NORYL GTX™ RESIN GTX985

REGION EUROPE

DESCRIPTION

NORYL GTX985 resin is a conductive, 18% mineral reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade combines high stiffness, excellent chemical resistance, and high heat resistance. NORYL GTX985 is conductive for primerless electrostatic painting and is an excellent candidate for automotive exterior trim applications.

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	Mineral, Conductive agent
Polymer Types	Polyphenylene Ether + PA (PPE+Nylon)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Exteriors

TYPICAL PROPERTY VALUES

Revision 20241014

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	65	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	7	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	110	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4200	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	65	MPa	ISO 527
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4	%	ISO 527
Tensile Strain, break, 5 mm/min	7	%	ISO 527
Tensile Modulus, 1 mm/min	4400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	105	MPa	ISO 178
Flexural Modulus, 2 mm/min	4350	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	45	J/m	ASTM D256
Izod Impact, notched, -30°C	40	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	10	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	60	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	55	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
THERMAL [1]			
Vicat Softening Temp, Rate B/50	195	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	200	°C	ASTM D648
CTE, 23°C to 60°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.5E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	195	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	205	°C	ISO 75/Bf
PHYSICAL [1]			
Specific Gravity	1.25	-	ASTM D792
Melt Flow Rate, 280°C/5.0 kgf	16	g/10 min	ASTM D1238
Density	1.25	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	15	cm³/10 min	ISO 1133
Mold Shrinkage, flow, 3.2 mm [2]	0.8 – 1.2	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [2]	0.8 – 1.2	%	SABIC method
ELECTRICAL [1]			
Volume Resistivity	1.E+03 – 1.E+04	Ω.cm	SABIC method
INJECTION MOLDING [3]			
Drying Temperature	100 – 110	°C	
Drying Time	2 – 3	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	80 – 100	°C	
Mold Temperature	100 – 120	°C	

(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.

DISCLAIMER