

Noryl* Resin WCV072

Americas: COMMERCIAL

Flexible, halogen free mPPE extrusion grade material for applications such as automotive wire insulation. Low specific gravity with good flame retardant and very good scrape abrasion resistance. Designed for evaluation in applications requiring ISO6722. 72 Shore D hardness. Processed using standard extrusion equipment.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	43	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	41	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	15	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	83	%	ASTM D 638
Tensile Modulus, 50 mm/min	1710	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	53	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1550	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	44	MPa	ISO 527
Tensile Stress, break, 50 mm/min	42	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	11	%	ISO 527
Tensile Strain, break, 50 mm/min	46	%	ISO 527
Tensile Modulus, 1 mm/min	1750	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	59	MPa	ISO 178
Flexural Modulus, 2 mm/min	1740	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	309	J/m	ASTM D 256
Izod Impact, notched, -30°C	67	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	45	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	36	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	33	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	114	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	92	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.05E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.11E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	114	°C	ISO 306
Vicat Softening Temp, Rate B/120	117	°C	ISO 306
HDT/af, 1.8 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/af
PHYSICAL			
Specific Gravity	1.03	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	- 0.74	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	13.8	g/10 min	ASTM D 1238
Density	1.03	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62

Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	13	cm ³ /10 min	ISO 1133

Source GMD, last updated:07/11/2005

Processing

Parameter	Value	Unit
Wire Coating Extrusion		
Drying Temperature	40 - 80	°C
Drying Time	0 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.05	%
Screw Speed	5 - 50	rpm
Feed Zone Temperature	20 - 50	°C
Middle Zone Temperatures	230 - 250	°C
Head Zone Temperature	270 - 280	°C
Neck Temperature	270 - 280	°C
Cross-head Temperature	270 - 280	°C
Die Temperature	270 - 280	°C
Melt Temperature	270 - 285	°C
Conductor Pre-heat Temperature	20 - 100	°C
Screen Pack	mesh 200 - 80	-
Cooling Water Air Gap	100 - 1000	mm
Water Bath Temperature	15 - 30	°C

Source GMD, last updated:07/11/2005

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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