PVDF

Material Information

PVDF

Product full identity:
Polyvinylidene Fluoride

PVDF combines high mechanical strength, stiffness, and tensile strength with dimensional stability and wear resistance. Ideal for pumps, electrical insulation, medical parts, and anti-corrosive linings, it ensures durable and dependable performance in demanding applications.

Properties

- Very high temperature range (+150 to -50°C)
- Good strength and dimensional stability
- Good chemical resistance
- Fire rating – self extinguishing
- Very low moisture absorption <0.1%
- Food contact approved

Applications

- Pumps
- Electrical insulation
- Medical parts
- Anti-corrosive linings

Forms

 Sheet

 Solid Rod

 Weld Rod

PVDF

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	**g/cm³**	DIN EN ISO 1183	**1.78**
Water absorption until saturation at 23°C	**%**	-	**-**
Maximum service temp. Upper temp limit – short term	**°C**	-	**140**
Maximum service temp. Upper temp limit – long term	**°C**	-	**-**
Lower temp limit	**°C**	-	**-30**
Mechanical	**Unit**	**Test Method**	**Result**
Tensile strength	**MPa**	DIN EN ISO 527	**55**
Elongation at yield	**%**	DIN EN ISO 527	**8**
Tensile strength at break	**MPa**	-	**-**
Unnotched impact strength	**kJ/m²**	DIN EN ISO 179	**No break**
Notch impact strength	**kJ/m²**	DIN EN ISO 179-1eA	**12**
Ball indentation / Rockwell hardness	**MPa**	DIN EN ISO 2039-1	**120**
Shore-D		DIN EN ISO 868	**78**
Flexural modulus of elasticity	**MPa**	-	**-**
Tensile modulus of elasticity	**MPa**	DIN EN ISO 527	**1950**
Thermal	**Unit**	**Test Method**	**Result**
Vicat-softening point VST/B/50	**°C**	DIN EN ISO 306	**140**
Heat deflection temperature HDT/B	**°C**	-	**-**
Coefficient of linear thermal expansion 23 – 100°C	**m/(m.K)**	ISO 11359-2	**1.3×10^{-4}**
Thermal conductivity at 23°C	**W/mK**	-	**-**
Electrical	**Unit**	**Test Method**	**Result**
Volume resistivity	**Ω x m**	-	**-**
Surface resistivity	**Ω**	DIN IEC 60093	**$\geq 10^{13}$**
Insulation resistivity	**Ω . cm**	-	**-**
Dielectric constant at 1MHz		-	**-**
Dielectric loss factor at 1MHz		-	**-**
Dielectric strength	**kV/mm**	IEC 60243-1	**25**
Comparative tracking index (CTI)		-	**-**
Additional Data	**Unit**	**Test Method**	**Result**
Bondability		-	**-**
Food compliance – FDA		FDA	**Yes**
Food compliance – EU		EU 10/2011	**Yes**
Antistatic		-	**-**
Flammability	**Unit**	**Test Method**	**Result**
Fire performance		DIN 4102	**B1**
Optical	**Unit**	**Test Method**	**Result**
N/A	**N/A**	N/A	**N/A**

All information provided in this Product Datasheet is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.

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