INEOS STYROLUTION

Styrolution PS 153F

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 153F is general purpose polystyrene with high heat resistance and good flow properties. Styrolution PS 153F is free of internal lubricants, e.g. zinc stearate.

FEATURES

- Free of internal lubricants
- Good flow characteristics

APPLICATIONS

- XPS

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	7.5
Mechanical Properties			
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	8
Tensile Stress at Yield, 23 °C	ISO 527	MPa	45
Tensile Strain at Yield, 23 °C	ISO 527	%	1.5
Tensile Modulus	ISO 527	MPa	3050
Flexural Strength, 23 °C	ISO 178	MPa	70
Flexural Modulus, 23 °C	ISO 178	MPa	3250
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	101
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°C	99
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	90
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	$>10^{14}$

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Property, Test Condition	Standard	Unit	Values
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	89.2
Haze	ASTM D 1003	%	1.2
Other Properties			
Density	ISO 1183	kg/m³	1040
Processing			
Melt Temperature Range	ISO 294	°C	180 - 280

Typical values for uncolored products

SUPPLY FORM

Styrolution PS 153F is supplied as cylindrical or lens shaped pellets. It has to be kept in its original containers in a cool, dry place. Avoid direct exposure to sunlight. Styrolution PS can be stored in silos.

PROCESSING

Styrolution PS 153F can be processed by all the methods normally used for polystyrene. It is preferably processed by extrusion to foamed sheets and boards using a direct gas injection method, especially when using halogenated flame retardant additives.

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.

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.

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