

Noryl* Resin WCV063

Americas: COMMERCIAL

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

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	28	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	28	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D 638
Tensile Modulus, 50 mm/min	840	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	720	MPa	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	Value	Unit	Standard
Izod Impact, notched, 23°C	560	J/m	ASTM D 256
Izod Impact, notched, -30°C	170	J/m	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	Value	Unit	Standard
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	Value	Unit	Standard
Specific Gravity	1.03	-	ASTM D 792
Melt Flow Rate, 280°C/5.0 kgf	33	g/10 min	ASTM D 1238
ELECTRICAL	Value	Unit	Standard
Relative Permittivity, 1 GHz	2.47	-	ASTM D 150
Dissipation Factor, 1 GHz	0.0032	-	ASTM D 150

Source GMD, last updated:2009/11/03

Processing

Parameter	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

Source GMD, last updated:2009/11/03

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

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.

(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.

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