

PLEXIGLAS® Softlight 8N df23

PMMA

Röhm GmbH

Productprofil:

PLEXIGLAS® Softlight 8N df23, based on PLEXIGLAS® 8N, is characterized by diffuse scattering of light.

Typical properties of PLEXIGLAS® molding compound are

1. good flow
2. high mechanical strength, surface hardness and mar resistance
3. very good weather resistance.

Special properties of PLEXIGLAS® Softlight 8N df23 are

1. excellent lightdiffusion combined with excellent light transmission.

Application:

Used for injection molding items for lighting engineering applications

Example:

luminaire covers, projection screens and similar applications

Processing:

PLEXIGLAS® Softlight 8N df23 can be processed on injection molding machines with 3-zone general purpose screws for engineering thermoplastics.

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	2.1	cm³/10min	ISO 1133
Temperature	230	°C	-
Load	3.8	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3300	MPa	ISO 527
Stress at Break	65	MPa	ISO 527
Strain at Break	2.5	%	ISO 527
Impact Strength (Charpy), +23°C	16	kJ/m²	ISO 179/1eU

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Glass Transition Temperature (10°C/min)	108	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	98	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	103	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	109	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	63	E-6/K	ISO 11359-1/-2

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	1190	kg/m³	ISO 1183

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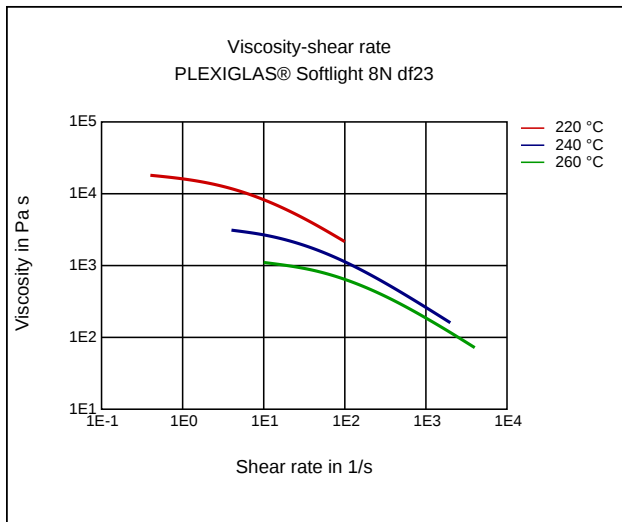
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Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	81	%	ISO 13468-1, -2

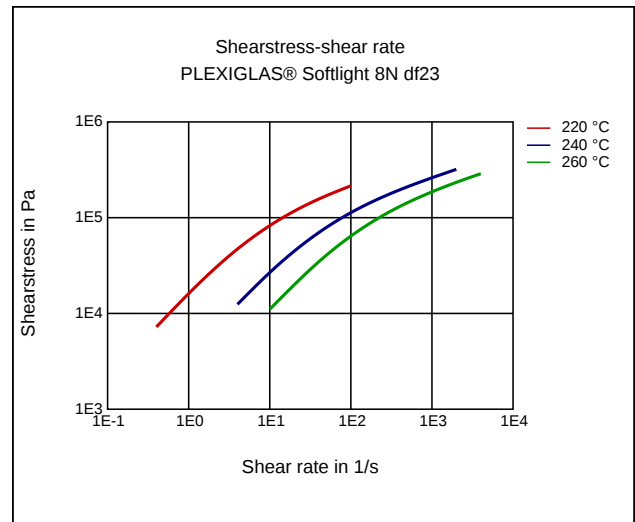
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	248	°C	ISO 294
Injection Molding, mold temperature	69	°C	ISO 294
Injection Molding, injection velocity	195	mm/s	ISO 294

Diagrams

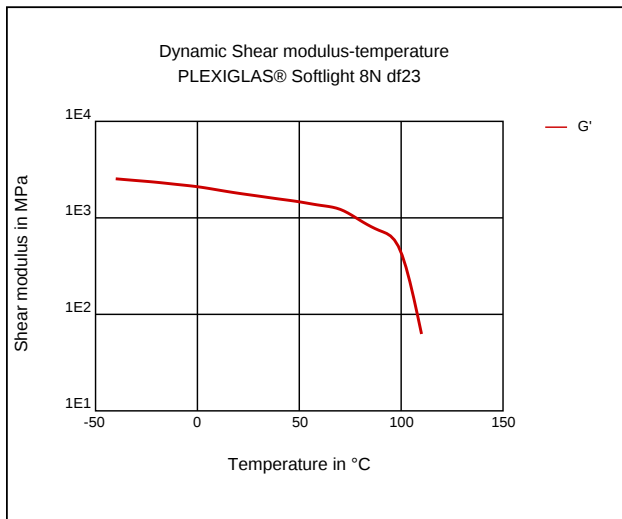
Viscosity-shear rate



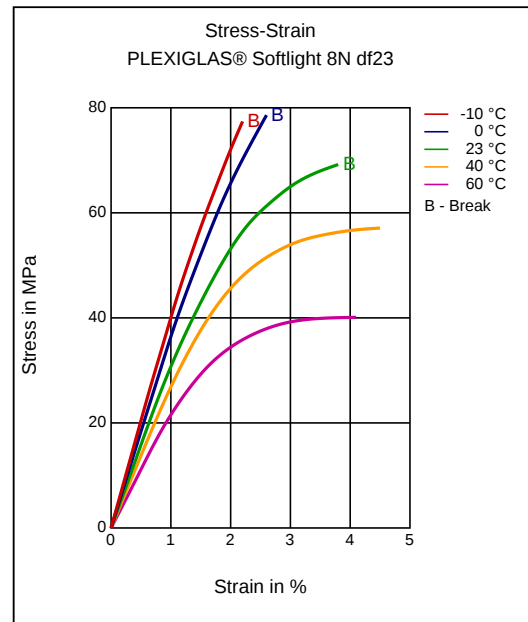
Shearstress-shear rate



Dynamic Shear modulus-temperature



Stress-strain

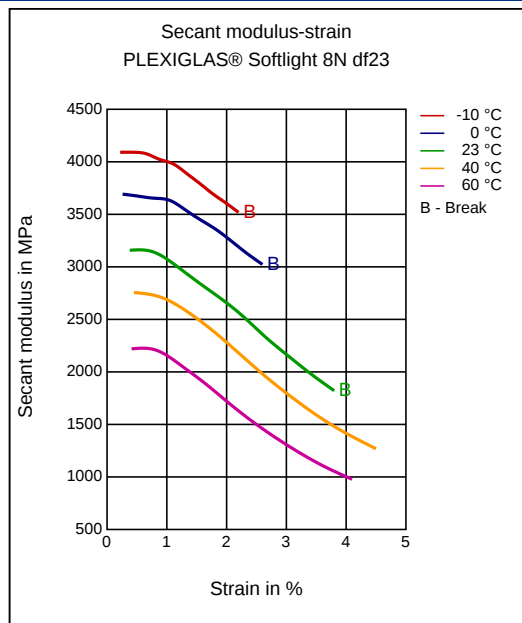


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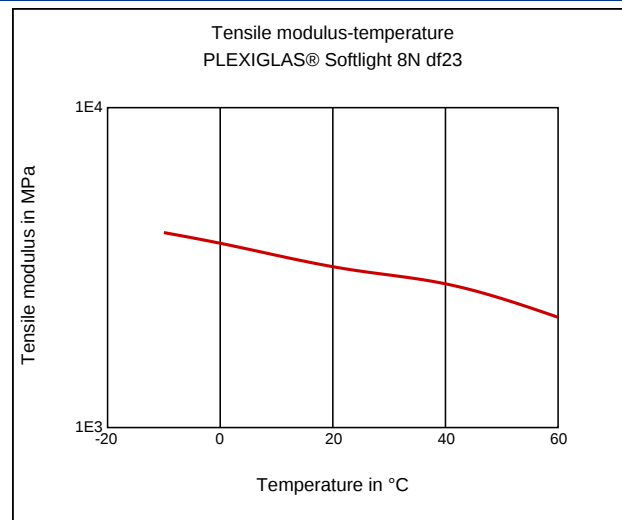
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Secant modulus-strain



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Light stabilized or stable to light, UV stabilized

Features

Light Diffusing

Injection Molding

PREPROCESSING

Predrying temperature: max. 95 °C

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

PROCESSING

Melt temperature: 220 - 260 °C

Mold temperature: 60 - 90 °C

Chemical Media Resistance

Acids

- ✓ Acetic Acid (5% by mass) (23 °C)
- ✓ Citric Acid solution (10% by mass) (23 °C)
- ✓ Lactic Acid (10% by mass) (23 °C)
- ✓ Sulfuric Acid (38% by mass) (23 °C)
- ✓ Sulfuric Acid (5% by mass) (23 °C)

Bases

- ✓ Sodium Hydroxide solution (35% by mass) (23 °C)
- ✓ Sodium Hydroxide solution (1% by mass) (23 °C)
- ✓ Ammonium Hydroxide solution (10% by mass) (23 °C)

Hydrocarbons

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- ✓ n-Hexane (23°C)
- ✓ iso-Octane (23°C)

Standard Fuels

- ✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Salt solutions

- ✓ Sodium Carbonate solution (20% by mass) (23°C)
- ✓ Sodium Carbonate solution (2% by mass) (23°C)

Other

- ✓ 50% Oleic acid + 50% Olive Oil (23°C)
 - ✓ Water (23°C)
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