

Product Information

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PLEXIGLAS® zk4BR Molding Compound

Product Profile:

PLEXIGLAS® zk4BR is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).

Typical properties of impact-modified PLEXIGLAS® molding compounds are

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

PLEXIGLAS® zk4BR 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 extruding and coextruding sheets and profiles as well as for injection molding

Examples:

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

Processing:

PLEXIGLAS® zk4BR 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® zk4BR
Mechanical Properties				
Tensile Modulus	1 mm/min	MPa	ISO 527	2800
Yield Stress	50 mm/min	MPa	ISO 527	71
Yield Strain	50 mm/min	%	ISO 527	4.5
Nominal Strain @ Break		%	ISO 527	19
Charpy Impact Strength	23°C	kJ/m ²	ISO 179/1eU	25
Thermal Properties				
Vicat Softening Temperature	B / 50	°C	ISO 306	102
Glass Transition Temperature		°C	IEC 10006	108
Temp. of Deflection under Load	0.45 MPa	°C	ISO 75	99
Temp. of Deflection under Load	1.8 MPa	°C	ISO 75	95
Coeff. of Linear Therm. Expansion	0 – 50°C	E-5 /°K	ISO 11359	8
Fire Rating			DIN 4102	B2
Flammability UL 94	1.6 mm	Class	IEC 707	HB
Rheological Properties				
Melt Volume Rate, MVR	230°C / 3.8kg	cm ³ /10min	ISO 1133	4.5
Optical Properties				
Luminous transmittance	d=3 mm			
Luminous transmittance	D65	%	ISO 13468-2	92
Haze			ASTM D1003	< 1.5
Refractive Index			ISO 489	1.49
Other Properties				
Density		g/cm ³	ISO 1183	1.18
Water Absorption in Water		%	ISO 62	2
Humidity Absorption	23°C / 50%	%	ISO 62	0.6
Recommended Processing Conditions				
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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