NORYL™ WCD841U resin

Polyphenylene Ether + TPE

SABIC Innovative Plastics

Message:

Flexible, UV stabilized, halogen free extrusion grade for applications such as wire insulation and cable jacket. Good color stability after UV weathering per ASTM D4459. Light color capable. Flame retardant performance capable of meeting UL VW-1 requirement. 80C application temperature rating as defined by UL 1581. 84 Shore A hardness. Processing typically conducted on standard extrusion equipment. UL 1581 tests conducted on 2.0 mm wire with 0.12 mm x 20 stranded copper conductor.

General Information			
Additive	UV stabilizer		
Features	Good flexibility Good color stability Halogen-free		
Uses	Wire and cable applications Wire sheath Insulating material		
RoHS Compliance	RoHS compliance		
Processing Method	Extrusion coating		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.08	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	23	g/10 min	ASTM D1238
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 30 sec)	84		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
Fracture	18.0	MPa	UL 1581
Fracture [1]	18.0	MPa	ASTM D638
Fracture, 113°C [2]	20.0	MPa	UL 1581
Fracture	17.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture	300	%	UL 1581
Fracture [3]	250	%	ASTM D638
Fracture, 113°C [4]	240	%	UL 1581
Fracture	220	%	ISO 527-2/50
Flexural Modulus [5]			
100mm span	94.0	MPa	ASTM D790
--	94.0	MPa	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**

Brittleness Temperature	< -40.0	°C	ASTM D746
UL Temperature Rating	80	°C	UL 1581
Heat Deformation (100°C) [6]	19	%	UL 1581
VW-1	Pass		UL 1581
Smoke Density			ASTM E662
Flame, 0.5 mm plaque, Ds, max	130		ASTM E662
Non-Flame, 0.5 mm plaque, Ds, max	170		ASTM E662
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	4.2E+15	ohms·cm	ASTM D257
Dielectric Strength (2.00 mm, in Oil)	22	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	2.60		ASTM D150
Dissipation Factor (1 MHz)	6.0E-3		ASTM D150
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Glow Wire Flammability Index (3.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.00 mm)	750	°C	IEC 60695-2-13
Oxygen Index	25	%	ISO 4589-2
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 °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

Recommended distributors for this material

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