

NAS® 90 is a styrene acrylic copolymer that can be used in a variety of applications demanding a strong, stiff water-clear plastic resin with excellent thermal stability.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-
Melt flow index, MFI	5	g/10min	ISO 1133
MFI temperature	200	°C	-
MFI load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3100	MPa	ISO 527
Stress at break	60	MPa	ISO 527
Strain at break	2.3	%	ISO 527
Charpy impact strength (+23°C)	13	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	1.5	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	75	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	83	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	90	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	HB	class	UL 94
Thickness tested	1.6	mm	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1070	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	220	°C	ISO 294
Injection Molding, mold temperature	50	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Transparent, Sterilizable, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Features

Blending Resin, Copolymer

Chemical Resistance

Radiation Resistance

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved, Drug Master File, Long term supply assurance, Food approval, Food approval 10/2011, Food Contact (FDA)

Applications

Medical

Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2h

PROCESSING

injection molding, Melt temperature, range: 200 - 240 °C

injection molding, Mold temperature, range: 30 - 60 °C

Disclaimer

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

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