

## Technical Datasheet: High performance plastic type SV

### General notes

- **PVDF** polyvinylidene fluoride carbon fibre reinforced
- excellent mechanical strength and toughness
- smooth surface
- heat stabilized, high heat capability, continuous use temperature up to 150°C
- high purity (clean room and medical devices approved, low extraction value)
- excellent chemical resistance to most aggressive substances (mineral and organic acid) and solvents (hydrocarbons, alcohols, halogenated), resistant to halogens
- outstanding resistance to hydrofluoric acid (40% conc., 90°C), nitric acid (50% conc., 90°C), hydrochloric acid (36% conc., 90°C)
- high abrasion resistant
- resistant to UV and nuclear radiation (sterilisation)
- ESD safe material, (avoid powder attraction, sparks generation, ignition sources) .
- typical applications include handling of very scratch- and contamination-sensitive components, cleaning and etching processes.

### Mechanical properties

Flexural modulus +23°C:	7500 MPa	ASTM D 790
Tensile modulus +23°C:	8000 MPa	ASTM D638
Tensile strength +23°C:	120 MPa	ASTM D638
Flexural strength +23°C:	150 MPa	ASTM D790
Shore D hardness:	82	ASTM D 2240
Izod-Impact strength (notched) +23°C:	110 J/m	ASTM D 256

### Thermal properties

Temp. of defl. under load (1.80 MPa):	158 °C	ASTM D648
Temp. of defl. under load (0.45 MPa):	170 °C	ASTM D648
Vicat softening temperature (50°C/h 50N):	172 °C	ISO 306
Coef. of lin. therm expansion, normal:	7.00 E-5/°C	ASTM D 696
Continuous Use Temperature	150°C	20'000 h
Short Time Temperature	200°C	

### Electrical properties

Surface resistivity:	<1.0E5 Ohm	ASTM D257
Volume resistivity:	<1.0E3 Ohm.cm	ASTM D257

### Other properties

Density	1.37 g/ccm	ISO 1183
Water absorption in water 23°C (24h)	0.65%	ISO 62