

NORYL™ WCA871A resin

Polyphenylene Ether

SABIC Innovative Plastics Asia Pacific

Message:

Flame retardant performance and mechanical properties capable of meeting UL VW-1 requirement and 105C temperature rating as defined UL1581. UL1581 tests conducted on 1.0mmD wire with AWG28 conductor.

General Information			
Features	Flame retardancy		
Agency Ratings	UL VW-1		
RoHS Compliance	RoHS compliance		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	15	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 30 sec)	87		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Fracture	30.0	MPa	UL 1581
Fracture ¹	18.0	MPa	ASTM D638
Fracture, 136°C ²	27.0	MPa	UL 1581
Fracture	18.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture	280	%	UL 1581
Fracture ³	140	%	ASTM D638
Fracture, 136°C ⁴	200	%	UL 1581
Fracture	130	%	ISO 527-2/50
Flexural Modulus ⁵			
100mm span	100	MPa	ASTM D790
--	100	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-40.0	°C	ASTM D746
UL Temperature Rating	105	°C	UL 1581
Heat Deformation (121°C) ⁶	20	%	UL 1581
Smoke Density			ASTM E662
Flame, 0.5 mm plaque, Ds, max	140		ASTM E662
Non-Flame, 0.5 mm plaque, Ds, max	67		ASTM E662
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.4E+16	ohms · cm	ASTM D257
Dielectric Strength (1.50 mm, in Oil)	28	kV/mm	IEC 60243-1

Relative Permittivity (1 MHz)	2.60		IEC 60250
Dissipation Factor (1 MHz)	2.8E-3		IEC 60250
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)	825	°C	IEC 60695-2-13
Oxygen Index	28	%	ISO 4589-2

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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