INEOS STYROLUTION

Styrolution PS 486N

High Impact Polystyrene (HIPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 486N is a normal flowing, high impact grade that is especially suitable for blends with a high proportion of general purpose polystyrene (preferably Styrolution PS 165N of Styrolution PS 158N for better heat resistance). It is suitable for all kinds of thermoformed packaging.

FEATURES

- Suitable for blending with high proportions of GPPS
- UL 94 HB

APPLICATIONS

- Food packaging and disposables
- Cups
- Cutlery
- Blends with GPPS

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	3.9
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	12
Tensile Stress at Yield, 23 °C	ISO 527	MPa	24
Tensile Strain at Yield, 23 °C	ISO 527	%	1.5
Tensile Modulus	ISO 527	MPa	1800
Elongation at Break (MD)	ISO 527	%	35
Hardness, Ball Indentation	ISO 2039-1	MPa	66
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	74
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	83
Coefficient of Linear Thermal Expansion	ISO 11359	10^{-6}/°C	80
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	2.5

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Property, Test Condition	Standard	Unit	Values
Dissipation Factor (100 Hz)	IEC 62631-2-1	10^{-4}	4
Dissipation Factor (1 MHz)	IEC 62631-2-1	10^{-4}	4
Volume Resistivity	IEC 62631-3-1	Ohm*m	$>10^{16}$
Surface Resistivity	IEC 62631-3-1	Ohm	$>10^{13}$
Other Properties			
Density	ISO 1183	kg/m³	1040
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	180 - 260
Injection Velocity	ISO 294	mm/s	200

Typical values for uncolored products

SUPPLY FORM

Styrolution PS 486N is supplied as cylindrical shaped granules. It has to be kept in its original containers in a cool, dry place. Avoid direct exposure to sunlight. Styrolution PS 486N can be stored in silos.

PROCESSING

Styrolution PS 486N can be injection molded at temperatures between 180 and 260°C, and recommended mold temperatures between 10 and 60°C. Extrusion temperatures should not exceed 240°C.

PRODUCT SAFETY

During processing of Styrolution PS small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20ppm 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.

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DISCLAIMER

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