

Noryl* Resin WCV065

Americas: COMMERCIAL

Flexible, non-halogenated FR, PPE+Polyolefin resin designed for evaluation in Automotive ISO6722 Class A-C applications.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	37	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	37	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	37	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	45	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	41	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1150	MPa	ASTM D 790
Hardness, Shore D, 30S reading	65	-	ASTM D 2240
Tensile Stress, yield, 50 mm/min	39	MPa	ISO 527
Tensile Stress, break, 50 mm/min	37	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	17	%	ISO 527
Tensile Strain, break, 50 mm/min	38	%	ISO 527
Tensile Modulus, 1 mm/min	1450	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	44	MPa	ISO 178
Flexural Modulus, 2 mm/min	1260	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	550	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	33	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	42	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	41	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	43	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	71	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	84	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.31E-04	1/°C	ASTM E 831
Vicat Softening Temp, Rate B/50	71	°C	ISO 306
Vicat Softening Temp, Rate B/120	76	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	93	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.04	-	ASTM D 792
Melt Flow Rate, 280°C/5.0 kgf	20.2	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 280°C/5.0 kg	20	cm ³ /10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Relative Permittivity, 1 MHz	2.5	-	IEC 60250
Dissipation Factor, 1 MHz	0.002	-	IEC 60250

Source GMD, last updated:06/21/2007

Processing

Parameter	Value	Unit
Wire Coating Extrusion		
Drying Temperature	60 - 80	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.02	%
Extruder Length/Diameter Ratio (L/D)	22:1 to 26:1	-
Screw Speed	15 - 40	rpm
Feed Zone Temperature	210 - 260	°C
Middle Zone Temperatures	230 - 285	°C
Head Zone Temperature	250 - 285	°C
Neck Temperature	250 - 285	°C
Cross-head Temperature	250 - 285	°C
Die Temperature	250 - 285	°C
Melt Temperature	250 - 285	°C
Conductor Pre-heat Temperature	80 - 150	°C
Screen Pack	150 - 100	-
Cooling Water Air Gap	100 - 200	mm
Water Bath Temperature	15 - 80	°C

Source GMD, last updated:06/21/2007

- NOTE: Recommended Drying Parameters are based on usage of Dehumidify Drying / Drying Oven.

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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