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

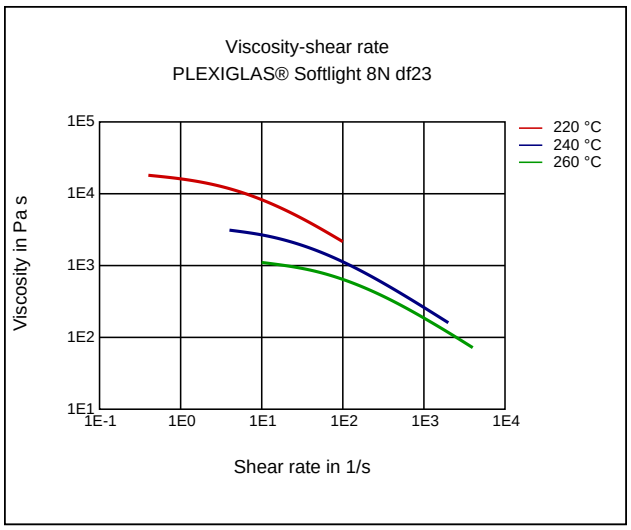
Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1190	kg/m³	ISO 1183

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

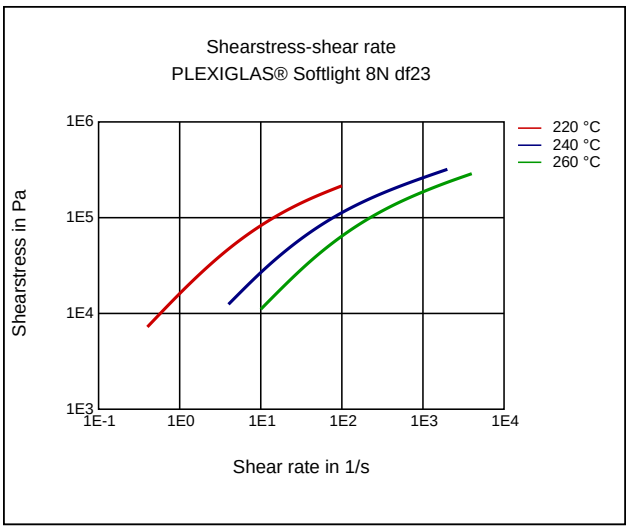
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	248	°C	ISO 294
Injection Molding, mold temperature	69	°C	ISO 294
Injection Molding, injection velocity	195	mm/s	ISO 294

Diagrams

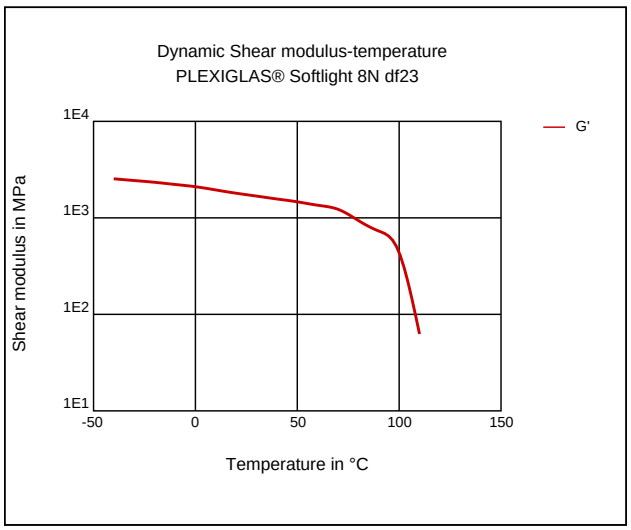
Viscosity-shear rate



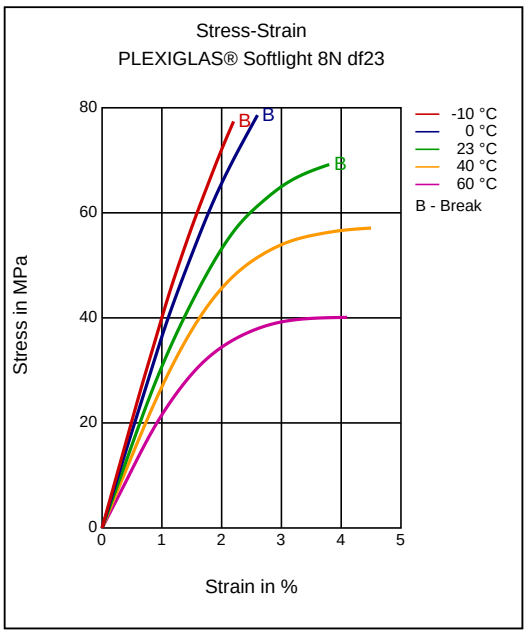
Shearstress-shear rate



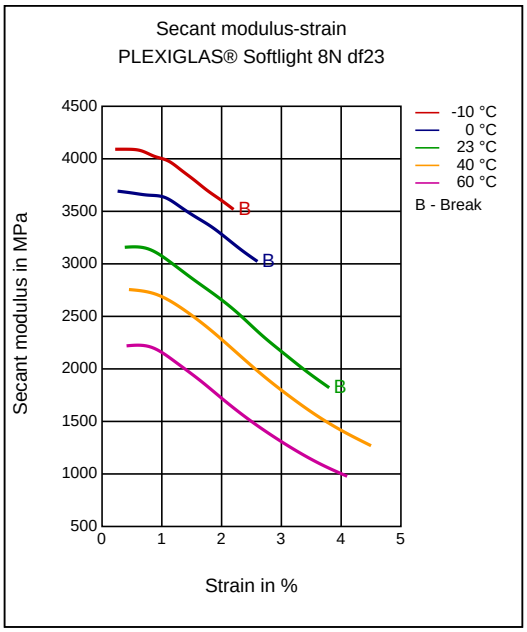
Dynamic Shear modulus-temperature



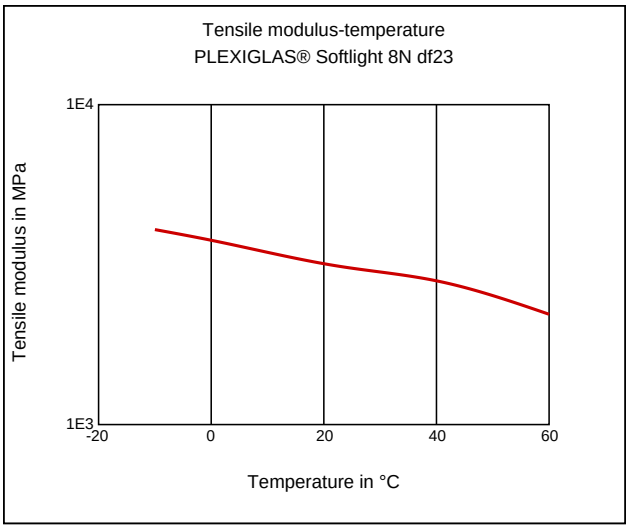
Stress-strain



Secant modulus-strain



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Special Characteristics
Light stabilized or stable to light, UV stablized

Delivery form
Pellets

Features
Light Diffusing

Additives
Release agent

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

- ✔ 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)

Disclaimer