INEOS STYROLUTION

NAS® XC

Styrene Methyl Methacrylate (SMMA)

TECHNICAL DATASHEET

DESCRIPTION

NAS® XC is a styrene methyl methacrylate copolymer that can be used in a variety of applications demanding a low haze and extreme clarity.

FEATURES

- High surface quality
- Transparency
- Low density
- Water clear appearance

APPLICATIONS

- Automotive rear light housings

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	24
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	1.4
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	20.5
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	1.7
Tensile Modulus	ISO 527	MPa	3400
Tensile Stress at Yield, 23 °C	ISO 527	MPa	65
Tensile Strain at Break, 23 °C	ISO 527	%	3
Flexural Modulus, 23 °C	ISO 178	MPa	3200
Flexural Strength, 23 °C	ISO 178	MPa	101
Hardness, Ball Indentation	ISO 2039-1	MPa	163
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	98
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	99
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.54
Haze	ASTM D 1003	%	0.3

Contact us:
INSTY.infopoint.emea@ineos.com
www.ineos-styrolution.com

Revision Date: 09/06/2023

Property, Test Condition	Standard	Unit	Values
Light Transmission at 550 nm	ASTM D 1003	%	93
Other Properties			
Density	ISO 1183	kg/m³	1110
Water Absorption, Saturated at 23 °C	ISO 62	%	0.17
Processing			
Melt Temperature Range	ISO 294	°C	200 - 240
Mold Temperature Range	ISO 294	°C	32 - 60
Drying Temperature	-	°C	82
Drying Time	-	h	2

Typical values for uncolored products
Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.
Please consult our local sales or technical representatives for details.

SUPPLY FORM

INEOS Styrolution NAS resins are available in bulk, 25kg bags or octabin cartons. NAS pellets can be stored for prolonged periods in dry areas subject to normal temperature control without any changes in mechanical properties. However, for sensitive colors storage over some years can cause some color change. Under poor storage conditions, NAS absorbs moisture, which can be removed again by drying. Packs stored in cold areas should be brought to ambient temperature before opening, to prevent condensation on the pellets.

PROCESSING

NAS is a low moisture absorption copolymer and in many instances processes readily without pre-drying. There are combinations of conditions that require the product to be dried, such as high humidity and heavy section molding. Two hours at 82 °C (180 °F) is adequate for most applications. Dehumidifying type driers are recommended. To obtain maximum clarity and gloss from this product, it is necessary to have a highly polished mold. Design of gates, runners and sprues can be patterned after standard practice for high-heat polystyrene. All mold surfaces must be temperature controlled at 54 °C (130 °F) for optimum clarity and surface gloss. For optimum clarity, machine cylinders, barrels, screws, valves, etc. should be thoroughly cleaned before processing. Contamination by other materials will cause streaking or haze.

PRODUCT SAFETY

During processing of NAS small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is were five to eight air changes per hour are made.

DISCLAIMER

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.

Contact us:
INSTY.infopoint.emea@ineos.com
www.ineos-styrolution.com