



## Polystyrene

High impact polystyrene with excellent mechanical properties and high cold resistance, good deflection temperature and high stress cracks performance.

### Brief characteristic:

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### Mechanical properties

Yield strength	DIN 53455	N/mm <sup>2</sup>	17,5
Elongation at yield	DIN 53455	%	2,0
Tensile strength at break	DIN 53455	N/mm <sup>2</sup>	17
Elongation at break	DIN 53455	%	> 30
Modulus in flexure	DIN 53457-B4	N/mm <sup>2</sup>	1850
Flexural stress at conventional deflection	DIN 53452	N/mm <sup>2</sup>	39
Impact strength at 23°C	DIN 53453	kJ/m <sup>2</sup>	> 30
Impact strength at -30°C	DIN 53453	kJ/m <sup>2</sup>	30
Impact strength notched at 23°C	DIN 53453	kJ/m <sup>2</sup>	6
Impact strength notched at -30°C	DIN 53453	kJ/m <sup>2</sup>	5
Indentation hardness (H 358/30)	DIN 53456	N/mm <sup>2</sup>	80

### Thermal properties

Vicat softening point VST B 50	DIN 53460	°C	90
ISO/R75 process A	DIN 53461	°C	78
ISO/R75 process B	DIN 53461	°C	89
Continuous working temperature		°C	70
Thermal coefficient of linear expansion	DIN 53752	10 <sup>-5</sup> /K	8-10
Thermal conductivity	DIN 52612	W/Km	0,17
Specific heat		kJ/kgK	1,2

### Electrical properties

Dielectric constant	DIN 53483		2,5
Dissipation factor	DIN 53483	10 <sup>-5</sup>	4
Specific volume resistivity	DIN 53482	Ωcm	>10 <sup>16</sup>
Surface resistivity	DIN 53482	Ω	>10 <sup>13</sup>
Dielectric strength	DIN 53481	kV/mm	155

### Other properties

Shrinkage		%	0,4-0,7
Water absorption	DIN 53495	%	<0,1
Density	DIN 53479	g/cm <sup>3</sup>	1,05 – 1,12

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