PLEXIGLAS® Softlight zk6BR df22

PMMA

Röhm GmbH

Productprofil:

PLEXIGLAS® Softlight zk6BR df22, 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

1. high break resistance and impact strength
2. improved resistance to stress cracking
3. good weather resistance
4. high surface hardness and mar resistance
5. the pleasant feel and sound of the moldings.

PLEXIGLAS® Softlight zk6BR df22 is characterized by the following special properties:

1. very good lightdiffusion combined with excellent light transmission
2. 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® Softlight zk6BR df22 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® Softlight 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	1.4	cm³/10min	ISO 1133
Temperature	230	°C	-
Load	3.8	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1800	MPa	ISO 527
Yield stress	45	MPa	ISO 527
Yield strain	5	%	ISO 527
Nominal strain at break	40	%	ISO 527
Impact Strength (Charpy), +23°C	54	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

Temp. of deflection under load (0.45 MPa)	99	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	98	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	90	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E13	Ohm	IEC 62631-3-2

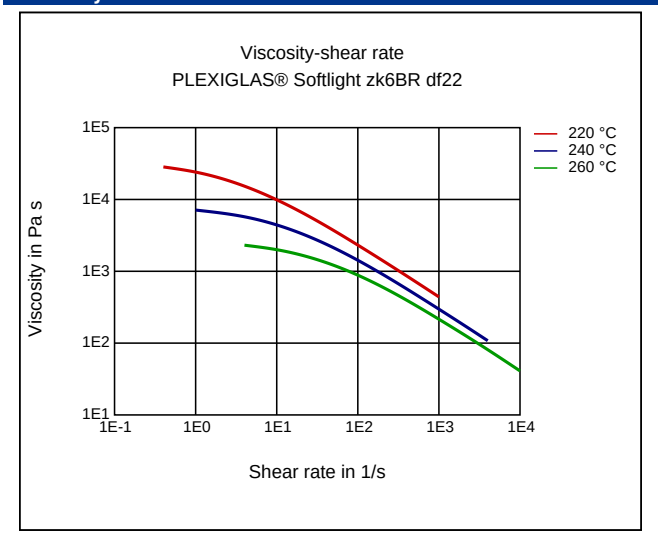
Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1150	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	86	%	ISO 13468-1, -2

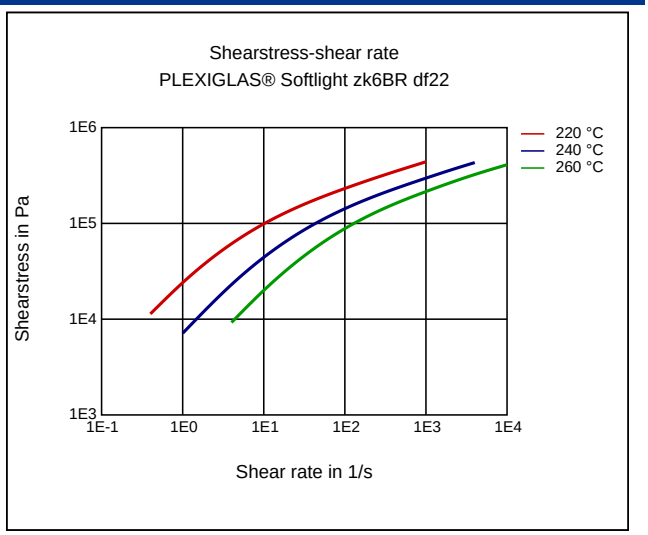
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	255	°C	ISO 294
Injection Molding, mold temperature	58	°C	ISO 294
Injection Molding, injection velocity	195	mm/s	ISO 294

Diagrams

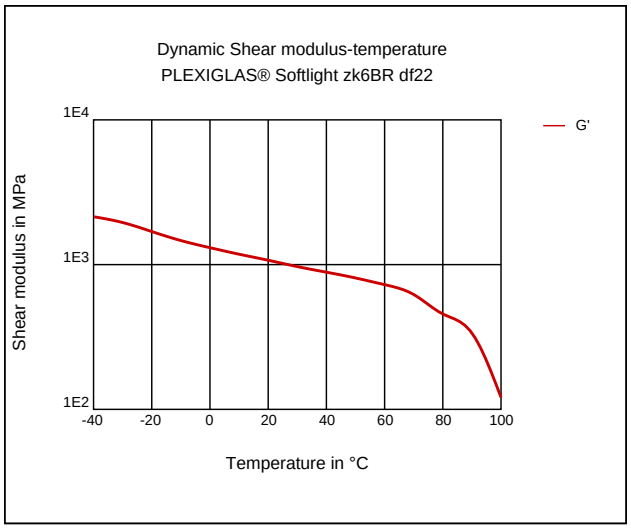
Viscosity-shear rate



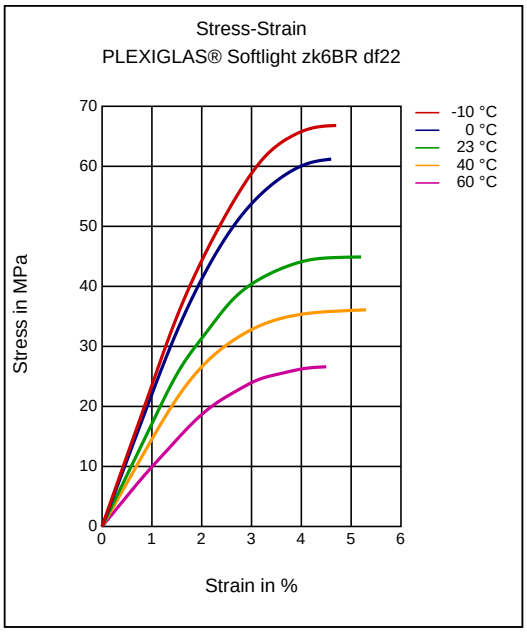
Shearstress-shear rate



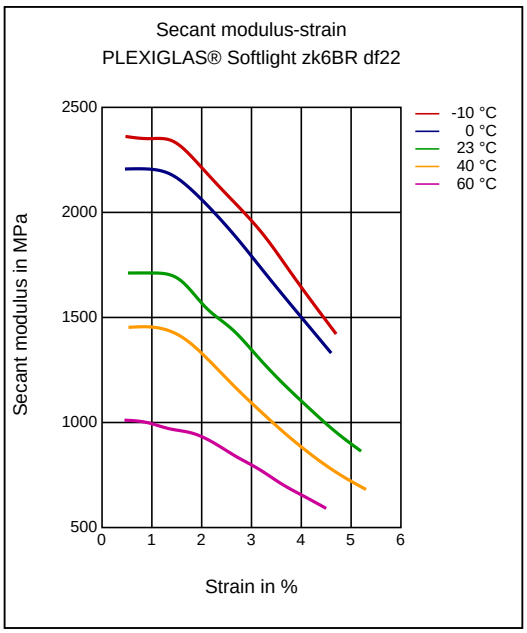
Dynamic Shear modulus-temperature



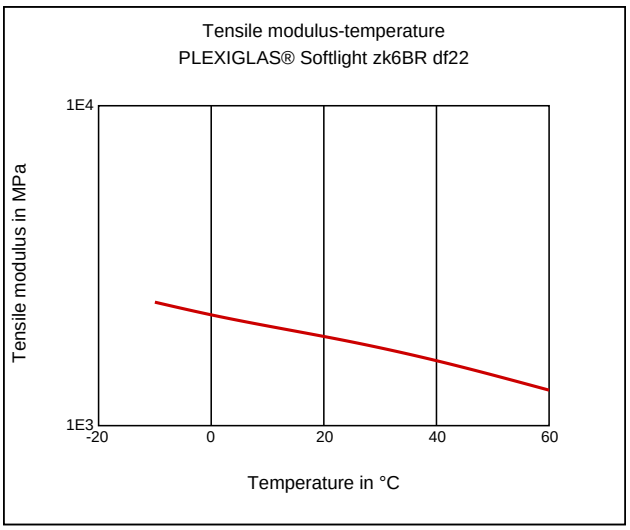
Stress-strain



Secant modulus-strain



Tensile Modulus-Temperature



Characteristics

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

Delivery form
Pellets

Additives
Release agent

Special Characteristics
Impact modified, Light stabilized or stable to light, UV stablized

Features
Light Diffusing

Chemical Resistance
Environmental Stress Crack Resistance

Injection Molding

PREPROCESSING
Predrying temperature: max. 80 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260°C
Mold temperature:60 - 90°C

Profile extrusion

PREPROCESSING
Predrying temperature: max. 80 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 230 - 260 °C

Die temperature: 230 - 260 °C

Sheet Extrusion

PREPROCESSING
Predrying temperature: max. 80 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 230 - 260 °C
Die temperature: 230 - 260 °C

Disclaimer