

POLYCASA® ACRYL G 88

Polymethyl Methacrylate Acrylic

Polycasa

Message:

Polycasa Acryl is the trade name for thermoplastic moulding compounds from Polycasa.
Polycasa Acryl is a highly transparent, amorphous thermoplastic based on polymethylmethacrylate (PMMA), whilst Polycasa Acryl KR products are high-impact modified products with a range of melt viscosities.

CHARACTERISTICS

- Available in many transparent and opaque shades.
- Excellent transparency and brilliance.
- Unsurpassed resistance to ageing.
- High surface hardness.
- Scratch resistance.
- Good recyclability.
- High optical quality.
- Glass-clear appearance.
- Good outdoor performance.
- Meets all current European food contact legislation and can be used in contact with foodstuffs.

APPLICATIONS

- Automotive.
- Building.
- Lighting.
- Food.
- Signs.
- Electrical.
- Sanitary.
- Marine.
- Medical.

General Information	
Features	Amorphous
	Food Contact Acceptable
	Good Weather Resistance
	High Clarity
	High Hardness
	High Scratch Resistance
	Opticals
	Outstanding Surface Finish
	Recyclable Material
Uses	Automotive Applications
	Building Materials
	Construction Applications
	Electrical/Electronic Applications
	Lighting Applications
	Marine Applications
	Medical/Healthcare Applications
	Non-specific Food Applications

Sanitary Products

Agency Ratings	EU Food Contact, Unspecified Rating		
Appearance	Clear/Transparent Colors Available Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm ³	ISO 1183
Apparent Density	0.67	g/cm ³	DIN 53466
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	2.10	cm ³ /10min	ISO 1133
Molding Shrinkage	0.50 to 0.80	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	0.30	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 961/30)	195	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3200	MPa	ISO 527-2
Tensile Stress (Break)	70.0	MPa	ISO 527-2
Tensile Strain (Break)	5.0	%	ISO 527-2
Flexural Stress	120	MPa	ISO 178
Films	Nominal Value	Unit	Test Method
Water Vapor Permeability	0.80	g/m ² /24 hr	DIN 53122
Maximum Service Temperature - short cycle operation	98	°C	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.0	kJ/m ²	ISO 179/1e
Charpy Unnotched Impact Strength (23°C)	20	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	100	°C	ISO 75-2/Af
Vicat Softening Temperature	105	°C	ISO 306/B50
CLTE - Flow (23 to 80°C)	7.0E-5	cm/cm/°C	DIN 53752
Specific Heat	1500	J/kg/°C	IEC 1006
Thermal Conductivity	0.18	W/m/K	DIN 52612
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms · cm	IEC 60093
Electric Strength ¹	60	kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
100 Hz	3.20		

1 MHz	2.90		
Dissipation Factor			IEC 60250
100 Hz	0.040		
1 MHz	0.030		
Comparative Tracking Index (Solution B)	600	V	IEC 60112
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.492		ISO 489
Transmittance (3000 μm)	92.0	%	DIN 5036-3
Haze	< 1.0	%	DIN 5036-3
Injection	Nominal Value	Unit	
Processing (Melt) Temp	220 to 260	°C	
Mold Temperature	70.0 to 90.0	°C	
NOTE			
1.	K20/P50		

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