TAMSHELL MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Noryl®	Polyphenylene Oxide, Modified

Noryl® due to its inherent chemical composition, exhibits unusually low moisture absorption. Therefore, good electrical insulating properties are realized over a wide range of humidity and temperature conditions. Chemical attack from water, most salt solutions, acids and bases is also minimal with Noryl®. The addition of glass fiber reinforcement enhances both th mechanical and thermal properties of the basic Noryl® material. This material also offers good electrical insulating properties along with long term dimensional stability.

Mechanical Properties	ASTM Test Method	Value	Units
Density	D792	0.0383	lbs/in^3
Specific Gravity	D792	1.08	g/cc
Water Absorption @ 24 hours, 73°F	D570	0.07	%
@ Saturation, 73°F	D570	0	%
Tensile Strength, 73°F	D638	9,200	psi
Tensile Modulus	D639	3.5×10^5	psi
Elongation (at break), 73°F	D638	25	%
Flexural Strength, 73°F	D790	13,400	psi
Flexural Modulus, 73°F	D790	3.7×10^5	psi
Compressive Strength	D695		psi
Izod Impact Strength, 73°F	D256	4	ft-lb/in of notch
Rockwell Hardness, 73°F	D785	R - 119	M or R Scale
Shure Hardness			D Scale
Wear Factor Against Steel, 40 psi, 50 fpm	D3702		$in.^3$-min/ft.lbs.hr
Static Coefficient of Friction	D3702		
Dynamic Coefficient of Friction, 40 pcs, 50 fpm	D3702		
Thermal Properties			
Heat Deflection Temperature @ 66 psi	D648	279	°F
@ 264 psi	D648	254	°F
Coefficient of Linear Thermal Expansion	D696	3.3×10^{-5}	in/in./°F
Continuous Servicing Temperature, Intermittent		230	°F
Long Term	UL746B	220	°F
Specific Heat		0.4	BTU/lb -°F
Thermal Conductivity			
Melting Point	D2133	310	°F
Flammability	UL94	V-2 (3.0)	(mm)
Electrical Properties			
Surface Resistivity	D257		ohm/square
Volume Resistivity	D257	1×10^{17}	ohm - cm
Dielectric Strength	D149	500	Volts/mil
Dielectric Constant, 60 Hz, 73°F, 50% RH	D150	2.7	
Dissipation Factor, 60 HZ, 73°F	D150	0.0007	

237 Glider Circle, Corona, CA 92880 Phone: (951) 272-9395 Fax: (951) 272-9397

*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. The above information is provided by Ensinger Hyde.