FLEX NORYL™ RESIN WCP921

REGION ASIA

DESCRIPTION

FLEX NORYL™ WCP921 resin is a high flow, flexible, non-reinforced injection moldable blend of Polyphenylene Ether (PPE) + Styrene Ethylene Butylene Styrene (SEBS) + Polyolefin. This material contains non-halogenated flame retardant and carries a UL94 flame rating of V0 at 6mm. FLEX NORYL WCP921 resin is intended for evaluation in over-molding applications such as plugs, strain reliefs, and connectors. It has a Shore A Hardness reading of 88 and exhibits low specific gravity, very low water absorption, and dimensional stability.

TYPICAL PROPERTY VALUES

Revision 20190717

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 50 mm/min	15	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	150	%	ASTM D 638
Flexural Modulus, 12.5 mm/min, 100 mm span	180	MPa	ASTM D 790
Hardness, Shore A, 30S reading	88	-	ASTM D 2240
Tensile Stress, break, 50 mm/min	15	MPa	ISO 527
Tensile Strain, break, 50 mm/min	140	%	ISO 527
Flexural Modulus, 12.5 mm/min	200	MPa	ISO 178
IMPACT			
Brittleness Temperature	<-40	°C	ASTM D 746
PHYSICAL			
Specific Gravity	1.04	-	ASTM D 792
Water Absorption, 23°C/48hrs	0.06	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.55	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.65	%	ASTM D 955
Melt Flow Rate, 210°C/5 kgf	15	g/10 min	ASTM D 1238
Melt Flow Rate, 250°C/2.16 kgf	17	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	7.1E+15	Ohm-cm	ASTM D 257
Dielectric strength in oil, 2.0mm	25	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 1 MHz	0.029	-	IEC 60250
Comparative Tracking Index [1]	600	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥3	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-100123574	-	-
UL Recognized, 94HB Flame Class Rating	≥1	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥6	mm	UL 94
Glow Wire Flammability Index 850°C, passes at [1]	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm [1]	725	°C	IEC 60695-2-13
Oxygen Index (LOI)	24	%	ISO 4589
INJECTION MOLDING			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	60 – 80	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.01	%	
Melt Temperature	220 – 250	°C	
Nozzle Temperature	220 – 250	°C	
Front - Zone 3 Temperature	220 – 250	°C	
Middle - Zone 2 Temperature	210 – 240	°C	
Rear - Zone 1 Temperature	180 – 220	°C	
Mold Temperature	40 – 60	°C	
Back Pressure	3 – 10	MPa	
Screw Speed	30 – 80	rpm	
Shot to Cylinder Size	30 – 70	%	
Vent Depth	0.03 – 0.05	mm	

(1) Value shown here is based on internal measurement.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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