







## Polystone P - Grey

Heat stabilized, grey, polypropylene

General properties			
	density	0.91 g/cm <sup>3</sup>	DIN EN ISO 1183-1
	flammability	HB/HB 3 mm / 6 mm	UL 94
	absorption of moisture	<0.10 %	DIN EN ISO 62
Mechanical properties			
	yield stress/ tensile strength	30 MPa	DIN EN ISO 527
	tensile elongation	>50 %	DIN EN ISO 527
	tensile modulus of elasticity	1,300 MPa	DIN EN ISO 527
	notched impact strength (Charpy)	10 kJ/m <sup>2</sup>	DIN EN ISO 179
	Shore hardness	70 Skala D	DIN EN ISO 868
Thermal properties			
	melting temperature	162 – 167 °C	ISO 11357-3
	thermal conductivity	0.20 W / (m · K)	DIN 52612-1
	specific thermal capacity	1.70 kJ / (kg · K)	DIN 52612
	coefficient of linear thermal expansion	120 – 190 10 <sup>-6</sup> K <sup>-1</sup>	DIN 53752
	service temperature, long term (min.)	0 °C	Benchmark
	service temperature, long term (max.)	100 °C	Benchmark
	service temperature, short term	150 °C	Benchmark
	heat deflection temperature	90 °C	DIN EN ISO 306 (Vicat B)
Electrical properties			
	dielectric constant	2.30	DIN IEC 60250
	dielectric dissipation factor	1.9·10 <sup>-4</sup>	DIN IEC 60250
	specific volume resistivity	>10 <sup>14</sup> Ω · cm	DIN IEC 60093
	surface resistivity	>10 <sup>14</sup> Ω	DIN VDE 0303-3
	comparative tracking index (test solution A)	600	DIN EN 60112
	dielectric strength	>60 kV/mm	DIN EN 60243

The following applies to Polyamides: Under the influence of moisture absorption, the mechanical properties change. The material becomes tougher and more resistant to impact, the modulus of elasticity declines. Depending on the environmental atmosphere, the temperature and the period of moisture absorption, only the surface layer is affected by alterations of property to a certain depth. On thick-walled parts, the center area remains unaffected.

The short-term maximum application temperature only applies to very low mechanical stress for a few hours. The long-term maximum application temperature is based on the thermal ageing of plastics by oxidation, resulting in a decrease of the mechanical properties. This applies to an exposure to temperatures for at least 5,000 hours causing a 50% loss of the tensile strength from the original value (measured at room temperature). This value says nothing about the mechanical strength of the material at high application temperatures. In case of thick-walled parts, only the surface layer is affected by oxidation from high temperatures. With the addition of antioxidants, a better protection of the surface layer is achieved. In any case, the center area of the material remains unaffected. The minimum application temperature is basically influenced by possible stress factors like impact and/or shock under application. The values stated refer to a minimum degree of impact stress.

The electrical properties as stated result from measurements on natural, dry material. With other colours (in particular black) or saturated material, there may be clear differences in the electrical properties.

The values indicated result from numerous individual measurements for an approximation of the values and are to our today's knowledge. They serve as information about our products and are presented as a guide to choose from our range of materials. This, however, does not include an assurance of specific properties or the suitability for particular application purposes that are legally binding. Since the properties also depend on the dimension of the semi-finished products and the degree of crystallisation (e.g. nucleating by pigments), the actual values of the properties of a particular product may differ from the indicated values.

The mechanical properties of fibre reinforced material were measured on injection molded samples, parallel to fibre direction. Special construction details of further material specifications on request.