



NORYL™ Resin REN501
Americas: COMMERCIAL

Noryl REN501 resin is an unfilled Post Industrial Recycle (PIR) based injection moldable modified polyphenylene ether blend comprising up to 40% PIR content. Available in black only.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	610	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	500	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	15	%	ASTM D 638
Tensile Modulus, 5 mm/min	25400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	970	kgf/cm ²	ASTM D 790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	960	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	26500	kgf/cm ²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	24400	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	265	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	18	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	9	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	499	cm-kgf	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	124	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	129	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	118	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.04E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.81E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.09	-	ASTM D 792
Melt Flow Rate, 280°C/5.0 kgf	7.7	g/10 min	ASTM D 1238

(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.

Source GMD, last updated:

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	105 - 110	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	280 - 310	°C
Nozzle Temperature	280 - 310	°C
Front - Zone 3 Temperature	270 - 310	°C
Middle - Zone 2 Temperature	260 - 305	°C
Rear - Zone 1 Temperature	250 - 300	°C
Mold Temperature	75 - 105	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 70	%

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