

RALUPOL® UP 4566

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		
Physical	Nominal Value	Unit	Test Method
Density	2.00 to 2.20	g/cm ³	ISO 1183
Apparent Density	0.90 to 1.10	g/cm ³	ISO 60
Molding Shrinkage - Flow ¹	0.30 to 0.60	%	ISO 2577
Water Absorption (23°C, 24 hr)	< 0.60	%	ISO 62
Post Shrinkage ²	< 0.10	%	ISO 2577
Maximum Service Temperature			IEC 60216
<50 h	200	°C	
20,000 h	160	°C	
Compression Molding Molding Pressure	> 10.0	MPa	
Compression Molding Temperature	165 to 180	°C	
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (Compression Molded)	16000 to 20000	MPa	ISO 178
Flexural Stress (Compression Molded)	60.0 to 80.0	MPa	ISO 178
Compressive Stress	150 to 200	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Compression Molded)	2.0 to 2.5	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength (Compression Molded)	3.0 to 4.0	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Unannealed	> 200	°C	ISO 75-2/A
8.0 MPa, Unannealed	150 to 170	°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
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.	168 h / 110°C		

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