RALUPOL® UP 4802

Thermoset Polyester

RASCHIG GmbH

Message:

Glass-fibre reinforced Polyester moulding compound
Low mould shrinkage and post-shrinkage, good electrical values, excellent heat resistance, outstanding pourability
Primary application(s): Lamp holders for automobile halogen bulbs
This product meets the allowed upper limits for heavy metals and PCAs and also conforms to the requirements of the EU directives 2002/95 (RoHS), 2002/96 (WEEE) and 2006/122 (PFOS)

General Information	
Filler / Reinforcement	Glass Fiber
Features	Good Electrical Properties High Heat Resistance Low Shrinkage
Uses	Automotive Applications
Agency Ratings	EU 2002/96/EC (WEEE) EU 2006/122/EC
RoHS Compliance	RoHS Compliant
Forms	Granules
Processing Method	Compression Molding Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.90 to 2.10	g/cm³	ISO 1183
Apparent Density	0.75 to 1.00	g/cm³	ISO 60
Molding Shrinkage - Flow			ISO 2577
-- [1]	0.40 to 0.70	%	
-- [2]	0.20 to 0.50	%	
Water Absorption (23°C, 24 hr)	< 0.50	%	ISO 62
Post Shrinkage [3]	< 0.10	%	ISO 2577
Maximum Service Temperature			IEC 60216
<50 h	210	°C	
20,000 h	170	°C	
Compression Molding Molding Pressure	> 10.0	MPa	
Compression Molding Temperature	165 to 180	°C	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
Compression Molded	6000 to 9000	MPa	

Injection Molded	6000 to 9000	MPa	
Tensile Stress			ISO 527-2
Compression Molded	35.0 to 60.0	MPa	
Injection Molded	40.0 to 70.0	MPa	
Flexural Modulus			ISO 178
Compression Molded	8000 to 12000	MPa	
Injection Molded	8000 to 12000	MPa	
Flexural Stress			ISO 178
Compression Molded	80.0 to 100	MPa	
Injection Molded	100 to 120	MPa	
Compressive Stress	150 to 200	MPa	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
Compression Molded	2.5 to 3.5	kJ/m^2	
Injection Molded	3.0 to 4.0	kJ/m^2	
Charpy Unnotched Impact Strength			ISO 179/1eU
Compression Molded	5.0 to 10	kJ/m^2	
Injection Molded	8.0 to 11	kJ/m^2	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, Unannealed	> 175	°C	ISO 75-2/A
8.0 MPa, Unannealed	125 to 150	°C	ISO 75-2/C
CLTE - Flow (50 to 100°C)	1.0E-5 to 2.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.90 to 1.1	W/m/K	ASTM E1461
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+12 to 1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+13 to 1.0E+14	ohms·cm	IEC 60093
Electric Strength	25 to 35	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
	6.00		
100 Hz	5.00		
	5.00		
1 MHz	4.00		
Dissipation Factor			IEC 60250
100 Hz	0.010 to 0.030		
1 MHz	0.010 to 0.030		
Arc Resistance	PLC 4		ASTM D495

Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.60 mm, Tested by RASCHIG)	HB		UL 94
Glow Wire Flammability Index	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	930	°C	IEC 60695-2-13
Injection	**Nominal Value**	**Unit**	
Middle Temperature	50.0 to 70.0	°C	
Front Temperature	80.0 to 100	°C	
Processing (Melt) Temp	100 to 115	°C	
Mold Temperature	165 to 180	°C	
Back Pressure	1.00 to 1.50	MPa	
Screw Speed	70 to 100	rpm	
NOTE			
1.	Compression Molded		
2.	Injection Molded		
3.	168 h / 110°C		

Recommended distributors for this material

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