

**Product Texts**

**Productprofil:**

PLEXIGLAS® Resist zk5HF 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 zk5HF is characterized by the following special properties:

- high break resistance and impact strength
- improved resistance to stress cracking
- excellent flow.

**Application:**

Used for injection molding as well as for extruding sheets and profiles.

**Example:**

applications involving thin walls and long flow paths; thin-walled components; items requiring accurate mold surface reproduction, such as very finely textured luminaire covers.

**Processing:**

PLEXIGLAS® Resist zk5HF molding compound 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 25 kg polyethylene bags or in 500 kg boxes with PE lining; other packaging on request.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melt volume-flow rate, MVR	<b>8.1</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>230</b>	°C	-
Load	<b>3.8</b>	kg	-
<sup>[C]</sup> Density of melt	<b>1040</b>	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	<b>0.19</b>	W/(m K)	-
<sup>[C]</sup> Spec. heat capacity of melt	<b>2440</b>	J/(kg K)	-
<sup>[C]</sup> Eff. thermal diffusivity	<b>7.49E-8</b>	m <sup>2</sup> /s	-
<sup>[C]</sup> Ejection temperature	<b>75</b>	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>2500</b>	MPa	ISO 527
<sup>[C]</sup> Yield stress	<b>55</b>	MPa	ISO 527
<sup>[C]</sup> Yield strain	<b>4.5</b>	%	ISO 527

**PLEXIGLAS® Resist zk5HF**

PMMA-I

Röhm GmbH

<sup>[C]</sup> Nominal strain at break	<b>25</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>50</b>	kJ/m <sup>2</sup>	ISO 179/1eU

[C]: CAMPUS

<b>Thermal properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Glass transition temperature, 10°C/min	<b>95</b>	°C	ISO 11357-1/-2
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>93</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>102</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	<b>96</b>	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	<b>90</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	<b>HB</b>	class	IEC 60695-11-10
Thickness tested	<b>1.6</b>	mm	-
Yellow Card available	<b>yes</b>	-	-
<sup>[C]</sup> Oxygen index	<b>17.5</b>	%	ISO 4589-1/-2

[C]: CAMPUS

<b>Electrical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 100Hz	<b>3.7</b>	-	IEC 62631-2-1
<sup>[C]</sup> Relative permittivity, 1MHz	<b>2.9</b>	-	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 100Hz	<b>500</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 1MHz	<b>300</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Volume resistivity	<b>&gt;1E13</b>	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	<b>1E13</b>	Ohm	IEC 62631-3-2

[C]: CAMPUS

<b>Optical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Luminous transmittance	<b>92</b>	%	ISO 13468-1, -2

[C]: CAMPUS

<b>Other properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>1.9</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.5</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1170</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

<b>Test specimen production</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Injection Molding, melt temperature	<b>230</b>	°C	ISO 294
Injection Molding, mold temperature	<b>56</b>	°C	ISO 294
Injection Molding, injection velocity	<b>195</b>	mm/s	ISO 294

[C]: CAMPUS

<b>Processing Recommendation Injection Molding</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Pre-drying - Temperature	<b>85</b>	°C	-
Pre-drying - Time	<b>2 - 3</b>	h	-
Melt temperature	<b>220 - 260</b>	°C	-
Mold temperature	<b>50 - 70</b>	°C	-

**Characteristics****Processing**

Injection Molding, Profile Extrusion, Sheet Extrusion

**Features**

Amorphous

**Delivery form**

Pellets

**Chemical Resistance**

Environmental Stress Crack Resistance

**Additives**

Release agent

**Regional Availability**

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

**Special Characteristics**

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

**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