

# NORYL GTX™ RESIN GTX934

REGION EUROPE

## DESCRIPTION

NORYL GTX934 is an unfilled GTX grade with improved processability and heat ageing performance.

## TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	60	%	ASTM D 638
Tensile Modulus, 50 mm/min	2300	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2350	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Tensile Strain, break, 50 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
Hardness, H358/30	85	MPa	ISO 2039-1
<b>IMPACT</b>			
Izod Impact, notched, 23°C	220	J/m	ASTM D 256
Izod Impact, notched, -30°C	100	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	60	J	ASTM D 3763
Izod Impact, notched 80°10'4 +23°C	20	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80°10'4 -30°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10'4 sp=62mm	20	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10'4 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	205	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	190	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.5E-05	1/°C	ASTM E 831
Thermal Conductivity	0.23	W/m·°C	ISO 8302
CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.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	250	°C	ISO 306
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
Vicat Softening Temp, Rate B/120	205	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	190	°C	ISO 75/Be
<b>PHYSICAL</b>			
Specific Gravity	1.09	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow	1.6 – 2	%	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	13	g/10 min	ASTM D 1238
Density	1.09	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	3.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	1.21	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	13	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Comparative Tracking Index	600	V	IEC 60112
<b>INJECTION MOLDING</b>			
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	

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