NORYL™ Resin PX0844

REGION AMERICAS

DESCRIPTION

NORYL PX0844 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This grade exhibits very low moisture absorption, hydrolytic stability, dimensional stabilty, good foam adhesion, and property retention over a wide temperature range. NORYL PX0844 resin is inherently UL94 HB and is an excellent candidate for automotive interior applications such as instrument panels, audio components, speaker housings, and interior trim. *see NORYL PX0888 resin for higher heat resistance.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, 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 20261113

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	49	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	44	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	30	%	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 5 mm/min	2400	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	80	MPa	ASTM D790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	75	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2550	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2240	MPa	ASTM D790
Hardness, Rockwell R	114	-	ASTM D785
Tensile Stress, yield	47	MPa	ISO 527
Tensile Stress, break	43	MPa	ISO 527
Tensile Strain, yield	2.9	%	ISO 527
Tensile Strain, break	43	%	ISO 527
Tensile Modulus, 1 mm/min	2420	MPa	ISO 527
Flexural Stress	78	MPa	ISO 178
Flexural Modulus	2450	MPa	ISO 178
IMPACT [1]			
Izod impact, notched			
23°C	270	J/m	ASTM D256
-30°C	175	J/m	ASTM D256

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
-40°C	133	J/m	ASTM D256
80*10*4 +23°C	22	kJ/m²	ISO 180/1A
80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Instrumented Dart Impact Total Energy, 23°C	40	J	ASTM D3763
Charpy Impact, notched, 23°C	22	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	10	kJ/m²	ISO 179/2C
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	120	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	121	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	112	°C	ASTM D648
CTE, 0°C to 100°C, flow	7.38E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	125	°C	ISO 306
Vicat Softening Temp, Rate B/120	128	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	122	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	107	°C	ISO 75/Ae
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
Melt Flow Rate, 280°C/5.0 kgf	13.7	g/10 min	ASTM D1238
INJECTION MOLDING [3]			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	275 – 305	°C	
Nozzle Temperature	275 – 305	°C	
Front - Zone 3 Temperature	265 – 305	°C	
Middle - Zone 2 Temperature	255 – 300	°C	
Rear - Zone 1 Temperature	245 – 295	°C	
Mold Temperature	70 – 100	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	
Vent Depth	0.038 – 0.051	mm	

(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) 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.

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