NORYL™ RESIN PX1390

REGION AMERICAS

DESCRIPTION

NORYL PX1390 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This injection moldable grade inherently meets UL94 HB flame rating. NORYL PX1390 resin exhibits excellent electrical properties, easy processability, high heat resistance, and good dimensional stabilty. It is an excellent candidate for automotive connector applications.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Dimensional stability, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	30	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	99	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2270	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	288	J/m	ASTM D256
Izod Impact, notched, -40°C	160	J/m	ASTM D256
THERMAL [1]			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	146	°C	ASTM D648
CTE, 0°C to 100°C, flow	7.2E-05	1/°C	ASTM E831
PHYSICAL [1]			
Specific Gravity	1.06	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [2]	0.5 – 0.7	%	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E121562-221188	-	-
UL Recognized, 94HB Flame Class Rating	≥0.7	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	Hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	295 – 315	°C	
Front - Zone 3 Temperature	280 – 315	°C	
Middle - Zone 2 Temperature	270 – 310	°C	
Rear - Zone 1 Temperature	260 – 305	°C	
Mold Temperature	75 – 105	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses, colors and regions. For details, please see the UL Yellow Card.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER