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## Quadrant EPP Noryl PPO, Polyphenylene oxide, unfilled, extruded

**Subcategory:** Polymer; Polyphenylene Ether/PPO; Thermoplastic

**Material Notes:**

Data provided by Quadrant Engineering Plastic Products

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	0.039 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.1 %	0.1 %	Immersion, 24 hr; ASTM D570(2)
<b>Mechanical Properties</b>			
Hardness, Rockwell M	92	92	ASTM D785
Tensile Strength, Ultimate	57.2 MPa	8300 psi	ASTM D638
Elongation at Break	23 %	23 %	ASTM D638
Tensile Modulus	2.53 GPa	367 ksi	ASTM D638
Flexural Modulus	2.74 GPa	397 ksi	ASTM D790
Flexural Yield Strength	88.9 MPa	12900 psi	ASTM D790
Compressive Strength	91 MPa	13200 psi	10% Def.; ASTM D695
Compressive Modulus	2.18 GPa	316 ksi	ASTM D695
Shear Strength	57.2 MPa	8300 psi	ASTM D732
Izod Impact, Notched	1.55 J/cm	2.9 ft-lb/in	ASTM D256 Type A
<b>Electrical Properties</b>			
Dielectric Strength	27.6 kV/mm	701 V/mil	Short Term; ASTM D149
<b>Thermal Properties</b>			
CTE, linear 68°F	64.1 µm/m-°C	35.6 µin/in-°F	(-40°F to 300°F); ASTM E831
Maximum Service Temperature, Air	93.3 °C	200 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	127 °C	260 °F	ASTM D648
Glass Temperature	140 °C	284 °F	ASTM D3418
<b>Descriptive Properties</b>			
Continuous Sunlight	Limited		
FDA Compliance	Not Compliant		
Relative Machinability	6		1-10, 1=Easier to Machine
Service in Alcohols	Acceptable		
Service in Aliphatic Hydrocarbons	Limited		
Service in Aromatic Hydrocarbons	Unacceptable		
Service in Chlorinated Solvents	Unacceptable		
Service in Ethers	Limited		
Service in Ketones	Unacceptable		

Service in Strong Acids	Unacceptable
Service in Strong Alkalies	Unacceptable
Service in Weak Acids	Acceptable
Service in Weak Alkalies	Acceptable

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