	–	330,000 [2,275.3]	4,500 [31.0]
450°F [232°C]	– [–]	–	270,000 [1,861.6]	3,800 [26.2]
500°F [260°C]	– [–]	–	250,000 [1723.7]	3,400 [23.4]

typical properties / arlon® 1555

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