

# Datenblatt | Data sheet

## Plastic ball PS

Amorphous light vinyl polymer balls, they provide good hardness and stiffness. Brittle material with fair corrosion resistance and no UV radiation resistant.

### Field of application

They are used as floating elements on not aqueous liquids, different applications in the electronic, pharmaceutical and medical field, and as decorative elements.

### Corrosion resistance

Good corrosion resistance in contact with diluted acids, basis, aqueous solutions, detergents. Fair against oxidizing agents, oils and greases. Poor resistance in contact with aromatic hydrocarbons, aldehydes, halogens, esters, ethers, ketones.

### Material

Technical name	Alternative Name	Abbreviation
Polystyrene	Polystyrene	PS

### Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	$\delta$	g/cm <sup>3</sup>	Physical	Ambient temperature	1,05
Modulus of Elasticity	E	MPa	Mechanical		3200
Friction coefficient	$\mu$	-	Mechanical	Ambient temperature	0,40
Specific heat	C	J/kg*K	Thermal	Ambient temperature	0,15
Coefficient of linear thermal expansion	$\alpha$	10 <sup>-6</sup> /°C	Thermal	( $\Delta T = 0 - 100$ °C)	90
Thermal conductivity	$\lambda$	W/(m*K)	Thermal	Ambient temperature	0,12
Volume resistivity	$\rho$	$\Omega$ *m	Electrical	-	> 10 <sup>14</sup>
Relative magnetic permeability	$\mu$	-	Magnetical	Diamagnetic	<~1

### Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	Shore D	78 - 82	-	-
Yield point load in compression	Mechanical	MPa	50 - 90	psi*10 <sup>3</sup>	7 - 13
Operating temperature	Thermal	°C	-10 - 90	°F	-14 - 194

### Available with

Diameter min/max (mm)	Diameter min/max (in)	Precision grade
1,500 - 100,000	1/16 - 4	0 / I / II / III / IV