

## Product Information

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### PLEXIGLAS® zk5BR Molding Compound

#### Product Profile:

PLEXIGLAS® zk5BR is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).

Typical properties of impact-modified PLEXIGLAS® molding compounds are:

- high weather resistance
- excellent transmission and clarity
- brilliant appearance
- the pleasant feel and sound of the moldings.

PLEXIGLAS® zk5BR is characterized by the following special properties:

- high break resistance and impact strength
- improved resistance to stress cracking
- balanced property profile
- AMECA listing.

#### Application:

Used for injection molding as well as for extruding and coextruding panels and profiles

#### Examples:

mobile phone displays, extruded and injection-molded luminaire covers, extruded hollow profiles, writing utensils such as stencils and fountain pens, housings, coextruded profiles for window frames, gutters, downspouts, and housewares such as cutlery handles, bowls, cookie jars.

#### Processing:

PLEXIGLAS® zk5BR molding compound can be processed on machines with 3-zone general purpose screws for engineering thermoplastics.

#### Physical Form / Packaging:

PLEXIGLAS® zk molding compounds are supplied as pellets of uniform size in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

**Properties:**

	Parameter	Unit	Standard	PLEXIGLAS® zk5BR
<b>Mechanical Properties</b>				
Tensile Modulus	1 mm/min	MPa	ISO 527	2400
Yield Stress	50 mm/min	MPa	ISO 527	62
Yield Strain	50 mm/min	%	ISO 527	4.5
Nominal Strain @ Break		%	ISO 527	27
Charpy Impact Strength	23°C	kJ/m <sup>2</sup>	ISO 179/1eU	50
<b>Thermal Properties</b>				
Vicat Softening Temperature	B / 50	°C	ISO 306	100
Glass Transition Temperature		°C	IEC 10006	109
Temp. of Deflection under Load	0.45 MPa	°C	ISO 75	98
Temp. of Deflection under Load	1.8 MPa	°C	ISO 75	93
Coeff. of Linear Therm. Expansion	0 – 50°C	E-5 /°K	ISO 11359	9
Fire Rating			DIN 4102	B2
Flammability UL 94	1.6 mm	Class	IEC 707	HB
<b>Rheological Properties</b>				
Melt Volume Rate, MVR	230°C / 3.8kg	cm <sup>3</sup> /10min	ISO 1133	3.3
<b>Optical Properties</b>				
Luminous transmittance	d=3 mm			
	D65	%	ISO 13468-2	92
Haze			ASTM D1003	< 2
Refractive Index			ISO 489	1.49
<b>Other Properties</b>				
Density		g/cm <sup>3</sup>	ISO 1183	1.17
Water Absorption in Water		%	ISO 62	1.9
Humidity Absorption	23°C / 50%	%	ISO 62	0.5
<b>Recommended Processing Conditions</b>				
Predrying Temperature		°C		max. 90
Predrying Time in Desiccant-Type Drier		h		2 – 3
Melt Temperature		°C		220 – 260
Mold Temperature (Injection Molding)		°C		50 – 70

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

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The Business Unit Performance Polymers of Evonik is a worldwide manufacturer of PMMA molding compounds sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian Continent and under the trademark ACRYLITE® in the Americas.

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