

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
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	12
Mechanical Properties			
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m ²	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, 23 °C	ISO 178	MPa	3400
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
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 ⁻⁶ /°C	80
Thermal Conductivity	DIN 52612-1	W/(m K)	0.16
Electrical Properties			
Volume Resistivity	IEC 62631-3-1	Ohm*m	>10 ¹⁶
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹³

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Property, Test Condition	Standard	Unit	Values
Optical Properties			
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
Other Properties			
Density	ISO 1183	kg/m ³	1040
Processing			
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 where five to eight air changes per hour are made.

DISCLAIMER

The aforementioned data shall constitute the agreed contractual quality of the product sold by INEOS Styrolution at the time of passing of risk. INEOS Styrolution does not make any further warranty, representation or guarantee of any kind, express or implied, regarding the suitability of the product for any particular purpose or application and 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.