

PLEXIGLAS® zk4BR Molding Compound
PLEXIGLAS® zk5BR Molding Compound
PLEXIGLAS® zk6BR Molding Compound

Product Profile:

PLEXIGLAS® zk4BR, PLEXIGLAS® zk5BR and PLEXIGLAS® zk6BR are impact-modified molding compounds based on polymethyl methacrylate (PMMA).

The grades of the zkBR series are the most widely used impact-modified PLEXIGLAS® molding compounds. They are characterized in particular by the following properties:

- high break resistance and impact strength,
- improved crazing resistance,
- excellent weatherability,
- brilliant optics,
- high surface hardness and abrasion resistance
- AMECA listing.

Application:

PLEXIGLAS® zk molding compounds of the BR series are suitable for extrusion and coextrusion of panels and profiles as well as for injection molding.

Uses of PLEXIGLAS® zkBR molding compounds: extruded and injection-molded lighting fixture covers, extruded hollow bodies, writing utensils such as templates and fountain pens, housings, coextruded profiles for window frames, gutters, downspouts, etc., and housewares such as cutlery handles, bowls, cookie jars.

Processing:

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

Recommended processing conditions:

Predrying temperature (max.):	PLEXIGLAS® zk4BR	90°C
	PLEXIGLAS® zk5BR	90°C
	PLEXIGLAS® zk6BR	85°C
Predrying time in desiccant-type drier:		2 - 3 h
Processing temperatures:	melt temperature	220 - 260 °C
	barrel temperature	220 - 260 °C
	mold temperature	50 - 70 °C

Physical Form / Packaging:

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

Properties:

	Unit	Standard	PLEXIGLAS® zk4BR	PLEXIGLAS® zk5BR	PLEXIGLAS® zk6BR
Mechanical properties					
Tensile modulus (1 mm/min)	MPa	ISO 527	2800	2400	1800
Yield stress (50 mm/min)	MPa	ISO 527	71	62	45
Yield strain (50 mm/min)	%	ISO 527	4,5	4,5	5
Nominal strain at break	%	ISO 527	19	27	54
Charpy impact strength (23°C)	kJ/m ²	ISO 179	25	50	80
Thermal properties					
Vicat softening temperature (B/50)	°C	ISO 306	102	100	95
Glass transition temperature	°C	IEC 10006	108	109	109
Temp. of deflection under load (0.45 MPa)	°C	ISO 75	99	98	93
Temp. of deflection under load (1.8 MPa)	°C	ISO 75	95	93	88
Coeff. of linear therm. expansion (0-50°C)	10 ⁻⁵ K ⁻¹	ASTM E831	8	9	11
Fire rating		DIN 4102	B2	B2	B2
Flammability UL 94 (at nom. 1.6 mm)	Klasse	IEC 707	HB	HB	HB
Rheological properties					
Melt volume rate, MVR (230/3.8)	cm ³ /10min	ISO 1133	4.5	3.3	1.6
Optical properties					
Transmission factor, τ_{D65}	%	DIN 5036	92	92	91
Haze	%	ASTM D1003	< 1.5	< 2	< 2
Refractive index		ISO 489	1.49	1.49	1.49
Other properties					
Density	g/cm ³	ISO 1183	1.18	1.17	1.16

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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