

**Product Texts**

**Productprofil:**

PLEXIGLAS® 7M molding compound is based on polymethyl methacrylate (PMMA).

Besides showing the familiar properties of PLEXIGLAS® 7H molding compounds, such as

- excellent light transmission and brilliance
- excellent weatherability
- high mechanical strength, surface hardness and abrasion resistance.

PLEXIGLAS® 7M is special in that it

- better flowing behavior,
- AMECA listing.

**Application:**

PLEXIGLAS® 7M is particularly suitable for extruding profiles and panels for use in lighting engineering.

**Example:**

lighting fixtures, displays and similar extruded items for technical purposes.

**Processing:**

PLEXIGLAS® 7M can be processed on extruders with 3-zone general purpose screws for thermoplastics.

**Physical Form / Packaging:**

PLEXIGLAS® molding compound is supplied as pellets of uniform size in two-ply, 25kg polyethylene bags; other packaging on request.

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melt volume-flow rate, MVR	<b>2.9</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>1060</b>	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	<b>0.181</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>6.99E-8</b>	m <sup>2</sup> /s	-
<sup>[C]</sup> Ejection temperature	<b>85</b>	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>3200</b>	MPa	ISO 527
<sup>[C]</sup> Stress at break	<b>69</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break	<b>4</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>20</b>	kJ/m <sup>2</sup>	ISO 179/1eU

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Glass transition temperature, 10°C/min	<b>108</b>	°C	ISO 11357-1/-2
<sup>[C]</sup> Vicat softening temperature, B	<b>104</b>	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	<b>80</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>17.2</b>	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
<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>2.8</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>200</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

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

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
<sup>[C]</sup> Water absorption	<b>2</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.6</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1190</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

Material specific properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Viscosity number	<b>62</b>	cm <sup>3</sup> /g	ISO 307, 1157, 1628

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Processing conditions acc. ISO	<b>8257</b>	-	ISO ....-2
<sup>[C]</sup> Injection Molding, melt temperature	<b>254</b>	°C	ISO 294
Injection Molding, mold temperature	<b>64</b>	°C	ISO 294
Injection Molding, injection velocity	<b>195</b>	mm/s	ISO 294

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion

**Special Characteristics**

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

**Delivery form**

Pellets

**Regional Availability**

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

**Other text information****Profile extrusion**

## PREPROCESSING

Predrying temperature: max. 94 °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. 94 °C

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

## PROCESSING

Melt temperature: 220 - 260 °C

Die temperature: 220 - 260 °C