

## Styrenix PS 131

### General Purpose Polystyrene (GPPS)

#### DESCRIPTION

Styrenix PS 131 is a medium strength, easy flowing general purpose grade, suitable for blending with impact modified polystyrene. It offers exceptional processing characteristics for thin walled parts, multi-cavity tools, and complex designs.

#### FEATURES

- Easy flowing
- Good strength & processability
- Medium strength

#### APPLICATIONS

- Artificial jewelry, household articles, jars and cutlery
- Paper Weights, Crystal Ware, scales etc.
- Gift articles, Combs, Trays
- Used as a coextruded gloss cap layer over HIPS
- Blends with high impact polystyrene

Property, Test Condition	Standard	Unit	Typical Values
<b>Rheological Properties</b>			
Melt Volume Rate 200 °C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	14
<b>Mechanical Properties</b>			
Charpy Notched Impact Strength, 23 °C	ISO 179	kJ/m <sup>2</sup>	3
Charpy Unnotched, 23 °C	ISO 179	kJ/m <sup>2</sup>	>23
Tensile Stress at Yield, 23 °C	ISO 527	MPa	42
Tensile Strain at Break, 23 °C	ISO 527	%	2
Tensile Modulus	ISO 527	MPa	3200
Flexural Strength	ISO 178	MPa	70
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	94
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	78
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	86
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
<b>Electrical Properties</b>			
Dielectric Constant (100 Hz)	IEC 60250	-	2.5
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	135
Relative Permittivity (100 Hz)	IEC 60250	-	2.5
Relative Permittivity (1 MHz)	IEC 60250	-	2.5

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Volume Resistivity	IEC 60093	Ohm*m	>1E16
Surface Resistivity	IEC 60093	Ohm	>1E14
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1046
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	%	0.3 - 0.6
Melt Temperature Range	ISO 294	°C	180 - 260
Mold Temperature Range	ISO 294	°C	10 - 60
Injection Velocity	ISO 294	mm/s	200

### SUPPLY FORM

Styrenix PS 131 is supplied as cylindrical shaped granules. It has to be kept in its original containers in a dry, cool place. Avoid direct exposure to sunlight. Styrenix PS 131 can also be stored in silos.

### PROCESSING

Styrenix PS 131 can be injection molded at temperatures between 180 and 280°C. Recommended mold temperatures are between 10 and 60°C. Extrusion melt temperature should not exceed 240°C.

### PRODUCT SAFETY

During processing of Styrenix PS resins small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm 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. Further information can be found in our Styrenix PS safety data sheets.

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