

NORYL™ WCD883AU resin

Polyphenylene Ether + TPE

SABIC Innovative Plastics Asia Pacific

Message:

Flexible and non-halogenated flame retardant extrusion grade intended for evaluation in applications such as jacket of HD 21.14 flexible cables. Flame retardant performance capable of meeting EN 50265-2-1 requirement.

General Information			
Additive	Flame retardancy		
Features	Good flexibility		
	Halogen-free		
	Flame retardancy		
Uses	Cable sheath		
Agency Ratings	EN 50265-2-1		
Processing Method	Extrusion coating		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/10.0 kg)	4.0	g/10 min	ASTM D1238
Water Absorption (23°C, 24 hr)	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 30 sec)	< 87		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Fracture	18.0	MPa	UL 1581
Fracture ¹	14.0	MPa	ASTM D638
Fracture, 136°C ²	19.0	MPa	UL 1581
Fracture	15.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture	260	%	UL 1581
Fracture ³	260	%	ASTM D638
Fracture, 136°C ⁴	240	%	UL 1581
Fracture	240	%	ISO 527-2/50
Flexural Modulus ⁵			
100mm span	37.0	MPa	ASTM D790
--	45.0	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Heat Deformation (100°C) ⁶	23	%	UL 1581
Vertical Flame Test	PASSES		EN 50265-2-1
Smoke Density			ASTM E662

Flame, 0.5 mm plaque, Ds, max	57		ASTM E662
Non-Flame, 0.5 mm plaque, Ds, max	140		ASTM E662
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.5E+16	ohms	ASTM D257
Volume Resistivity	5.6E+15	ohms·cm	ASTM D257
Dielectric Strength (2.00 mm, in Oil)	25	kV/mm	ASTM D149
Dielectric Constant (1.00 GHz)	3.00		ASTM D150
Dissipation Factor (1.00 GHz)	3.0E-3		ASTM D150
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (3.0 mm)	850	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.0 mm)	775	°C	IEC 60695-2-13
Oxygen Index	36	%	ISO 4589-2
Extrusion	Nominal Value	Unit	
Drying Temperature	75 - 85	°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 °CCooling Water Air Gap: 100 - 200 mmCross-head Temperature: 220 - 250 °CDrying Time (Cumulative): 12 hrsExtruder Length/Diameter Ratio (L/D): 22:1 to 26:1Neck Temperature: 220 - 250 °CScreen Pack: 150 - 100Screw Speed: 15 - 85 rpmWater 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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