

NAS 30

Styrene Methyl Methacrylate (SMMA)

TECHNICAL DATASHEET

DESCRIPTION

NAS® 30 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.

FEATURES

- Sparkling clarity
- Low density
- Ease of processing
- Gamma & ETO sterilizable
- Meets USP XXIII specifications for Class VI plastics

APPLICATIONS

- Cosmetic jars and lids
- Reusable drinkware
- Medical devices
- Toys
- Office accessories

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	2.2
Mechanical Properties			
Izod Notched Impact Strength, 23°C (73°F)	ASTM D 256	ft-lb/in	0.4
Tensile Stress at Yield, 23° C	ASTM D 638	psi	8800
Tensile Modulus	ASTM D 638	psi x 10 ³	470
Elongation, Failure	ASTM D 638	%	2.3
Flexural Strength	ASTM D 790	psi	14600
Flexural Modulus	ASTM D 790	psi x 10 ³	460
Hardness, Rockwell	ASTM D 785	M scale	75
Thermal Properties			
Vicat Softening Temperature, B/1 (120°C/h, 10N)	ASTM D 1525	°F	220
Optical Properties			
Refractive Index, Sodium D Line	ASTM D 542	-	1.56
Light Transmission at 550 nm	ASTM D 1003	%	91.4
Haze	ASTM D 1003	%	0.3
Other Properties			

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Property, Test Condition	Standard	Unit	Values
Density	ASTM D 792	-	1.09
Water Absorption, Saturated at 23°C	ASTM D 570	%	0.15
Processing			
Linear Mold Shrinkage	ASTM D 955	in/in	0.002 to 0.006
Melt Temperature Range		°F	410 - 470
Mold Temperature Range		°F	90 - 140
Rear Temperature Range		°F	360 - 420
Middle Temperature Range		°F	390 - 450
Front Temperature Range		°F	410 - 470
Injection Velocity		in/s	Slow to Moderate
Drying Temperature		°F	180
Drying Time		h	2
Max Service Temperature		°F	500