

# VESPEL® SF 0900



Vespel® SF foam products are ideal candidates for applications requiring extremes of strength, temperature, and performance.

Vespel® SF foam products are characterized by high compressive strength, excellent insulative properties, and outstanding resistance to heat, fire, solvents, and chemicals.

Additional properties include increased stiffness and low weight.

## SF-0900

PHYSICAL	TEST METHOD	UNIT	SF-0920 (LOW DENSITY)	SF-0930 (MED. DENSITY)	SF-0940 (HIGH DENSITY)
DENSITY RANGE	ASTM D3574 Test E	g/cc	0.15+/-0.05	0.3+/-0.1	0.5+/-0.1
		lb/ft³	9.36+/-3.0	18.7+/-6.0	31.2+/-6.0
MAX STANDARD THK		mm	36.0	12.0	6.0
		in	1.42	0.47	0.24
STANDARD SHEET SIZE		mm	575x575	525x525	450x450
		in	~23x23	~21x21	~18x18
<b>MECHANICAL</b>					
ULTIMATE TENSILE STRENGTH	ASTM D3574 Test E	kPa	425	4,400	26,000
		psi	61.6	640	3,770
TENSILE MODULUS	ASTM D3574 Test E	kPa	-----	106,700	521,200
		psi	-----	15,480	75,600
ELONGATION AT BREAK	ASTM D3574 Test E	%	-----	7.94%	9.08%
COMPRESSION FORCE TEST @ 20%	ASTM D3574 Test C	kPa	120	1,760	32,400
		psi	17.4	255	4,700
COMPRESSION FORCE TEST @ 40%	ASTM D3574 Test C	kPa	200	3,800	52,700
		psi	29	550	7,640
COMPRESSION MODULUS	ASTM D1621	kPa	-----	1,640	320,600
		psi	-----	238	46,500
COMPRESSIVE STRENGTH @ 10%	ASTM D1621	kPa	-----	2,000	25,400
		psi	-----	290	3,680
COMPRESSIVE STRENGTH @ 20%	ASTM D1621	kPa	-----	3,400	41,000
		psi	-----	490	6,000
RELATIVE PERMITTIVITY (DIELECTRIC CONSTANT)	ASTM D1673		1.11	1.39	1.9
DISSIPATION (CAPACITANCE) FACTOR	ASTM D1673	pf	2.52	3.04	4.21
<b>THERMAL</b>					
CONTINUOUS USE TEMPERATURE		C	300	300	300
		F	572	572	572
THERMAL CONDUCTIVITY 25°C (77°F)	ASTM C518	W/(m-K)	0.033-0.036	0.0467	0.0657
CLTE (60°-130°F)	ASTM E228	10e-6 in/in/F	0.28		
CLTE (130°-200°F)	ASTM E228	10e-6 in/in/F	0.13		

Properties are typical and not legally guaranteed.



## WHAT ARE DENSIFIED FOAM PRODUCTS?

Currently DuPont™ Vespel® is providing open-cell densified foam products to an aircraft powerplant manufacturer. Its current application is a high-temperature seal. Vespel® provides densified foam in the form of finished parts machined to customer specifications.

### USE VESPEL® SF FOAM TO:

- Isolate systems of varying pressures
- Insulate ducts and pipes from temperature variations
- Provide acoustic insulation
- Provide structural stability
- Use in gasket-type applications
- Protect surfaces in harsh environments

### WHAT ARE THE BENEFITS?

- Excellent sealing properties due to abradable (self-cut) sealing
- Increased engine efficiency
- Less downtime, highly durable
- Safe: Does not burn, off gass or release toxic fumes
- Lightweight design



### WHAT ARE POTENTIAL APPLICATIONS?

Applications in which temperature resistance, weight, vibration and sealing are a concern. Typical markets and applications may include:

#### AERO-ENGINES & AERO-FRAMES

- Stator vanes seals
- Variable bushing packing
- Nacelle insulation
- Reinforced composite panels

#### INDUSTRIAL MARKETS

- Machinery
- Vibration isolation for oven shelves
- Material handling equipment
- High temperature gaskets

#### TRANSPORTATION MARKETS

- General aviation, ultralight composite aircraft
- Automotive (commercial & racing)

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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."