

## TYPICAL PROPERTIES

# VESPEL® TP- 8549



### THERMOPLASTIC PARTS FOR HIGH LOADS

Vespel® TP-8549 is a thermoplastic polyimide for high-performance applications. A unique combination of fillers makes it incredibly tough and strong, and well suited for high-load applications as well as dry wear and friction conditions.

And of course, as part of the Vespel® parts and shapes product line, injection-molded Vespel® TP-8549 parts comply with the highest quality standards in the industry.

MECHANICAL		TEST METHOD	SI UNITS	ENGLISH UNITS
TENSILE STRENGTH	23°C/73°F 150°C/302°F	ASTM D-638	252 MPa 119 MPa	37,000 psi 17,300 psi
ELONGATION AT BREAK	23°C/73°F 150°C/302°F	ASTM D-638	2.0% 2.0%	2.0% 2.0%
FLEXURAL STRENGTH	23°C/73°F	ASTM D-790	354 MPa	52,000 psi
FLEXURAL MODULUS	23°C/73°F	ASTM D-790	20.4 GPa	2,900,000 psi
NOTCHED IZOD 3.175 mm/1/8 in.	23°C/73°F	ASTM D-256	106 J/m	2.0 ft. lb./in.

THERMAL	TEST METHOD	SI UNITS	ENGLISH UNITS
HDT @ 1.8 MPa (264 psi)	ASTM D-648	236°C	457°F
CTE (23-150°C/73-302°F) FLOW DIRECTION	ASTM E-228	1.1x10 <sup>-5</sup> cm/cm/°C	0.6x10 <sup>-5</sup> in./in./°F
CTE (23-150°C/73-302°F) TRANSVERSE DIRECTION	ASTM E-228	3.7x10 <sup>-5</sup> cm/cm/°C	2.0x10 <sup>-5</sup> in./in./°F

WEAR AND FRICTION	TEST METHOD	SI UNITS	ENGLISH UNITS
PV LIMIT (DRY)	—	9.6 MPa m/s	270,000 fpm-psi

OTHER PROPERTIES	TEST METHOD	SI UNITS	ENGLISH UNITS
SPECIFIC GRAVITY	ASTM D-792	1.39	1.39
WATER ABSORPTION (24 hrs. @ 23°C/73°F)	ASTM D-570	0.08%	0.08%



The miracles of science™

## For more information about DuPont™ Vespel®:

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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."