

TECAPEEK VF PEEK for vacuum forming applications



TECAPEEK VF combines the well tried characteristics of PEEK with new processing possibilities.

In recent years, increasing material requirements, integrated functionality and high mechanical and thermal loads have made TECAPEEK the material of choice for multiple applications.

Due to increasing proliferation of options for technical applications and smaller volumes resulting, vacuum forming as a processing method has gained in importance. Vacuum forming is no longer a domain only for standard plastics: increasing requirements in applications call for new solutions in material and processing. The use of high performance plastics in vacuum forming processes is a logical consequence.

TECAPEEK VF (PEEK) is the answer to the increasing market demand and combines the well tried characteristics of TECAPEEK with a new dimension of processability. If increasing safety and material requirements have to be combined with low volumes and thin walled parts, TECAPEEK VF is the optimised material choice.

Offering approvals for aerospace and medical technology, vacuum formed TECAPEEK VF is a very cost efficient alternative for low volume applications in these industries.

Properties

- | High mechanical strength
- | Excellent thermal stability
- | Outstanding chemical resistance
- | Good tribological properties
- | Biocompatibility
- | Good sterilisation characteristics
- | Inherently flame resistant
- | Approved for aerospace applications

Preferred fields

Medical technology, Aerospace, Engineering, Electronic industry, Chemical processing


Applications

Sterilisation trays, technical components, housings for medical applications, insulation parts, interior parts

Technical Properties

		TECAPEEK VF
DIN abbreviation		PEEK
Density (ASTM D 792, DIN 53 479)	ρ g/cm ³	1,30
Tensile strength at yield (DIN EN ISO 527)	MPa	95
Elongation at yield (DIN EN ISO 527)	%	5
Modulus of elasticity after tensile test (DIN EN ISO 527)	MPa	3000
Modulus of elasticity after flexural test (DIN EN ISO 178)	MPa	4100
Impact resistance (DIN EN ISO 179 (Charpy))	a_n kJ/m ²	n.b.
Glass transition temperature (DIN 53 765)	°C	143
Heat distortion temperature (ISO-R 75, method A, DIN 53 461)	°C	140
Heat distortion temperature (ISO-R 75, method B, DIN 53 461)	°C	182
Service temperature short term long term	°C °C	300 260
Coefficient of linear thermal expansion (23 °C, ASTM D 696, DIN 53 752, ASTM E 831)	10 ⁻⁵ 1/K	5,0
Volume resistance (ASTM D 257, EC 93, DIN IEC 60093)	ρ_o Ω cm	10 ¹⁶
Surface resistance (ASTM D 257, EC 93, DIN IEC 60093)	R_o Ω	10 ¹⁵
Water absorption at equilibrium 23 °C/50 % rel. humidity (DIN EN ISO 62)	%	0,1
Flammability acc. to UL standard 94		V0

Stocklist

Plates 	Tolerances (mm)	TECAPEEK VF
DIN-Abbreviation		PEEK
Density (g/cm ³)		1,30
Size (mm)		kg/m
1 x 610 x 1220	+0,076/-0,076	0,81
2 x 610 x 1220	+0,178/-0,178	1,62
3 x 610 x 1220	+0,254/-0,254	2,43

Please find information concerning the exclusion of liability and Terms and Conditions of Delivery in our Semi-finished products catalogue or at www.ensinger-online.com.

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