

NAS 90

Styrene Methyl Methacrylate (SMMA)

TECHNICAL DATASHEET

DESCRIPTION

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. Food contact statements are available on request.

FEATURES

- High surface quality
- Sterilisable(ETO,NO2,Irradiation)
- Transparency
- Low density
- Water clear appearance

APPLICATIONS

- Water filters
- Point-of-purchase displays
- Food contact applications
- Medical devices
- Cosmetic packaging

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm ³ /10 min	16
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	1.5
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m ²	13
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	2.5
Tensile Modulus	ISO 527	MPa	3100
Tensile Stress at Yield, 23 °C	ISO 527	MPa	60
Tensile Strain at Break, 23 °C	ISO 527	%	2.3
Flexural Modulus, 23 °C	ISO 178	MPa	3200
Flexural Strength, 23 °C	ISO 178	MPa	100
Hardness, Ball Indentation	ISO 2039-1	MPa	168
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	90
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	75
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	83
Optical Properties			

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Property, Test Condition	Standard	Unit	Values
Refractive Index, Sodium D Line	ISO 489	-	1.57
Haze	ASTM D 1003	%	0.3
Light Transmission at 550 nm	ASTM D 1003	%	91
Other Properties			
Density	ISO 1183	kg/m ³	1070
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.1
Processing			
Melt Temperature Range	ISO 294	°C	200 - 240
Mold Temperature Range	ISO 294	°C	30 - 50
Drying Temperature	-	°C	80
Drying Time	-	h	2