DuPont™ Vespel® CP-8000, CP-8001 & CP-8002

Composite Parts

Braided Series

Vespel® CP-8000 series composite parts are made from fibers braided into hollow tubes held in a matrix of resins. This produces bushings that offer the best combination of properties for applications that require the benefits that a composite structure offers. Toughness, thermal resistance, self-lubricity, and wear resistance are the most common requirements for the Vespel® CP-8000 series products.

CP-8000

Thermal Property	Temperature	Test Method	Units	Typical Values
Glass Transition Temperature, Tg	—	Thermal Mechanical Analysis	°C (°F)	360 (680)
Thermal Expansion Coefficient	—	—	m/m/°C (in/in/°F)	8.3×10^{-6} (4.6×10^{-6})
Oxidative Stability	357 °C(675 °F)	See note[a]	% weight loss	3.0
Other Property				
Specific Gravity	—	ASTM D-792	—	1.52

CP-8001

Thermal Property	Temperature	Test Method	Units	Typical Values
Glass Transition Temperature, Tg	—	Thermal Mechanical Analysis	°C (°F)	349 (660)
Thermal Expansion Coefficient	—	—	m/m/°C (in/in/°F)	8.3×10^{-6} (4.6×10^{-6})
Oxidative Stability	321 °C(610 °F) 357 °C(675 °F)	See note[a]	% weight loss	2.4 6.2
Other Properties				
Specific Gravity	—	ASTM D-792	—	1.54

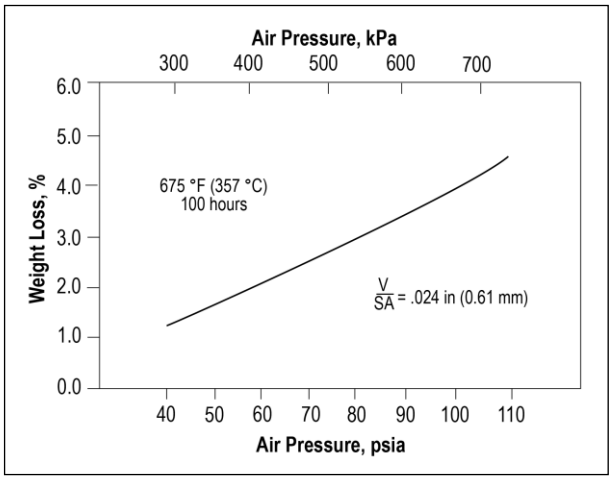
CP-8002				
Thermal Property	**Temperature**	**Test Method**	**Units**	**Typical Values**
Glass Transition Temperature, Tg	—	Thermal Mechanical Analysis	°C (°F)	330 (626)
Thermal Expansion Coefficient	—	—	m/m/°C (in/in/°F)	7.2×10^{-6} (4.0×10^{-6})
Oxidative Stability	321 °C/610 °F	See note[a]	% weight loss	2.6
Other Properties				
Specific Gravity	—	ASTM D-792	—	1.47

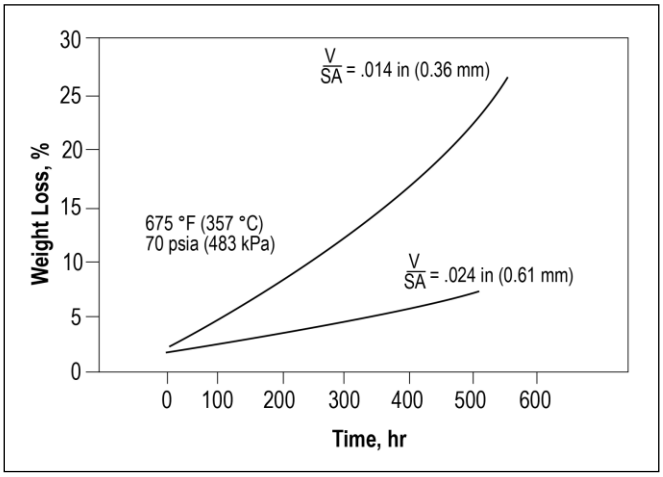
[a]100 hours, 70 psia (483 kPa), circulating air, saturated conditions, volume/surface area = .024 in (0.61 mm)

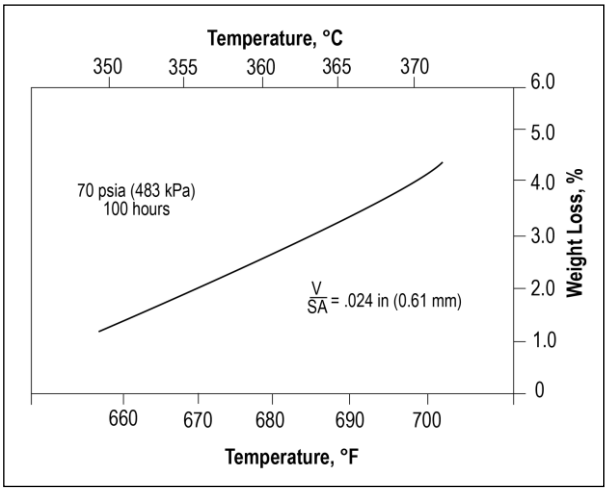
Note: Each part configuration is custom-designed to optimize process capability and part performance by adjusting resin/fiber ratios, fiber deniers, and braid construction. These design considerations can cause variation from the typical values listed above. Listed properties are based upon technical data that DuPont believes to be reliable. DuPont makes no warranties, expressed or implied, and assumes no liability in connection with use of this information.

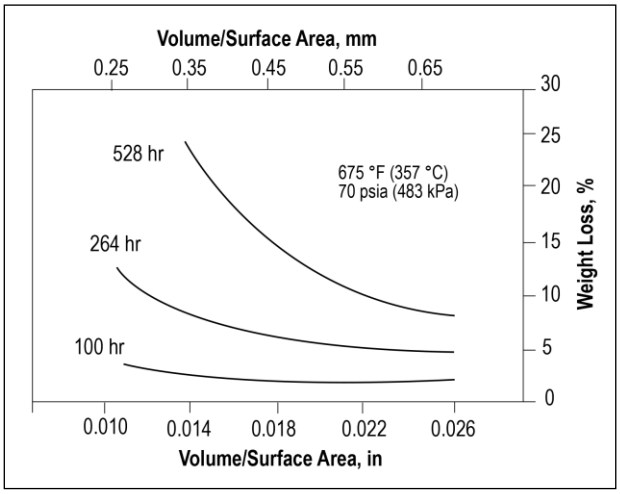
Thermal Oxidation Curves for CP-8000

(Tests performed in circulating air, saturated conditions)









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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

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