

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			
Features	Low density		
	Workability, good		
	Good flexibility		
	Halogen-free		
	Flame retardancy		
Uses	overmolding		
	Plug		
	Connector		
	Fatigue elimination supplies		
RoHS Compliance	RoHS compliance		
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	ASTM D1238
250°C/2.16 kg	17	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow: 24 hours	0.55	%	ASTM D955
Transverse flow: 24 hours	0.65	%	ASTM D955
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			
Fracture ²	15.0	MPa	ASTM D638
Fracture	15.0	MPa	ISO 527-2/50
Tensile Elongation			
Fracture ³	150	%	ASTM D638
Fracture	140	%	ISO 527-2/50
Flexural Modulus ⁴			

100mm 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
Dielectric 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 - 80.0	°C	
Drying Time	4.0 - 6.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.010	%	
Suggested Shot Size	30 - 70	%	
Rear Temperature	180 - 220	°C	
Middle Temperature	210 - 240	°C	
Front Temperature	220 - 250	°C	
Nozzle Temperature	220 - 250	°C	
Processing (Melt) Temp	220 - 250	°C	
Mold Temperature	40.0 - 60.0	°C	
Back Pressure	3.00 - 10.0	MPa	
Screw Speed	30 - 80	rpm	
Vent Depth	0.030 - 0.050	mm	
NOTE			
1.	Results measured at 48 hrs		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	13 mm/min		

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