

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022

Product Profile

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022 is an amorphous thermoplastic molding compound, based on impact-modified polymethyl methacrylate (PMMA).

Properties

PLEXIGLAS® molding compounds have the following typical properties:

- high weather resistance
- brilliant appearance
- 100 % recyclable

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022 is characterized by the following additional properties:

- highest breaking strength and impact resistance
- increased heat resistance
- improved resistance to stress cracking
- balanced property profile

Application and approvals

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022 is particularly suitable for injection molding of technical components where high impact resistance is needed. Due to its superior brilliance high-gloss Class A surfaces can be obtained without painting.

Application areas are:

Add-on automotive body parts, pillar-trims, mirror housings, trim parts at front – and rear end, etc.

Processing

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022 can be processed by injection molding with a three-section screw suitable for the processing of PMMA.

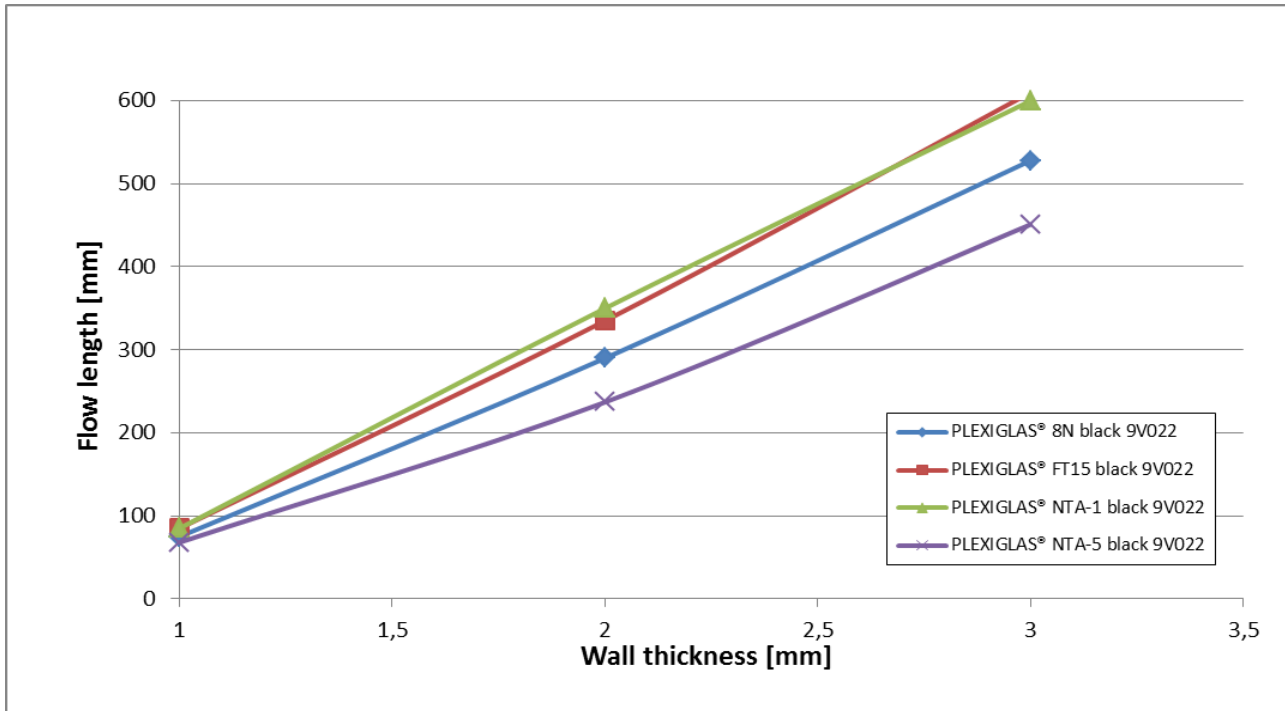
Further information can be found in our brochure “Injection Molding with PLEXIGLAS® – Processing Guidelines”.

Physical form and packaging

PLEXIGLAS® Hi-Gloss NTA-5 black 9V022 are supplied as cylindrical pellets in 25 kg polyethylene bags or 500 kg boxes with PE lining.

Flow length as function of wall thickness

(In comparison to other PLEXIGLAS® Hi-Gloss Molding Compounds)



Injection molding machine: Engel 200/110

Injection pressure: 1000 bar

Melt temperature: 250 °C

Mold temperature: 70°C

Max. flow front velocity: 950 mm/s

Width of flow path: 6 mm

Typical values

	Parameter	Unit	Standard	PLEXIGLAS® Hi-Gloss NTA-5 black 9V022
Mechanical values				
Tensile modulus	1 mm/min	MPa	ISO 527	2100
Tensile stress at yield	50 mm/min	MPa	ISO 527	54
Yield strain	50 mm/min	%	ISO 527	5
Nominal strain at break		%	ISO 527	48
Charpy impact strength	23°C	kJ/m ²	ISO 179/1eU	110
Thermal values				
Vicat softening temperature	B/50	°C	ISO 306	103
Glass transition temperature		°C	ISO 11357	113
Deflection temperature	0.45 MPa	°C	ISO 75	102
Deflection temperature	1.8 MPa	°C	ISO 75	96
Coefficient of linear thermal expansion	0-50 °C	E-5/°K	ISO 11359	11
Flammability UL 94	1.6 mm	Class	IEC 707	HB
Rheological values				
Melt volume rate, MVR	230°C / 3.8 kg	cm ³ /10 min	ISO 1133	1.3
Melt volume rate, MVR	260°C / 3.8 kg	cm ³ /10 min	ISO 1133	8.0
Other values				
Density		g/cm ³	ISO 1183	1.16
Water absorption in water		%	ISO 62	1.5
Moisture absorption	23°C / 50 %	%	ISO 62	0.5
Recommended processing conditions				
Temperatures pre-drying		°C		80
Pre-drying time in dry air dryer		h		> 4
Melt temperature		°C		230 - 260
Mold temperature		°C		60-80

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

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Röhm GmbH • Dolivostraße 17 • 64293 Darmstadt

plexiglas.polymers@roehm.com
www.plexiglas-polymers.de • www.roehm.com

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