

TECHNICAL DATA SHEET

Noryl (PPE)

(Polyphenylenether)

This amorphous material exhibits high impact strength, low water absorption, very high dimensional stability and very low tendency to creep. Noryl (PPE) exhibits unusually low moisture absorption and provides excellent insulating properties over a wide range of humidity and temperature. Alloy composition also provides Noryl (PPE) with good electrical properties allowing Noryl to be one of the few non-metallic materials that can be electroplated.

TYPICAL PROPERTIES of NORYL® Modified PPO

ASTM or UL test	Property	Unfilled	30% Glass-filled
PHYSICAL			
D792	Density (lb/in ³) (g/cm ³)	0.039 1.08	0.049 1.36
D570	Water Absorption, 24 hrs (%)	0.07	0.06
MECHANICAL			
D638	Tensile Strength (psi)	9,600	17,800
D638	Tensile Modulus (psi)	350,000	-
D638	Tensile Elongation at Break (%)	30	-
D790	Flexural Strength (psi)	13,500	20,000
D790	Flexural Modulus (psi)	360,000	1,100,000
D695	Compressive Strength (psi)	-	-
D695	Compressive Modulus (psi)	-	-
D785	Hardness, Rockwell	R119	L108
D256	IZOD Notched Impact (ft-lb/in)	5.0	2.3
THERMAL			
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	3.3	1.4
D648	Heat Deflection Temp (°F / °C) at 264 psi	265 / 129	275 / 135
D3418	Vicat Softening Temp (°F / °C)	310 / 154	- / -
-	Max Operating Temp (°F / °C)	220 / 105	220 / 105
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	1.32 4.55	1.94 6.68
UL94	Flammability Rating (1/4" thick)	V-0	V-0
ELECTRICAL			
D149	Dielectric Strength (V/mil) short time, 1/8" thick	500	530
D150	Dielectric Constant at 60 Hz	2.7	3.2
D150	Dissipation Factor at 60 Hz	0.001	0.002
D257	Volume Resistivity (ohm-cm) at 50% RH	10 ¹⁷	10 ¹⁷

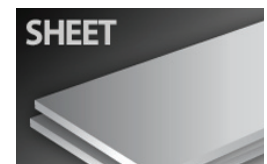
Benefits

Heat or cold stability
UL94 V0 and V1
High impact strength
Low water absorption
Dimensional stability
Low creep
Thermo stability
Good electrical properties

Applications

Automotive
Electronics
Connectors
Gears
Housings
Cable Applications
Pump
Industrial

SHAPES AVAILABLE



NORYL is a registered trademark of SABIC Innovative Polymers (formerly GE Plastics).

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. Contact us for manufacturers' complete material property datasheets.

All values at 73°F (23°C) unless otherwise noted.