

Noryl® PPO (Modified Polyphenylene Oxide)

Noryl® modified PPO is a strong engineering plastic with outstanding mechanical, thermal, and electrical properties. Low moisture absorption and low thermal expansion make Noryl® one of the most dimensionally stable thermoplastics available. Noryl® is widely used for electrical housings and structural components since it has excellent insulating properties, flame resistance, and dimensional stability over a wide range of service temperatures. Noryl® is often selected for fluid handling applications since it has low moisture absorption and excellent strength and stiffness. Noryl® is easy to fabricate, paint, and glue.

- Excellent dimensional stability
- Low moisture absorption
- Good strength and stiffness over a wide range of service temperatures
- Good impact resistance
- High dielectric strength
- Easy to fabricate, paint, and glue
- Excellent flammability rating (UL94 V-1 @ .058" thick)

Applications

- Manifolds
- Pump, valve, and fitting applications
- Scientific and analytical instrument components
- Housings
- Covers
- Electrical components

Property	ASTM Test	Units	Noryl® PPO	Noryl® 30% GF
Physical				
Specific Gravity	D792		1.08	1.23
Water Absorption, @24 hours	D570	%	0.070	0.060
Mechanical				
Flexural Modulus	D790	psi	370,000	830,000
Flexural Strength @yield	D790	psi	14,400	22,000
Hardness-Rockwell	D785		R119	L106
Izod Impact Strength, Notched @-40°F	D256	ft-lb/in	2.5	1.8
Izod Impact Strength, Notched @73°F	D256	ft-lb/in	3.5	2.0
Tensile Elongation @break	D638	%	25.0	5.0
Tensile Strength @yield	D638	psi	9,200	15,500
Thermal				
Coefficient of Thermal Expansion	D696	in/in/°F	3.3×10^{-5}	1.4×10^{-5}
Flammability Rating, @.058"	UL94		V-1	V-1
Flammability Rating, @.236"	UL94		V-0	V-0
Heat Deflection Temperature, @66psi	D648	°F	—	280
Heat Deflection Temperature, @264psi	D648	°F	254	270
Electrical				
Dielectric Constant, @60Hz	D150		2.69	3.15
Dielectric Strength	D149	V/mil	500	600
Dissipation Factor, @60Hz	D150		0.0007	0.0016

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. All values at 73°F (23°C) unless otherwise noted.