

# DuPont™ Vespel® ST-2030

## POLYIMIDE DIRECT-FORMED PARTS

### Typical Direct-Formed Properties

DuPont™ Vespel® ST-2030 parts and shapes are used in applications in which low thermal expansion is more important than strength (which is slightly reduced). Applications may include bearings, bushings and washers. ST-2030 is a filled polymer with a lower coefficient of thermal expansion and lower elongation than ST-2010.

*Some data presented below are based on limited production runs and are subject to revision as new knowledge and experience become available.*

Mechanical Property	Temperature	ASTM	Units	Typical Values
Tensile Strength	23 °C (73 °F) 260 °C (500 °F)	D638	MPa (kpsi)	57 (8.26) 26 (3.80)
Strain at Break	23 °C (73 °F) 260 °C (500 °F)	D638	%	4.9 —
Tensile Modulus	23 °C (73 °F)	D638	MPa (kpsi)	3930 (570)
Izod Notched Impact Strength	23 °C (73 °F)	D256	J/m	—
Compressive Strength at 1% strain at 10% strain Ultimate	23 °C (73 °F)	D695	MPa (kpsi)	— — 155 (23)
Compressive Modulus	23 °C (73 °F)	D695	MPa (kpsi)	1207 (175)
<b>Electrical</b>				
Dieltric Strength	23 °C (73°F)	D149	kV/mm	—
Dielectric Constant 100 Hz 10 kHz 1 MHz	23 °C (73°F)	D150	—	300 110 40.6
Dielectric Factor 100 Hz 10 kHz 1 MHz	23 °C (73°F)	D150	—	6.90 0.65 0.30
Volume Resistivity	23 °C (73°F)	D257	ohm-cm	4.8 x 10 <sup>7</sup>
Surface Resistivity	23 °C (73°F)	D257	ohm	2.6 x 10 <sup>6</sup>



The miracles of science™

**DuPont™ Vespel® ST-2030 Typical Direct-Formed Properties** (continued)

Miscellaneous	Temperature	ASTM	Units	Typical Values
Thermal Conductivity	23 °C to 260 °C	F433	(W·cm/cm <sup>2</sup> ·°C) x 10 <sup>-3</sup>	9.7
Coefficient of Linear Thermal Expansion	23 °C to 260 °C (73 °F to 500 °F)	D696	μ/m/°C (in/in/°F)	32 (19 x 10 <sup>-6</sup> )
Water Absorption % change (weight) 24 h 48 h	23 °C (73°F)	D570	—	0.5 1.3
Deformation under 14 MPa Load	23 °C (73°F) 50 °C (122 °F)	D621	%	—
Specific Gravity	23 °C (73°F)	D272	—	1.44

Visit us at [kalrez.dupont.com](http://kalrez.dupont.com) or [vespel.dupont.com](http://vespel.dupont.com)

Contact DuPont at the following regional locations:

**North America**  
800-222-8377

**Latin America**  
+0800 17 17 15

**Europe, Middle East, Africa**  
+41 22 717 51 11

**Greater China**  
+86-400-8851-888

**ASEAN**  
+65-6586-3688

**Japan**  
+81-3-5521-8484

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable and falls within the normal range of properties. It is intended for use by persons having technical skill, at their own discretion and risk. This data should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, discuss with your DuPont customer service representative and read Medical Caution Statement H-50103-3.

Copyright © 2010 DuPont. The DuPont Oval Logo, DuPont™, The miracles of science™, Kalrez®, and Vespel® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

(09/10) Reference No. VPE-A10885-00-A0910



*The miracles of science™*