

## DESCRIPTION

Styrolution PS 416N is medium impact polystyrene with very good flow properties. It has a high rigidity whilst displaying a very good surface gloss.

## FEATURES

- Very good flow properties
- High rigidity
- Very good surface gloss

## APPLICATIONS

- Injection molding with long flow lengths

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	21
<b>Mechanical Properties</b>			
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m <sup>2</sup>	5
Tensile Stress at Yield, 23° C	ISO 527	MPa	30
Tensile Strain at Yield, 23° C	ISO 527	%	1.2
Tensile Modulus	ISO 527	MPa	2600
Nominal Strain at Break, 23 °C	ISO 527	%	35
Elongation at Break (MD)	ISO 527	%	-
Flexural Strength	ISO 178	MPa	46
<b>Thermal Properties</b>			
Vicat Softening Temperature VST/B/50 (50N, 50°C/h)	ISO 306	°C	81
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	71
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> (-6)/°C	80
Thermal Conductivity	DIN 52612-1	W/(m K)	0.16
<b>Electrical Properties</b>			
Volume Resistivity	IEC 60093	Ohm*m	>1E16
Surface Resistivity	IEC 60093	Ohm	>1E13

# Styrolution PS 416N

High Impact Polystyrene (HIPS)

## TECHNICAL DATASHEET

Property, Test Condition	Standard	Unit	Values
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1040
Water Absorption, Saturated at 23°C	ISO 62	%	< 0.1
Moisture Absorption, Equilibrium 23°C/50% RH	ISO 62	%	< 0.1
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.5 - 0.7
Melt Temperature Range	ISO 294	°C	180 - 260

Typical values for uncolored products

### SUPPLY FORM

Styrolution PS 416N 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 416N can be stored in silos.

### PROCESSING

Styrolution PS 416N can be processed by all conventional techniques using standard conditions for impact polystyrene. It is preferably used for injection molding components with long flow lengths. Mass temperature can be as high as 260°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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