



NORYL™ Resin WCD944

Europe-Africa-Middle East: COMMERCIAL

Flexible and non-halogenated flame retardant extrusion grade intended for applications such as jacket of optical fiber cables. Flame retardant performance capable of meeting EN 50265-2-1 requirement. IEC60754 compliant. 94 Shore A hardness. Processing typically conducted on standard extrusion equipment. Wire tests conducted on 2.0 mm wire with 0.12 mm x 20 stranded copper conductor.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 50 mm/min	180	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	250	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	1600	kgf/cm ²	ASTM D 790
Hardness, Shore A, 30S reading	94	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	18	MPa	ISO 527
Tensile Strain, break, 50 mm/min	220	%	ISO 527
Flexural Modulus, 12.5 mm/min	140	MPa	ISO 178
PHYSICAL			
Specific Gravity	0.99	-	ASTM D 792
Melt Flow Rate, 250°C/10.0 kgf	16	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	6.8E+15	Ohm-cm	ASTM D 257
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
UL Compliant, 94V-0 Flame Class Rating (3)(4)	6	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
WIRE AND CABLE - UL 1581 tested on 2.0mm wire with 0.12mmx20 stranded copper			
Tensile strength @ break	22	MPa	UL 1581
Tensile elongation @ break	310	%	UL 1581
Tensile strength @ break after 7days @136°C	23	MPa	UL 1581
Tensile elongation @ break after 7days @136°C	235	%	UL 1581
Heat Deformation at 121°C/250g	11	%	UL 1581
Vertical Flame Test	PASSES	-	EN 50265-2-1



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Wire Coating Extrusion		
Drying Temperature	75 - 85	°C
Drying Time	5 - 7	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 - 85	rpm
Feed Zone Temperature	180 - 220	°C
Middle Zone Temperatures	220 - 250	°C
Head Zone Temperature	220 - 250	°C
Neck Temperature	220 - 250	°C
Cross-head Temperature	220 - 250	°C
Die Temperature	220 - 250	°C
Melt Temperature	220 - 250	°C
Conductor Pre-heat Temperature	25 - 120	°C
Screen Pack	150 - 100	-
Cooling Water Air Gap	100 - 200	mm
Water Bath Temperature	15 - 60	°C

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