NORYL™ RESIN PVX0901

REGION ASIA

DESCRIPTION

NORYL™ PVX0901 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This high flow, injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of V1 at 1.2mm. NORYL PVX0901 resin exhibits good dimensional stabilty, low moisture absorption, low speific gravity and is an excellent candidate for internal printer components.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	45	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.3	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	6.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	2500	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	86	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	59	MPa	ISO 527
Tensile Stress, break, 50 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.3	%	ISO 527
Tensile Strain, break, 50 mm/min	8.8	%	ISO 527
Tensile Modulus, 1 mm/min	2440	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2450	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	175	J/m	ASTM D 256
Izod Impact, notched, -30°C	80	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	37	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	116	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	92	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	92	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.1E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	N/A	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	116	°C	ISO 306
Vicat Softening Temp, Rate B/120	109	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	89	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Elec [1]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	65	°C	UL 746B
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 280°C/5.0 kgf	50	g/10 min	ASTM D 1238
Density	1.1	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.24	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	52	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-100089947	-	-
UL Recognized, 94V-1 Flame Class Rating	≥1.2	mm	UL 94
INJECTION MOLDING			
Drying Temperature	75 – 80	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 275	°C	
Nozzle Temperature	250 – 275	°C	
Front - Zone 3 Temperature	240 – 275	°C	
Middle - Zone 2 Temperature	225 – 270	°C	
Rear - Zone 1 Temperature	215 – 265	°C	
Mold Temperature	55 – 75	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	
Vent Depth	0.038 – 0.051	mm	

(1) 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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