

Product Texts

Productprofil:

PLEXIGLAS® Resist zk50 is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).

Typical properties of impact-modified PLEXIGLAS® molding compounds are

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

PLEXIGLAS® Resist zk50 is characterized by the following special properties:

- maximum break resistance and impact strength
- improved resistance to stress cracking
- certified dishwasher resistance

Application:

Used for injection molding. Profile extrusion or coextrusion are also possible

Example:

lighting fixtures, writing and drawing utensils, domestic appliances and sanitaryware

Processing:

PLEXIGLAS® Resist zk molding compounds can be processed on machines with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

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

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	0.1	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	3.8	kg	-
^[C] Density of melt	1040	kg/m ³	-
^[C] Thermal conductivity of melt	0.19	W/(m K)	-
^[C] Spec. heat capacity of melt	2440	J/(kg K)	-
^[C] Eff. thermal diffusivity	7.49E-8	m ² /s	-
^[C] Ejection temperature	55	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	950	MPa	ISO 527
^[C] Yield stress	25	MPa	ISO 527
^[C] Yield strain	5	%	ISO 527
^[C] Nominal strain at break	>50	%	ISO 527
^[C] Tensile creep modulus, 1h	900	MPa	ISO 899-1

PLEXIGLAS® Resist zk50

PMMA-I

Röhm GmbH

^[C] Tensile creep modulus, 1000h	600	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	13	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Glass transition temperature, 10°C/min	115	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	70	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	73	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	75	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	150	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.6	mm	-
Yellow Card available	yes	-	-
^[C] Oxygen index	17.5	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	2.9	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	400	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	400	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E13	Ohm	IEC 62631-3-2
^[C] Comparative tracking index	600	-	IEC 60112

[C]: CAMPUS

Optical properties	Value	Unit	Test Standard
ISO Data			
^[C] Luminous transmittance	89	%	ISO 13468-1, -2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	1.2	%	Sim. to ISO 62
^[C] Humidity absorption	0.4	%	Sim. to ISO 62
^[C] Density	1120	kg/m ³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
^[C] Injection Molding, melt temperature	265	°C	ISO 294
Injection Molding, mold temperature	40	°C	ISO 294
Injection Molding, injection velocity	195	mm/s	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	70	°C	-
Pre-drying - Time	2 - 3	h	-
Melt temperature	230 - 240	°C	-
Mold temperature	50 - 70	°C	-

Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form

Pellets

Additives

Release agent

Special Characteristics

High impact or impact modified, Light stabilized or stable to light, U.V. stabilized or stable to weather, Transparent

Features

Amorphous

Chemical Resistance

Environmental Stress Crack Resistance

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information**Injection molding****PREPROCESSING**

Predrying temperature: max. 70 °C

Predrying time in a desiccant-type drier: 2 - 3 h

PROCESSING

Melt temperature: 230 - 240°C

Mold temperature: 50 - 70°C

Profile extrusion**PREPROCESSING**

Predrying temperature: max. 70 °C

Predrying time in a desiccant-type drier: 2 - 3 h

PROCESSING

Melt temperature: 230 - 240 °C

Die temperature: 230 - 240 °C

Sheet extrusion**PREPROCESSING**

Predrying temperature: max. 70 °C

Predrying time in a desiccant-type drier: 2 - 3 h

PROCESSING

Melt temperature: 230 - 240 °C

Die temperature: 230 - 240 °C