

NORYL™ WCD944 resin

Polyphenylene Ether + TPE

SABIC Innovative Plastics Europe

Message:

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.

General Information			
Additive	Flame retardancy		
Features	Good flexibility		
	Halogen-free		
	Flame retardancy		
Uses	Fiber Optic Cable Jacketing		
Agency Ratings	EN 50265-2-1		
RoHS Compliance	RoHS compliance		
Processing Method	Extrusion coating		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.998	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/10.0 kg)	16	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 30 sec)	94		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Fracture	22.0	MPa	UL 1581
Fracture ¹	18.0	MPa	ASTM D638
Fracture, 136°C ²	23.0	MPa	UL 1581
Fracture	18.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture	310	%	UL 1581
Fracture ³	250	%	ASTM D638
Fracture, 136°C ⁴	240	%	UL 1581
Fracture	220	%	ISO 527-2/50
Flexural Modulus ⁵			
100mm span	160	MPa	ASTM D790
--	140	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Heat Deformation ⁶ (121°C)	11	%	UL 1581
Vertical Flame Test	PASSES		EN 50265-2-1

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	6.8E+15	ohms·cm	ASTM D257
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (6.00 mm, Testing by SABIC)	V-0		UL 94
Glow Wire Flammability Index (3.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.00 mm)	800	°C	IEC 60695-2-13
Extrusion	Nominal Value	Unit	
Drying Temperature	75.0 - 85.0	°C	
Drying Time	5.0 - 7.0	hr	
Suggested Max Moisture	0.020	%	
Cylinder Zone 1 Temp.	180 - 220	°C	
Cylinder Zone 3 Temp.	220 - 250	°C	
Cylinder Zone 5 Temp.	220 - 250	°C	
Melt Temperature	220 - 250	°C	
Die Temperature	220 - 250	°C	
Extrusion instructions			

Conductor Pre-heat Temperature: 25 - 120 °C Cooling Water Air Gap: 100 - 200 mm Cross-head Temperature: 220 - 250 °C Drying Time (Cumulative): 12 hrs Extruder Length/Diameter Ratio (L/D): 22:1 to 26:1 Neck Temperature: 220 - 250 °C Screen Pack: 150 - 100Screw Speed: 15 - 85 rpm Water Bath Temperature: 15 - 60 °C

NOTE	
1.	Type 1, 50mm/min
2.	After 7 days
3.	Type 1, 50mm/min
4.	After 7 days
5.	13 mm/min
6.	250 g

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