

DECAL® 5431

Phenolic

Synres-Almoco BV

Message:

Organically and inorganically filled phenolic moulding compound

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	Organic\Inorganic
Agency Ratings	EU 2002/96/EC (WEEE)
	EU 2006/122/EC
RoHS Compliance	RoHS Compliant
Appearance	Black
Forms	Granules
Processing Method	Compression Molding
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.35 to 1.45	g/cm ³	ISO 1183
Apparent Density	0.55 to 0.70	g/cm ³	ISO 60
Molding Shrinkage - Flow ¹	0.60 to 0.80	%	ISO 2577
Water Absorption (23°C, 24 hr)	< 1.5	%	ISO 62
Post Shrinkage ²	0.40 to 0.60	%	ISO 2577

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
Compression Molded	3000 to 5000	MPa	
Injection Molded	4000 to 6000	MPa	
Tensile Stress			ISO 527-2
Compression Molded	50.0 to 70.0	MPa	
Injection Molded	50.0 to 70.0	MPa	
Flexural Modulus			ISO 178
Compression Molded	6000 to 8000	MPa	
Injection Molded	6000 to 8000	MPa	
Flexural Stress			ISO 178
Compression Molded	70.0 to 90.0	MPa	
Injection Molded	90.0 to 110	MPa	
Compressive Stress	200 to 250	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA

Compression Molded	1.5 to 3.5	kJ/m ²	
Injection Molded	2.0 to 4.0	kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU	
Compression Molded	4.0 to 6.0	kJ/m ²	
Injection Molded	6.0 to 9.0	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Unannealed	160 to 180	°C	ISO 75-2/A
8.0 MPa, Unannealed	100 to 120	°C	ISO 75-2/C
CLTE - Flow (50 to 150°C)	2.5E-5 to 3.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20 to 0.40	W/m/K	ASTM E1461
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13 to 1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+16 to 1.0E+17	ohms·cm	IEC 60093
Electric Strength	20 to 30	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
	16.0		
100 Hz	12.0		
	6.00		
1 MHz	4.00		
Dissipation Factor			IEC 60250
100 Hz	0.60 to 0.80		
1 MHz	0.060 to 0.080		
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index	> 175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.60 mm, Tested by Synres-Almoco)	V-0		UL 94
Glow Wire Flammability Index	900	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	900	°C	IEC 60695-2-13
NOTE			
1.	Compression Molded		
2.	168 h / 110°C		

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