

Noryl GTX* Resin GTX944

Americas: COMMERCIAL

NORYL GTX944 is an unfilled GTX grade with improved processability and increased impact performance.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	50	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	45	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 50 mm/min	1900	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	75	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1950	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.5	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	2000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	1900	MPa	ISO 178
Hardness, H358/30	75	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched, 23°C	680	J/m	ASTM D 256
Izod Impact, notched, -30°C	280	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	55	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	55	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	25	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	25	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	180	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	185	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.E-04	1/°C	ASTM E 831
Thermal Conductivity	0.24	W/m-°C	ISO 8302
CTE, 23°C to 60°C, flow	9.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	240	°C	ISO 306
Vicat Softening Temp, Rate B/50	180	°C	ISO 306
Vicat Softening Temp, Rate B/120	185	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	175	°C	ISO 75/Be
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792

Mold Shrinkage on Tensile Bar, flow (2)	1.4 - 1.8	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm	1.4 - 1.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	1.1 - 1.4	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	12.5	g/10 min	ASTM D 1238
Density	1.07	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	3.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	1.2	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	12	cm ³ /10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	2.2E+13	Ohm-cm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	20	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	3.5	-	IEC 60250
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.072	-	IEC 60250
Dissipation Factor, 1 MHz	0.024	-	IEC 60250
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Compliant, 94HB Flame Class Rating (3)(4)	1.6	mm	UL 94 by GE
Oxygen Index (LOI)	21	%	ISO 4589

Source GMD, last updated:06/25/2007

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	100 - 120	°C
Drying Time	2 - 3	hrs
Maximum Moisture Content	0.07	%
Melt Temperature	290 - 320	°C
Nozzle Temperature	280 - 310	°C
Front - Zone 3 Temperature	290 - 320	°C
Middle - Zone 2 Temperature	280 - 300	°C
Rear - Zone 1 Temperature	260 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 120	°C

Source GMD, last updated:06/25/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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.

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