

TYPICAL PROPERTIES

VESPEL® TP- 8005



THERMOPLASTIC PARTS FOR HIGH-PURITY REQUIREMENTS

Vespel® TP-8005 is an unfilled thermoplastic polyimide for use in high-temperature environments. The low outgassing and excellent resistance to etching conditions make this grade specifically suitable for semicon applications.

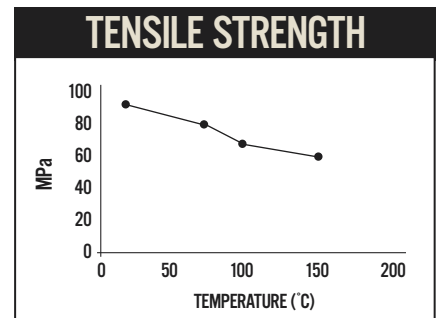
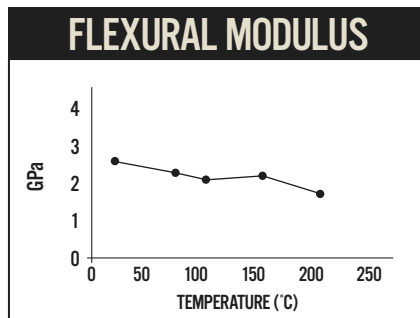
As with the rest of the Vespel® parts and shapes product line, injection-molded Vespel® TP-8005 parts comply with the highest quality standards in the industry.

MECHANICAL		TEST METHOD	SI UNITS	ENGLISH UNITS
TENSILE STRENGTH	23°C/73°F	ASTM D-638	92 MPa	13,300 psi
ELONGATION AT BREAK	23°C/73°F	ASTM D-638	90%	90%
FLEXURAL STRENGTH	23°C/73°F	ASTM D-790	135 MPa	19,600 psi
FLEXURAL MODULUS	23°C/73°F	ASTM D-790	2.9 GPa	421,000 psi
COMPRESSIVE STRENGTH	23°C/73°F	ASTM D-695	144 MPa	21,000 psi
COMPRESSIVE MODULUS	23°C/73°F	ASTM D-695	3.2 GPa	464,000 psi
NOTCHED IZOD 3.175 mm/1/8 in.	23°C/73°F	ASTM D-256	107 J/m	2 ft. lb./in.
HARDNESS, ROCKWELL E		ASTM D-785	47	47

THERMAL	TEST METHOD	SI UNITS	ENGLISH UNITS
CTE (23-150°C/73-302°F) FLOW DIRECTION	ASTM E-228	4.9x10 ⁻⁵ cm/cm/°C	2.7x10 ⁻⁵ in./in./°F
CTE (23-150°C/73-302°F) TRANSVERSE DIRECTION	ASTM E-228	5.2x10 ⁻⁵ cm/cm/°C	2.9x10 ⁻⁵ in./in./°F
THERMAL CONDUCTIVITY	ASTM F-433	0.13 W/m K	1.73 BTU in./hr. ft. ² °F

ELECTRICAL PROPERTIES	TEST METHOD	SI UNITS	ENGLISH UNITS
DIELECTRIC CONSTANT @ 100Hz	ASTM D-150	3.34	3.34
DIELECTRIC CONSTANT @ 1Hz	ASTM D-150	3.31	3.31
DIELECTRIC CONSTANT @ 10KHz	ASTM D-150	3.10	3.10
DIELECTRIC CONSTANT @ 1MHz	ASTM D-150	3.10	3.10

OTHER PROPERTIES	TEST METHOD	SI UNITS	ENGLISH UNITS
SPECIFIC GRAVITY	ASTM D-792	1.33	1.33
WATER ABSORPTION (24 hrs. @ 23°C/73°F)	ASTM D-570	0.34%	0.34%



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Caution: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement."