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)
Electrical				
Dielctric 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	4.8×10^{7}
Surface Resistivity	23 °C (73°F)	D257	ohm	2.6×10^{6}

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

Miscellaneous	Temperature	ASTM	Units	Typical Values
Thermal Conductivity	23 °C to 260 °C	F433	$(W \cdot cm/cm^2 \cdot °C) \times 10^{-3}$	9.7
Coefficient of Linear Thermal Expansion	23 °C to 260 °C (73 °F to 500 °F)	D696	µm/m/°C (in/in/°F)	32 (19×10^{-6})
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

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