PLEXIGLAS® Resist zk20

PMMA-I Röhm GmbH

Product Texts

Productprofil:

PLEXIGLAS® Resist zk20 is an amorphous thermoplastic molding compound that is slightly impact-modified (PMMA-I).

Typical properties of standard PLEXIGLAS® molding compounds are:

- excellent light transmission
- good mechanical properties.

Special properties of PLEXIGLAS® Resist zk20 are:

- increased break resistance to avoid demolding fractures during injection molding
- improved resistance to stress cracking
- AMECA listing.

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 zk20 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	**2**	cm³/10min	ISO 1133
Temperature	**230**	°C	-
Load	**3.8**	kg	-
[C] Density of melt	**1040**	kg/m³	-
[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**	m²/s	-
[C] Ejection temperature	**80**	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2400**	MPa	ISO 527
[C] Yield stress	**62**	MPa	ISO 527
[C] Yield strain	**4.5**	%	ISO 527
[C] Nominal strain at break	**22**	%	ISO 527
[C] Tensile creep modulus, 1h	**2300**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**1600**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**25**	kJ/m²	ISO 179/1eU

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Glass transition temperature, 10°C/min	**112**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**96**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**100**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**102**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**100**	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	-
[C] Oxygen index	**17.5**	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**3.7**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**2.9**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**500**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**300**	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	**91**	%	ISO 13468-1, -2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**1.7**	%	Sim. to ISO 62
[C] Humidity absorption	**0.5**	%	Sim. to ISO 62
[C] Density	**1170**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**250**	°C	ISO 294
Injection Molding, mold temperature	**64**	°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	**95**	°C	-
Pre-drying - Time	**2 - 3**	h	-
Melt temperature	**230 - 240**	°C	-
Mold temperature	**50 - 70**	°C	-

Characteristics

Processing
Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion, Thermoforming

Delivery form
Pellets

Features
Amorphous

Chemical Resistance
Environmental Stress Crack Resistance

Additives
Release agent

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

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

Other text information

Injection molding
PREPROCESSING
Predrying temperature: max. 95 °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. 95 °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. 95 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 230 - 240 °C
Die temperature: 230 - 240 °C