TECHNICAL DATA SHEET

PLEXIGLAS® Hi-Gloss NTA-3

Röhm GmbH
PMMA

Processing

Injection molding

Delivery Form

Pellets

Special Characteristics

High impact or impact modified, Light stabilized or stable to light, U.V. stabilized or stable to weather, Opaque

Features

High gloss

Applications

Automotive

Product Text

Product Information

Productprofil:

PLEXIGLAS® Hi-Gloss NTA-3 is an impact-modified compound with an increased heat deflection temperature based on polymethylmethacrylate (PMMA).

Besides the well-known properties of PLEXIGLAS® molding compound, such as

- good flow
- high mar resistance
- good weather resistance
- good polishability,

PLEXIGLAS® Hi-Gloss NTA-3 offers the added benefit of

- increased heat deflection temperature under load.

Application:

PLEXIGLAS® Hi-Gloss NTA-3 is particularly suitable for injection molding technical components. Owing to its superior brilliance, high-gloss (Class A) surfaces can be obtained in opaque colors.

Example:

automotive body parts: window channels, pillar panels

Processing:

PLEXIGLAS® Hi-Gloss NTA-3

Röhm GmbH

PLEXIGLAS® Hi-Gloss NTA-3 can be processed on machines with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

PLEXIGLAS® Hi-Gloss NTA-3 compounds are supplied as pellets of uniform size, packaged in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	2	cm³/10min	ISO 1133
Temperature	230	°C	
Load	3.8	kg	
Density of melt	1100	kg/m³	
Ejection temperature	95	°C	

Mechanical Properties	Value	Unit	Standard
Tensile modulus	2900	MPa	ISO 527
Stress at break	60	MPa	ISO 527
Strain at break	2.6	%	ISO 527
Poisson's ratio	0.35		ISO 527
Tensile creep modulus, 1h	2700	MPa	ISO 899-1
Tensile creep modulus, 1000h	1700	MPa	ISO 899-1
Charpy impact strength, +23°C	16	kJ/m²	ISO 179/1eU

Thermal Properties	Value	Unit	Standard
Glass transition temperature, 10°C/min	125	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	106	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	106	°C	ISO 75-1/-2
Vicat softening temperature, B	116	°C	ISO 306
Coeff. of linear therm. expansion, parallel	75	E-6/K	ISO 11359-1/-2
Burning rate, FMVSS, thickness 1 mm	93.4	mm/min	ISO 3795 (FMVSS 302)

Electrical Properties	Value	Unit	Standard
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1

Optical Properties	Value	Unit	Standard
Luminous transmittance	0	%	ISO 13468-1, -2

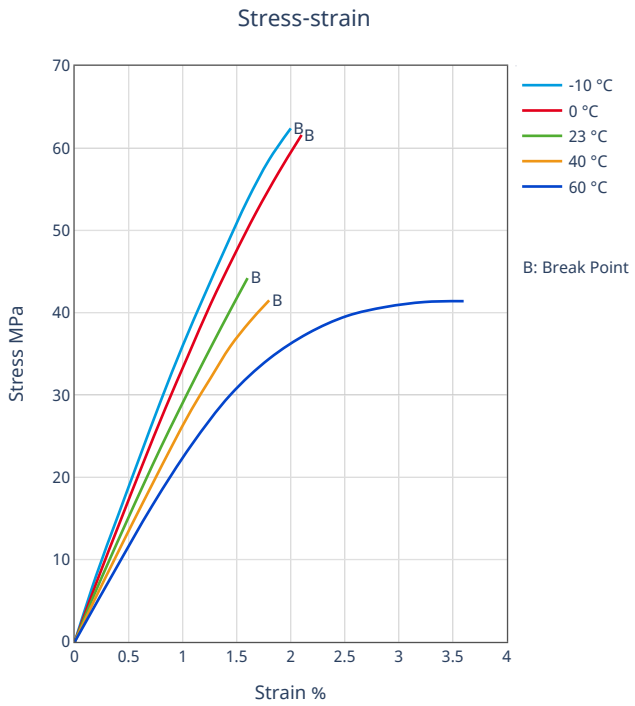
Other Properties	Value	Unit	Standard
Water absorption	3	%	Sim. to ISO 62
Density	1187	kg/m³	ISO 1183

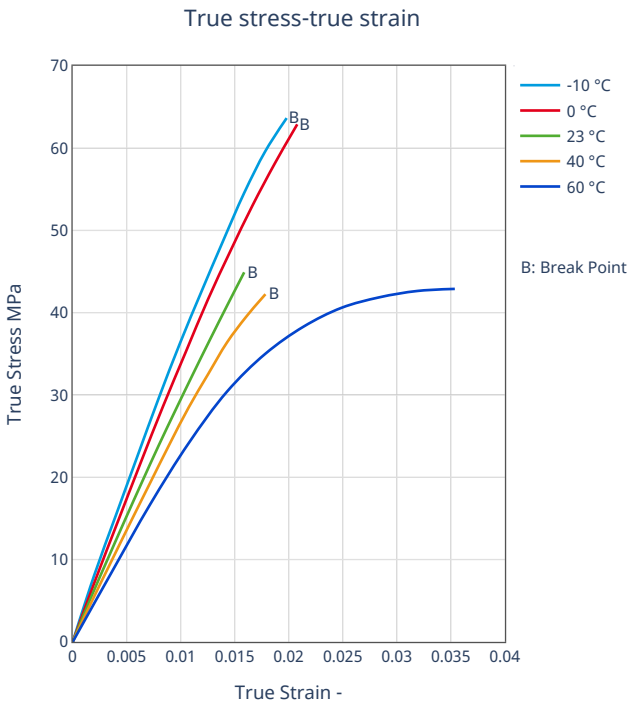
PLEXIGLAS® Hi-Gloss NTA-3

Röhm GmbH

Test Specimen Production	Value	Unit	Standard
Injection molding, melt temperature	240	°C	ISO 294
Injection molding, mold temperature	76	°C	ISO 294
Injection molding, injection velocity	195	mm/s	ISO 294

Diagrams

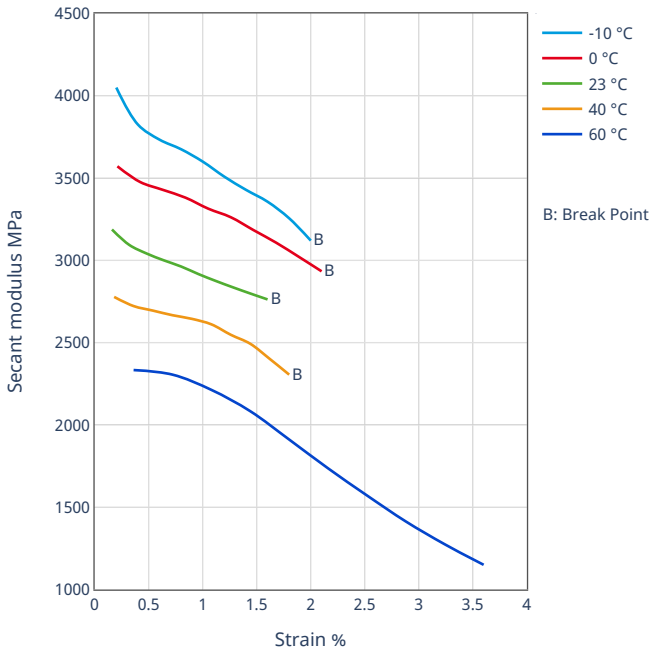




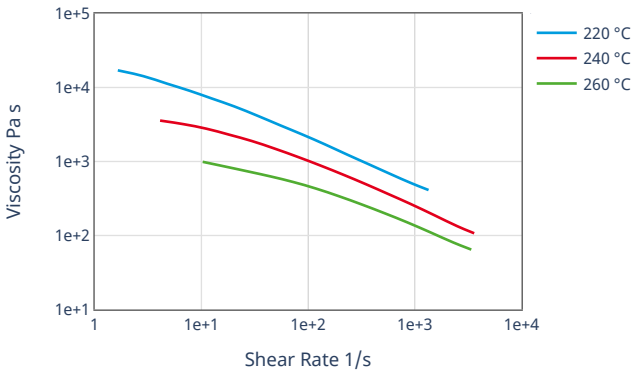
PLEXIGLAS® Hi-Gloss NTA-3

Röhm GmbH

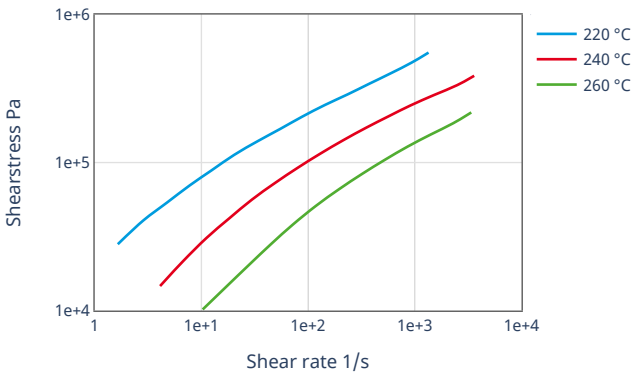
Secant modulus-strain



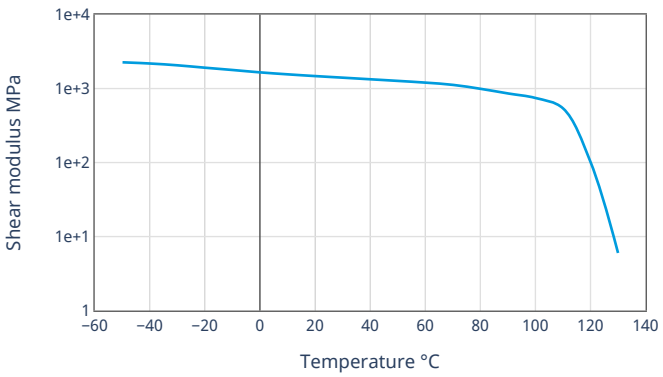
Viscosity-shear rate



Shearstress-shear rate



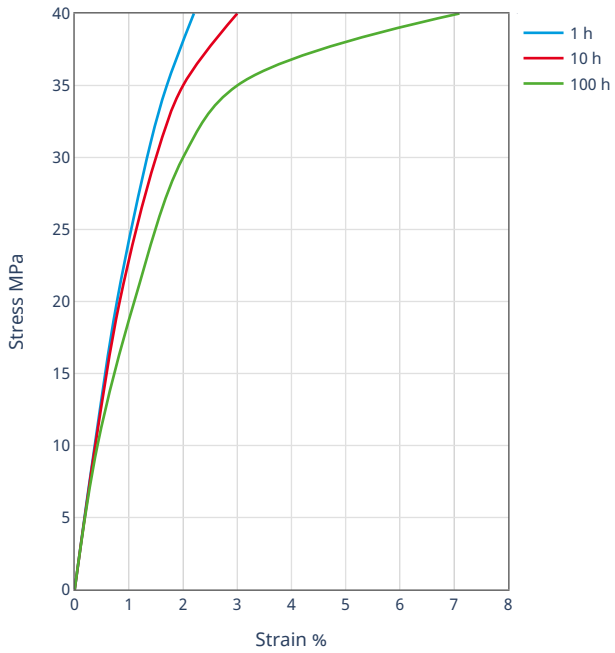
Dynamic shear modulus-temperature



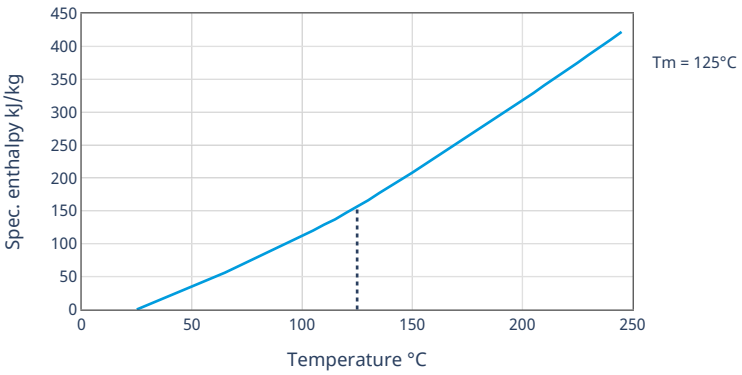
PLEXIGLAS® Hi-Gloss NTA-3

Röhm GmbH

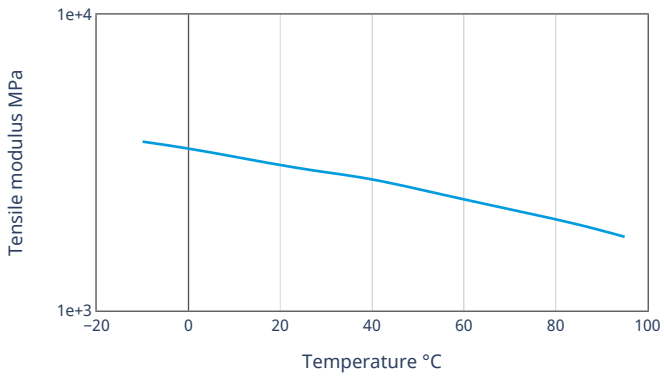
Stress-strain (isochronous) 23°C



Spec. enthalpy/mass-temp. (DSC)



Tensile modulus-temperature



Processing Information

Injection molding

PREPROCESSING
Predrying temperature: max. 100 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 250°C
Mold temperature:50 - 85°C