NORYL GTX™ RESIN GTX674PC

REGION AMERICAS

DESCRIPTION

NORYL GTX674PC resin is a conductive, non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade is optimized to allow for in- or on-line primer-less powder coat painting around corners and holes with a Class A Surface. NORYL GTX674PC resin exhibits high heat resistance, improved surface appearance and is an excellent candidate for automotive applications such as mirror housings and brackets. This material is only available in black.

GENERAL INFORMATION	
Features	Chemical Resistance, Electrically Conductive, Hydrolytic Stability, Low Warpage, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Aesthetics/Visual effects, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added
Fillers	Conductive agent
Polymer Types	Polyphenylene Ether + PA (PPE+Nylon)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Bus, Automotive Exteriors, Recreational/Specialty Vehicles
Building and Construction	Building Component
Consumer	Home Decoration, Personal Recreation

TYPICAL PROPERTY VALUES

Revision 20241015

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	64	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	4	%	ASTM D638
Tensile Modulus, 5 mm/min	2810	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	109	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2890	MPa	ASTM D790
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3	%	ISO 527
Tensile Strain, break, 50 mm/min	4	%	ISO 527
Flexural Stress, yield, 2 mm/min	103	MPa	ISO 178
Flexural Modulus, 2 mm/min	2480	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	74	J/m	ASTM D256
Izod Impact, notched, -30°C	50	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
THERMAL [1]			
Vicat Softening Temp, Rate B/50	197	°C	ASTM D1525

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	188	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	8.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.6E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	197	°C	ISO 306
Vicat Softening Temp, Rate B/120	196	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	185	°C	ISO 75/Bf
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.11	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	1 – 1.3	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	25	g/10 min	ASTM D1238
ELECTRICAL [1]			
Volume Resistivity	1.E+03 – 1.E+04	Ω.cm	SABIC method
Hot-Wire Ignition (HWI), PLC 3	0.75	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-549484	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	95 – 105	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.07	%	
Minimum Moisture Content	0.02	%	
Melt Temperature	280 – 305	°C	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	275 – 305	°C	
Middle - Zone 2 Temperature	270 – 305	°C	
Rear - Zone 1 Temperature	265 – 305	°C	
Mold Temperature	75 – 120	°C	
Back Pressure	0.3 – 1.4	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 50	%	
Vent Depth	0.013 – 0.038	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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(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.

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