

TECHNICAL DATA SHEET

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

Thermal properties

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

Electrical properties

Surface resistivity	<1.0E5 Ohm	<i>ASTM D257</i>
Volume resistivity	<1.0E3 Ohm.cm	<i>ASTM D257</i>

Other properties

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

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