NORYL™ RESIN ZM3640

REGION ASIA

DESCRIPTION

NORYL ZM3640 resin is a mineral reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This grade contains non-brominated, non-chlorinated flame retardant and has a UL94 flame rating of V1 at 1.5mm. NORYL ZM3640 resin exhibits high heat resistance, low warpage, good dimensional stability and is an excellent candidate for printer chassis applications.

GENERAL INFORMATION	
Features	Flame Retardant, Good Processability, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Enhanced mold release, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Mineral
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D638
Flexural Stress, yield, 6.4 mm	102	MPa	ASTM D790
Flexural Modulus, 6.4 mm	4620	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	35	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	103	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.8E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.22	-	ASTM D792
Melt Flow Rate, 300°C/2.16 kgf	24	g/10 min	ASTM D1238
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-100140832	-	-
UL Recognized, 94V-1 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [3]			
Drying Temperature	90 – 95	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 280	°C	
Nozzle Temperature	255 – 280	°C	
Front - Zone 3 Temperature	245 – 280	°C	
Middle - Zone 2 Temperature	230 – 275	°C	
Rear - Zone 1 Temperature	220 – 270	°C	
Mold Temperature	65 – 90	°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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

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

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER