



NORYL GTX™ Resin GTX673

Americas: COMMERCIAL

Conductive NORYL GTX resin designed for profile extrusion. This grade can be electrostatic or powder coat painted without the need for a primer. In addition, its high heat capability allows it to be painted on the same line as metal.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	660	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	640	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.8	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	6.1	%	ASTM D 638
Tensile Modulus, 5 mm/min	24600	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1010	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25600	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	66	MPa	ISO 527
Tensile Stress, break, 50 mm/min	64	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	7.1	%	ISO 527
Tensile Modulus, 1 mm/min	2670	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	103	MPa	ISO 178
Flexural Modulus, 2 mm/min	2470	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	10	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	50	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	10	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m ²	ISO 1791eA
THERMAL			
Vicat Softening Temp, Rate B/50	197	°C	ASTM D 1525

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
 (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
 (4) Internal measurements according to UL standards.
 (5) 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.
 (6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	187	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E 831
CTE, 23°C to 60°C, flow	8.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.6E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	197	°C	ISO 306
Vicat Softening Temp, Rate B/120	198	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	184	°C	ISO 75/Bf
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	1.3 - 1.5	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	7.8	g/10 min	ASTM D 1238
Density	1.1	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	4	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.4	%	ISO 62
Melt Volume Rate, MVR at 300°C/5.0 kg	7	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.E+03 - 1.E+04	Ohm-cm	SABIC Method

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Profile Extrusion		
Drying Temperature	105 - 110	°C
Drying Time	8	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.03	%
Melt Temperature	245 - 260	°C
Barrel - Zone 1 Temperature	245 - 260	°C
Barrel - Zone 2 Temperature	245 - 260	°C
Barrel - Zone 3 Temperature	245 - 260	°C
Barrel - Zone 4 Temperature	245 - 260	°C
Adapter Temperature	245 - 260	°C
Die Temperature	245 - 260	°C
Calibrator Temperature	35 - 75	°C
Water Bath Temperature	40 - 50	°C

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