NORYL™ WCD855 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 cable jacket of UL 62 SPE and NISPE configurations. Flame retardant performance capable of meeting UL 1581 VW-1 requirement. 90C or 105C temperature rating as defined by UL 62 TPE category. 85 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			
UL YellowCard	E207780-101533056		
Features	Good flexibility Halogen-free Flame retardancy		
Uses	Cable sheath Wire and cable applications		
Agency Ratings	UL 1581 UL 62 UL VW-1		
Processing Method	Extrusion coating		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.01	g/cm³	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)	85		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
Fracture	23.0	MPa	UL 1581
Fracture [1]	16.0	MPa	ASTM D638
Fracture, 136°C [2]	22.0	MPa	UL 1581
Fracture	16.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture	310	%	UL 1581
Fracture [3]	260	%	ASTM D638
Fracture, 136°C [4]	250	%	UL 1581
Fracture	250	%	ISO 527-2/50
Flexural Modulus [5]			

100mm span	65.0	MPa	ASTM D790
--	45.0	MPa	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -40.0	°C	ASTM D746
Heat Deformation (121°C) [6]	5.0	%	UL 1581
VW-1	Pass		UL 1581
Smoke Density			ASTM E662
Flame, 0.5 mm plaque, Ds, max	110		ASTM E662
Non-Flame, 0.5 mm plaque, Ds, max	47		ASTM E662
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.9E+16	ohms·cm	ASTM D257
Dielectric Strength (2.00 mm, in Oil)	25	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	2.40		ASTM D150
Dissipation Factor (1 MHz)	7.0E-3		ASTM D150
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Glow Wire Flammability Index (3.00 mm)	850	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.00 mm)	825	°C	IEC 60695-2-13
Oxygen Index	27	%	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

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China