

## TYPICAL PROPERTIES

# VESPEL® TP- 8541



### THERMOPLASTIC PARTS FOR HIGH LOADS

Vespel® TP-8541 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-8541 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	225 MPa	32,600 psi
ELONGATION AT BREAK	23°C/73°F	ASTM D-638	1.1%	1.1%
FLEXURAL STRENGTH	23°C/73°F	ASTM D-790	285 MPa	41,300 psi
FLEXURAL MODULUS	23°C/73°F	ASTM D-790	15.0 GPa	2,200,000 psi
NOTCHED IZOD 3.175 mm/1/8 in.	23°C/73°F	ASTM D-256	96 J/m	1.8 ft. lb./in.
HARDNESS, ROCKWELL E		ASTM D-785	82	82

THERMAL	TEST METHOD	SI UNITS	ENGLISH UNITS
HDT @ 1.8 MPa (264 psi)	ASTM D-648	292°C	558°F
CTE (23-150°C/73-302°F) FLOW DIRECTION	ASTM E-228	1.2x10 <sup>-5</sup> cm/cm/°C	0.67x10 <sup>-5</sup> in./in./°F
CTE (23-150°C/73-302°F) TRANSVERSE DIRECTION	ASTM E-228	3.4x10 <sup>-5</sup> cm/cm/°C	1.89x10 <sup>-5</sup> in./in./°F

OTHER PROPERTIES	TEST METHOD	SI UNITS	ENGLISH UNITS
SPECIFIC GRAVITY	ASTM D-792	1.41	1.41
WATER ABSORPTION (24 hrs. @ 23°C/73°F)	ASTM D-570	0.05	0.05

## For more information about DuPont™ Vespel®:

---

### **UNITED STATES**

DuPont Engineering Polymers  
Pencader Site  
Newark, DE 19714-6100  
Tel: 800-222-VESP  
Fax: (302) 733-8137

### **EUROPE**

DuPont de Nemours  
(Belgium) BVBA-SPRL  
Engineered Parts Center  
A. Spinoystraat 6  
B-2800 Mechelen  
Belgium  
Tel: ++32 15 441527  
Fax: ++32 15 441408

### **ASIA-PACIFIC**

**Japan** DuPont K.K.  
Arco Tower  
8-1, Shimomeguro 1-chome  
Meguro-ku, Tokyo 153-0064  
Tel: 03-5434-6989  
Fax: 03-5434-6982

**Korea** DuPont Korea Limited  
4/5 Floor, Asia Tower, #726  
Yeoksam-dong, Kangnam-ku  
Seoul 135-082  
Tel: 02-222-5200  
Fax: 02-222-5470

### **Taiwan/ China**

DuPont Taiwan Limited  
13th Floor, Hung Kuo Building  
167, Tun Hwa North Road  
Taipei, Taiwan 105  
Tel: 02-719-1999  
Fax: 02-712-0460

---

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentation. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience become available. Since we cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

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