

DATA SHEET

GPO-2 (PAGE 1)

	Unit	ASTM/UL Test No.	TSF	UTS
Part Number			1312	1478
Color, Standard			Brown	Red
<b>MECHANICAL PROPERTIES</b>				
NEMA Grade			GPO-1/GPO-1P	GPO-2/GPO-2P
Military Specification			LP-509/GPO-1	LP-509/GPO-2
Tensile Strength	Psi	D638	9,400	8,900
Tensile Modulus	Psi x 10 <sup>6</sup>	D638	1.7	1.9
Flexural Strength	Psi	D790	22,300	24,600
Flexural Strength - Hot	Psi	D790	15,400	14,900
Test Temperature	°C	D790	130	130
Flexural Modulus	Psi x 10 <sup>6</sup>	D790		
Compressive Strength	Psi	D695	38,900	39,000
Shear Strength	Psi	D732	13,400	13,400
Shear Strength - Hot	Psi	D732		
Test Temperature	°C	D732		
IZOD Impact Strength (notched)	Ft. lb./in.	D256	8.0	10.7
Water Absorption	% by wt.	D570	0.3	0.6
Specific Gravity		D792	1.78	1.97
<b>ELECTRICAL PROPERTIES</b>				
Electric Strength - Perpendicular S/T in air	Vpm	D149	417	433
Electric Strength - Perpendicular S/T in oil	Vpm	D149	493	567
Electric Strength - Parallel S/S in air	kV	D149	44	51
Arc Resistance	Sec.	D495	127	130
Inclined Plane Track Resistance	Min.	D2303		
IEC Track Resistance (CTI)	V.	UL746A		500+
UL High Voltage Track Rate	In./Min.	UL746A		0
Permittivity, 60 Hz		D150	4.2	4.1
Dissipation Factor, 60 Hz		D150	0.0095	0.011
Permittivity, MHz		D150	4.2	3.9
Dissipation Factor, MHz		D150	4.2	0.010
Insulation Resistance	Ohm x 10 <sup>12</sup>	D257	2.4	270.0
<b>FLAME RESISTANCE PROPERTIES</b>				
UL Subject 94		UL94	HB	VO
UL Hot Wire Ignition	Sec.	UL746A		300+
UL High Amp Ignition	#Exposure	UL 746A		200+
UL Standard 723 Flame Spread		E84		
UL Standard 723 Smoke Developed		E84		
UL Standard 723 Fuel Contributed		E84		
Radiant Panel - Flame Spread		E162		
Oxygen Index	%O <sub>2</sub>	D2863	21.8	36.0
Flame Resistance		D229-II		
Ignition Time	Min.			81
Burn Time	Min.			48
<b>THERMAL PROPERTIES</b>				
Coefficient of Thermal Expansion	In/In/ °C x 10 <sup>-5</sup>	D696	2.2	2.0
Thermal Conductivity	BTU/Hr/Ft <sup>2</sup> /In/°F	C177	1.8	1.8
UL Temperature Index Electrical	°C	UL746B		130
Mechanical	°C	UL746B		160
UL Recognition File Number				E81928
UL Classification Number				

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	UTR	1580	SG-200	FHT	1911	1119
Part Number	1494	1580	1906	1800	1911	1119
Color, Standard	Red	White	Nat./Tan	Nat./Cream	Black	White
<b>MECHANICAL PROPERTIES</b>						
NEMA Grade	GPO-3/GPO-3P	GPO-3/GPO-3P				
Military Specification						
Tensile Strength	7,800	8,400	12,500	10,500	15,500	8,800
Tensile Modulus	1.7	1.8	1.7			
Flexural Strength	22,100	24,600	29,000		33,000	20,000
Flexural Strength - Hot	13,100	8,470			15,000	
Test Temperature	130	130			130	
Flexural Modulus					1.8	1.0
Compressive Strength	33,100	31,200	36,000	14,000	55,000	35,000
Shear Strength	11,600	12,000	11,100		16,000	12,500
Shear Strength - Hot					9,000	
Test Temperature					200	
IZOD Impact Strength (notched)	8.9	8.9	12.0	10.0	10.0	8.0
Water Absorption	0.4	0.2	0.3	1.1		0.12
Specific Gravity	1.81	1.83	1.70	1.60		1.80
<b>ELECTRICAL PROPERTIES</b>						
Electric Strength - Perpendicular S/T in air	450	425	500	450	300	340
Electric Strength - Perpendicular S/T in oil	584	577	625	570	477	509
Electric Strength - Parallel S/S in air	47	47	50	60	60	
Arc Resistance	180	181	120/180 <sup>2</sup>	139	147	170
Inclined Plane Track Resistance	685+					
IEC Track Resistance (CTI)	500+	500+	500+	500+		
UL High Voltage Track Rate	0	0	0	0		
Permittivity, 60 Hz	4.1	4.2	4.6	6.4		4.8
Dissipation Factor, 60 Hz	0.013	0.011	0.037	0.070		
Permittivity, MHz	4.1	4.0	3.7	4.2		3.9
Dissipation Factor, MHz	0.010	0.010	0.013	0.033		
Insulation Resistance	3.1	823.0	145.0			
<b>FLAME RESISTANCE PROPERTIES</b>						
UL Subject 94	VO	VO	HB	HB	HB	VO
UL Hot Wire Ignition	300+	300+	0.028 in./35 0.058 in./39	0.028 in./49 0.058 in./102		
UL High Amp Ignition	200+	200+	200+	200+		
UL Standard 723 Flame Spread						15
UL Standard 723 Smoke Developed						500
UL Standard 723 Fuel Contributed						0
Radiant Panel - Flame Spread						7.8
Oxygen Index	35.0	39.0	21.8	21.8	25.1	89.0
Flame Resistance						
Ignition Time	85	84				
Burn Time	49	23				
<b>THERMAL PROPERTIES</b>						
Coefficient of Thermal Expansion	2.0	2.0	2.0			2.0
Thermal Conductivity	1.9	1.9	1.7			1.7
UL Temperature Index Electrical	130	120	210	0.028 in./190 0.058 in./200		
Mechanical	160	140	210	0.028 in./190 0.058 in./200		
UL Recognition File Number	E81928	E81928	E81928	E81928		
UL Classification Number						R9599



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