



NORYL™ Resin WCV063
Americas: COMMERCIAL

Flexible, non-halogenated FR, mPPE extrusion grade material for evaluation in automotive wire coating applications requiring ISO6722.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	280	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	280	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D 638
Tensile Modulus, 50 mm/min	8500	kgf/cm ²	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7300	kgf/cm ²	ASTM D 790
Hardness, Shore D, 10S reading	63	-	ASTM D 2240
Tensile Stress, yield	25	MPa	ISO 527
Tensile Stress, break, 50 mm/min	25	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	20	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	690	MPa	ISO 527
Flexural Modulus	790	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	57	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	17	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	37	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	14	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	82	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	56	°C	ASTM D 648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	66	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.03	-	ASTM D 792
Melt Flow Rate, 280°C/5.0 kgf	33	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.

(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
ELECTRICAL			
Relative Permittivity, 1 GHz	2.47	-	ASTM D 150
Dissipation Factor, 1 GHz	0.0032	-	ASTM D 150

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Wire Coating Extrusion		
Drying Temperature	80 - 100	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Extruder Length/Diameter Ratio (L/D)	>24:1	-
Compression Ratio	2;1-3:1	-
Screw Speed	5 - 60	rpm
Feed Zone Temperature	200 - 260	°C
Middle Zone Temperatures	270 - 300	°C
Head Zone Temperature	280 - 300	°C
Neck Temperature	280 - 300	°C
Cross-head Temperature	280 - 300	°C
Die Temperature	280 - 300	°C
Melt Temperature	280 - 300	°C
Conductor Pre-heat Temperature	100 - 150	°C
Screen Pack	60/200/60	-
Cooling Water Air Gap	100 - 1000	mm
Water Bath Temperature	15 - 30	°C

DRYING

- Dehumidification or vacuum oven dryers are recommended

ADDITIONAL SUGGESTIONS

- On-size dies are recommended
- Extrusion equipment should be purged thoroughly before shutting down
- A screw with mixing section can be used if properly designed to prevent excessive heat build-up

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