

NAS® 21
SMMA

INEOS Styrolution

NAS® 21 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.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	24	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3300	MPa	ISO 527
Stress at Break	60	MPa	ISO 527
Strain at Break	2.5	%	ISO 527
Impact Strength (Charpy), +23°C	12	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +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)	80	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	90	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	98	°C	ISO 306
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
UL recognition	yes	-	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.0	mm	-
UL recognition	yes	-	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1080	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Thermal Conductivity of Melt	0.21	W/(m K)	-
Spec. heat capacity of melt	2300	J/(kg K)	-

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2	h	-
Melt temperature	200 - 240	°C	-
Mold temperature	30 - 60	°C	-

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

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Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2h

PROCESSING

Melt temperature, range: 200 - 240 °C

Mold temperature, range: 30 - 50 °C
