

## Technical Data

### Product Description

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

Material Status	• Commercial: Active		
Literature <sup>1</sup>	• <a href="#">Technical Datasheet (English)</a>		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Impact Modifier		
Features	• Amorphous • Food Contact Acceptable • Good Optical Properties • Good Weather Resistance	• High Clarity • High Hardness • High Impact Resistance • High Scratch Resistance	• Impact Modified • 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		
Appearance	• Clear/Transparent	• Colors Available	• Opaque
Processing Method	• Coating	• Extrusion	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density	1.17 g/cm <sup>3</sup>	ISO 1183
Apparent (Bulk) Density	0.67 g/cm <sup>3</sup>	DIN 53466
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	1.5 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage	0.50 to 0.80 %	
Water Absorption (Equilibrium, 23°C, 50% RH)	0.30 %	



**POLYCASA® ACRYL KR 2008/1**

Polymethyl Methacrylate Acrylic

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Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2500 MPa	ISO 527-1
Tensile Stress (Break)	55.0 MPa	ISO 527-2
Tensile Strain (Break)	20 %	ISO 527-2
Flexural Stress	92.0 MPa	ISO 178
Films	Nominal Value Unit	Test Method
Water Vapor Permeability	0.80 g/m <sup>2</sup> /24 hr	DIN 53122
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0 kJ/m <sup>2</sup>	ISO 179/1e
Charpy Unnotched Impact Strength (23°C)	45 kJ/m <sup>2</sup>	ISO 179/1eU
Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	125 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	93.0 °C	ISO 75-2/Af
Vicat Softening Temperature	102 °C	ISO 306/B50
CLTE - Flow (23 to 80°C)	9.5E-5 cm/cm/°C	DIN 53752
Specific Heat	1500 J/kg/°C	IEC 1006
Thermal Conductivity	0.18 W/m/K	DIN 52612
Maximum Service Temperature - short cycle operation	93 °C	
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+14 ohms	IEC 60093
Volume Resistivity	1.0E+14 ohms·cm	IEC 60093
Electric Strength <sup>3</sup>	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
Light Transmittance (3000 µm)	91.0 %	DIN 5036-3
Haze	< 2.00 %	DIN 5036-3
Injection	Nominal Value Unit	
Processing (Melt) Temp	210 to 250 °C	
Mold Temperature	50 to 70 °C	
Extrusion	Nominal Value Unit	
Melt Temperature	180 to 250 °C	

**Notes**

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> K20/P50



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## Where to Buy

### Supplier

#### **Polycasa**

Geel, Geel Belgium

**Telephone:** +32-14-57-67-11

**Web:** <http://www.polycasa.com/>

### Distributor

#### **ALBIS Plastic**

*ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.*

**Telephone:** +49-40-78105-0

**Web:** <http://www.albis.com/>

**Availability:** Belgium, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Turkey, United Kingdom

#### **TER HELL Plastic GmbH**

*TER HELL Plastic is a Pan European distribution company. Contact TER HELL Plastic for availability of individual products by country.*

**Telephone:** +49-2366-5661-0

**Web:** <https://www.terplastics.com/>

**Availability:** Europe

