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**	*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*