

Noryl* Resin EXNL1117

Americas: COMMERCIAL

high gloss Noryl

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	67	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	3.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	5.2	%	ASTM D 638
Tensile Modulus, 5 mm/min	2560	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	100	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2730	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.3	%	ISO 527
Tensile Strain, break, 50 mm/min	4.4	%	ISO 527
Tensile Modulus, 1 mm/min	2810	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	2650	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	85	J/m	ASTM D 256
Izod Impact, notched, -30°C	20	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	30	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	9	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	96	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.7E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	96	°C	ISO 306
Vicat Softening Temp, Rate B/120	98	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	75	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.12	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 280°C/2.16 kgf	25	g/10 min	ASTM D 1238
Density	1.11	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.06	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0	%	ISO 62
Melt Volume Rate, MVR at 280°C/2.16 kg	25	cm ³ /10 min	ISO 1133

FLAME CHARACTERISTICS	Value	Unit	Standard
UL Compliant, 94V-1 Flame Class Rating (3)(4)	1.5	mm	UL 94 by GE
UL Compliant, 94V-0 Flame Class Rating (3)(4)	2.5	mm	UL 94 by GE

Source GMD, last updated:09/19/2008

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	75 - 80	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 275	°C
Nozzle Temperature	250 - 275	°C
Front - Zone 3 Temperature	240 - 275	°C
Middle - Zone 2 Temperature	225 - 270	°C
Rear - Zone 1 Temperature	215 - 265	°C
Mold Temperature	55 - 75	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%
Vent Depth	0.038 - 0.051	mm

Source GMD, last updated:09/19/2008

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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