**Product Texts**

## Productprofil:

PLEXIGLAS® Resist zk6BR 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® Resist zk6BR is characterized by the following special properties:

- maximum 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

## Example:

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® Resist zk6BR 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 in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Melt volume-flow rate, MVR | **1.6** | 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 | **75** | °C | - |

[C]: CAMPUS

| Mechanical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Tensile Modulus | **1800** | MPa | ISO 527 |
| [C] Yield stress | **45** | MPa | ISO 527 |

| | | | |
|---|---|---|---|
| [C] Yield strain | **5** | % | ISO 527 |
| [C] Nominal strain at break | **>50** | % | ISO 527 |
| [C] Tensile creep modulus, 1h | **1400** | MPa | ISO 899-1 |
| [C] Tensile creep modulus, 1000h | **900** | MPa | ISO 899-1 |
| [C] Charpy impact strength, +23°C | **80** | kJ/m² | ISO 179/1eU |

[C]: CAMPUS

| **Thermal properties** | **Value** | **Unit** | **Test Standard** |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Glass transition temperature, 10°C/min | **109** | °C | ISO 11357-1/-2 |
| [C] Temp. of deflection under load, 1.80 MPa | **88** | °C | ISO 75-1/-2 |
| [C] Temp. of deflection under load, 0.45 MPa | **93** | °C | ISO 75-1/-2 |
| [C] Vicat softening temperature, B | **95** | °C | ISO 306 |
| [C] Coeff. of linear therm. expansion, parallel | **110** | 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 | **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 | **1.9** | % | Sim. to ISO 62 |
| [C] Humidity absorption | **0.5** | % | Sim. to ISO 62 |
| [C] Density | **1160** | kg/m³ | ISO 1183 |

[C]: CAMPUS

| **Test specimen production** | **Value** | **Unit** | **Test Standard** |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Injection Molding, melt temperature | **255** | °C | ISO 294 |
| Injection Molding, mold temperature | **50** | °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 | **85** | °C | - |
| Pre-drying - Time | **2 - 3** | h | - |
| Melt temperature | **220 - 260** | °C | - |
| Mold temperature | **50 - 70** | °C | - |

## Characteristics

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

**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

**Applications**
Building Construction, Encapsulation

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

## Other text information

**Injection molding**
PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260°C
Mold temperature:50 - 70°C

**Profile extrusion**
PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260 °C
Die temperature: 220 - 260 °C

**Sheet extrusion**
PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260 °C
Die temperature: 220 - 260 °C