

# Styrolution PS 124N/L

General Purpose Polystyrene (GPPS)

## TECHNICAL DATASHEET

### DESCRIPTION

Styrolution PS 124N/L is a general purpose polystyrene grade with a good flow characteristic and an improved heat resistance.

### FEATURES

- Excellent flow properties
- Good heat resistance
- UL 94 HB (Antwerp only)

### APPLICATIONS

- Blending with HIPS in FFS thermoformed cups
- Injection molded articles
- Petri dishes, cuvettes, pipettes

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	12
<b>Mechanical Properties</b>			
Charpy Unnotched, 23 °C	ISO 179	kJ/m <sup>2</sup>	10
Tensile Stress at Yield, 23 °C	ISO 527	MPa	50
Tensile Modulus	ISO 527	MPa	3200
Nominal Strain at Break, 23 °C	ISO 527	%	2
Flexural Strength, 23 °C	ISO 178	MPa	80
Flexural Modulus	ISO 178	MPa	3400
Hardness, Ball Indentation	ISO 2039-1	MPa	150
<b>Thermal Properties</b>			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	87
Vicat Softening Temperature, B/1 ( 120°C/h, 10N)	ASTM D 1525	°C	102
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	78
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°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

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Property, Test Condition	Standard	Unit	Values
<b>Optical Properties</b>			
Refractive Index, Sodium D Line	ISO 489	-	1.56
Light Transmission at 550 nm	ASTM D 1003	%	91.4
Haze	ASTM D 1003	%	0.3
<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	%	0.4 to 0.6
Melt Temperature Range	ISO 294	°C	180 - 280

Typical values for uncolored products

## SUPPLY FORM

Styrolution PS 124N/L can be supplied in two versions, without or with an external additive for improving pneumatic conveying. "L" as a suffix to the grade designation characterises the version with this agent, i.e. Styrolution PS 124L. Styrolution PS 124N/L is supplied as cylindrical or lens shaped pellets, packed in 25 kg bags or bulk.

## PROCESSING

Styrolution PS 124N/L can be processed by all methods normally used for polystyrene. It is well balanced in its flow characteristic and heat resistance and is so used preferably for injection molding. It can be extruded as a blend component with high impact grades and as a gloss layer of thermoformed foils and sheets.

## 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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