

### **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

This document contains information based on average values as obtained from the results of laboratory tests and observations made on the material. Ideal-tek SA declines all responsibility from an improper use of the product described in this document.