RODRUN LC-5020CF

Liquid Crystal Polymer

UNITIKA Plastics Division

Message:

Unitika Rodrun is a thermoplastics for percision injection classified into semi-aromatic liquid crystal polyesters (LCPs). LC-5000 series has a excellent moldability (high flow without flash, using a mold of low temperature) and precision (low warpage).
LC-5000 series are suitable for almost all dipping soldering conditions and partial reflow soldering (low warpage).
LCP has stiff molecular structure to form liquid crystal at molten stage. The archeological properties of low viscosity under shear stress gives high flow without flash problems. Rodrun which use a standard mold temperature of 40°C shows the rheological merit of LCP clearly.
Out shape of a LCP seem to be just like a normal plastics, however, the solid LCP consists of crystal and glasified liquid crystal. Rodrun has a low crystalinity in the mold. This property yields low shrinkage and low warpage. Rodrun is a suitable resin for precision parts.

General Information			
UL YellowCard	E47924-239941		
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Gas Barrier Good Chemical Resistance Good Moldability High Flow Low Shrinkage Low Viscosity Low Warpage Semi Crystalline		
Uses	Engineering Parts		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.46	g/cm³	ASTM D792
Water Absorption (23°C, 24 hr)	0.020	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield, 3.20 mm)	157	MPa	ASTM D638
Tensile Elongation (Break)	3.5	%	ASTM D638
Flexural Modulus			ASTM D790
1.60 mm	23500	MPa	
3.20 mm	18600	MPa	
Flexural Strength			ASTM D790
Yield, 1.60 mm	235	MPa	
Yield, 3.20 mm	216	MPa	
Impact	**Nominal Value**	**Unit**	**Test Method**
Unnotched Izod Impact	74	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648

0.45 MPa, Unannealed	240	°C	
1.8 MPa, Unannealed	205	°C	

Flammability	Nominal Value	Test Method
Flame Rating		UL 94
0.800 mm	HB	
3.20 mm	V-0	

Injection	Nominal Value	Unit
Drying Temperature	130	°C
Drying Time	4.0	hr
Hopper Temperature	120	°C
Rear Temperature	270	°C
Middle Temperature	280	°C
Front Temperature	290	°C
Nozzle Temperature	290	°C
Mold Temperature	40.0	°C

Recommended distributors for this material

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