PLEXIGLAS® Satinice df23 zk6BR

PMMA — Evonik Industries AG

Product Texts

Productprofil:

PLEXIGLAS® Satinice df23 zk6BR, based on PLEXIGLAS® Resist zk6BR, is an impact modified molding compound characterized by diffuse scattering of light.

Typical properties of impact modified PLEXIGLAS® molding compound are

- high break resistance and impact strength
- improved resistance to stress cracking
- good weather resistance
- high surface hardness and mar resistance
- the pleasant feel and sound of the moldings.

PLEXIGLAS® Satinice df23 zk6BR is characterized by the following special properties:

- excellent lightdiffusion combined with excellent light transmission
- matte surfaces can be obtained by varying the extrusion parameters.

Application:

Used for extruding profiles and sheets, but also for injection molding items for lighting engineering applications

Example:

applications that call for light diffusion combined with optimum transmission

Processing:

PLEXIGLAS® Satinice df23 zk6BR can be processed on extruders with 3-zone general purpose screws for engineering thermoplastics.
The matte finish of profile surfaces depends very much on machine design (calibrating unit, polishing rolls) and cooling conditions. It can be enhanced by controlled temperature reduction.

Physical Form / Packaging:

PLEXIGLAS® Satinice df molding compounds are supplied as pellets of uniform size, packaged in 25kg polyethylene bags; other packaging on request.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	1.3	cm³/10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	3.8	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1900	MPa	ISO 527-1/-2
Yield stress	46	MPa	ISO 527-1/-2
Yield strain	5	%	ISO 527-1/-2
Nominal strain at break	36	%	ISO 527-1/-2
Charpy impact strength (+23°C)	50	kJ/m²	ISO 179/1eU

Thermal properties	Value	Unit	Test Standard
ISO Data			
Glass transition temperature, 10°C/min	109	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	93	°C	ISO 75-1/-2

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Temp. of deflection under load (0.45 MPa)	99	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	99	°C	ISO 306
Coeff. of linear therm. expansion, parallel	90	E-6/K	ISO 11359-1/-2

Electrical properties	Value	Unit	Test Standard
ISO Data			
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	1E13	Ohm	IEC 60093

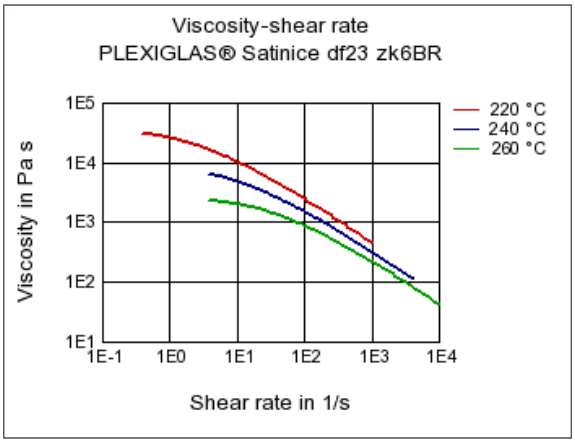
Other properties	Value	Unit	Test Standard
ISO Data			
Density	1150	kg/m³	ISO 1183

Material specific properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	81	%	ISO 13468-1, -2

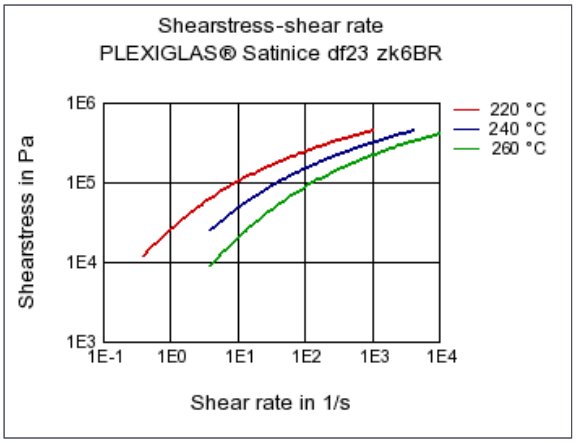
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	255	°C	ISO 294
Injection Molding, mold temperature	51	°C	ISO 10724
Injection Molding, injection velocity	195	mm/s	ISO 294

Diagrams

Viscosity-shear rate



Shearstress-shear rate



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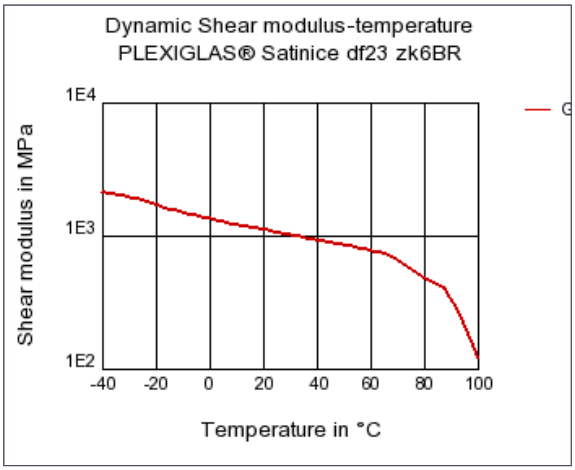
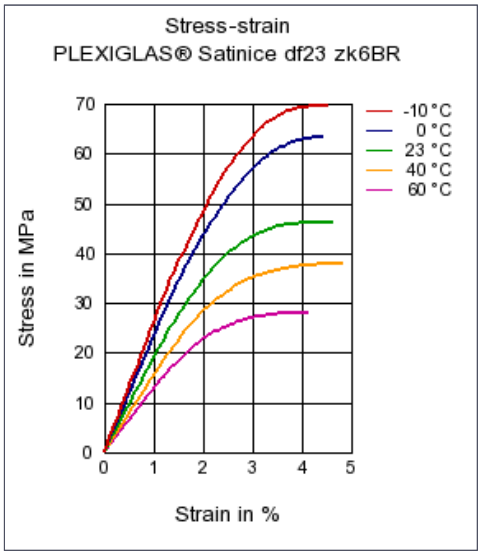
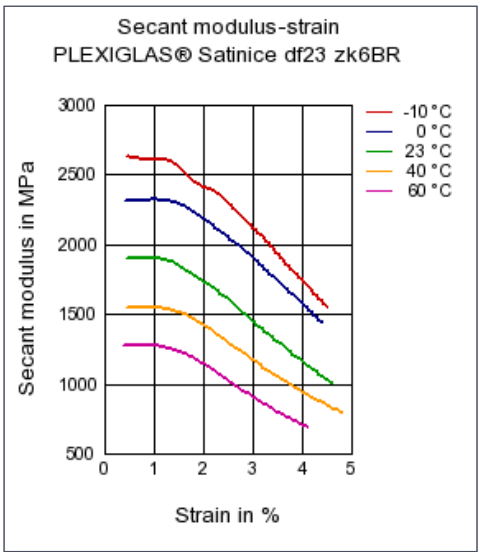
Dynamic Shear modulus-temperature



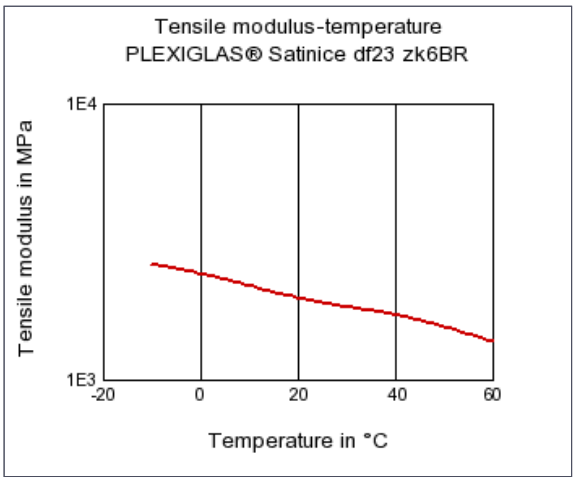
Stress-strain



Secant modulus-strain



Tensile modulus-temperature



Characteristics

Processing

Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion

Additives

Release agent

Special Characteristics

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

Delivery form

Pellets

Other text information

Injection Molding

PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Min. melt temperature: 220 - 260°C
Min. mold temperature:60 - 90°C

Profile extrusion

PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h

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PROCESSING
Melt temperature: 230 - 260 °C
Die temperature: 230 - 260 °C

Sheet extrusion

PREPROCESSING
Predrying temperature: max. 85 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 230 - 260 °C
Die temperature: 230 - 260 °C