

NORYL™ WCP921 resin

Polyphenylene Ether + TPE

SABIC Innovative Plastics Asia Pacific

Message:

Flexible NORYL injection molding grade. Low specific gravity with good non-halogenated flame retardant performance. Developed for evaluation in overmolding applications such as plugs, strain reliefs, and connectors. UL 94 V-0 performance with good processability.

General Information			
UL YellowCard	E207780-100123574		
Features	Flame Retardant		
	Good Flexibility		
	Good Processability		
	Halogen Free		
	Low Density		
Uses	Connectors		
	Overmolding		
	Plugs		
	Strain Reliefs		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
210°C/5.0 kg	15	g/10 min	
250°C/2.16 kg	17	g/10 min	
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.55	%	
Across Flow : 24 hr	0.65	%	
Water Absorption ¹ (23°C, 24 hr)	0.060	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 30 sec)	88		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Break ²	15.0	MPa	ASTM D638
Break	15.0	MPa	ISO 527-2/50
Tensile Elongation			
Break ³	150	%	ASTM D638
Break	140	%	ISO 527-2/50
Flexural Modulus ⁴			

100 mm Span	180	MPa	ASTM D790
--	200	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -40.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	7.1E+15	ohms·cm	ASTM D257
Electric Strength (2.00 mm, in Oil)	25	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	2.80		IEC 60250
Dissipation Factor (1 MHz)	0.029		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (6.00 mm)	V-0		UL 94
Glow Wire Flammability Index (3.00 mm)	850	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.00 mm)	725	°C	IEC 60695-2-13
Oxygen Index	24	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	60.0 to 80.0	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.010	%	
Suggested Shot Size	30 to 70	%	
Rear Temperature	180 to 220	°C	
Middle Temperature	210 to 240	°C	
Front Temperature	220 to 250	°C	
Nozzle Temperature	220 to 250	°C	
Processing (Melt) Temp	220 to 250	°C	
Mold Temperature	40.0 to 60.0	°C	
Back Pressure	3.00 to 10.0	MPa	
Screw Speed	30 to 80	rpm	
Vent Depth	0.030 to 0.050	mm	
NOTE			
1.	Results measured at 48 hrs		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	13 mm/min		

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