NORYL GTX™ RESIN GTX975

REGION ASIA

DESCRIPTION

NORYL GTX™ 975 resin is a conductive, 18% mineral reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade combines high stiffness and excellent temperature resistance with conductivity for primerless electrostatic painting. NORYL GTX975 was designed for in- or on-line painted exterior automotive trim parts such as tank flaps and corner panels.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	69	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	68	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	4.5	%	ASTM D 638
Tensile Modulus, 5 mm/min	4450	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	113	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4000	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	65	MPa	ISO 527
Tensile Stress, break, 5 mm/min	65	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.5	%	ISO 527
Tensile Strain, break, 5 mm/min	4	%	ISO 527
Tensile Modulus, 1 mm/min	4200	MPa	ISO 527
Flexural Stress, break, 2 mm/min	110	MPa	ISO 178
Flexural Modulus, 2 mm/min	4000	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	35	J/m	ASTM D 256
Izod Impact, notched, -30°C	30	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	3	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	40	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	35	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
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	40	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	215	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	210	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.4E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, 23°C to 60°C, flow	5.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.5E-05	1/°C	ISO 11359-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	195	°C	ISO 306
Vicat Softening Temp, Rate B/120	200	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	185	°C	ISO 75/Be
PHYSICAL			
Specific Gravity	1.25	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.8 – 1.2	%	SABIC method
Melt Flow Rate, 280°C/5.0 kgf	15	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	3.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	10	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1000 – 10000	Ohm-cm	SABIC method
INJECTION MOLDING			
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	

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