



## TECHNICAL DATA

# PES Foam | Divinycell F

### PES foam with excellent FST properties

Divinycell F is a recyclable, prepreg-compatible sandwich core designed specifically for commercial aircraft seating and cabin interiors. Offering outstanding Fire, Smoke, and Toxicity (FST) performance, it fully meets US and European regulatory requirements for safety. In addition to its FST compliance, Divinycell F delivers strong mechanical properties, long fatigue life, and excellent processing characteristics.

With compatibility across major aerospace manufacturing processes, it provides both performance and efficiency for demanding interior applications. Certified for aerospace – meets US and European FST regulations for commercial aircraft interiors. High-temperature capability – suitable for vacuum bag processing up to 428 °F and press processing up to 428 °F.

### Mechanical properties

Property	Test Procedure	Unit		F40	F50	F90	F130
Compressive Strength	ASTM D 1621	psi	Nominal	51	87	174	247
			Minimum	36	80	130	188
Compressive Modulus	ASTM C 365	psi	Nominal	1,305	2,680	4,930	8,700
			Minimum	943	1,665	3,770	5,800
Tensile Strength <sup>1</sup>	ASTM D 1623	psi	Nominal	218	276	406	479
			Minimum	181	210	326	348
Shear Strength	ASTM C 273	psi	Nominal	87	116	203	247
			Minimum	58	79	152	203
Shear Modulus <sup>2</sup>	ASTM C 273	psi	Nominal	1,230	1,930	3,480	4,350
			Minimum	768	1,450	2,030	3,480
Shear Strain	ASTM C 273	%	Typical	60	60	60	60
Density <sup>3</sup>	ASTM D 1622	lb/ft <sup>3</sup>	Nominal	2.5	3.1	5.6	8.1

1. Type B specimen, flatwise tension, equivalent to ASTM C 297
2. Tension mode
3. Tolerance ±10%

For optimal design of applications used in high operating temperatures in combination with continuous load, please contact Diab Technical Services for detailed design instructions.

### Product characteristics

- Excellent FST properties
- Excellent hot/wet performance
- Exceptional OSU heat release performance
- High temperature resistance
- Good chemical resistance
- Hot and cold formable
- Low water absorption
- Acoustic and thermal insulation
- Recyclable -zero waste
- No film adhesive required
- Processing efficiency -no need to edge fill

### Typical application areas



Aerospace

### Customers

B/E Aerospace  
C&D Zodiac  
Hawker Beechcraft  
Heath Tecna

### Specifications

Multiple  
CDM660  
050FS12x  
HMS-B4-001

## Technical characteristics

Characteristic <sup>1</sup>	Standard	Test method	F40	F50	F90	F130
Coefficient of Linear Expansion	ASTMD 696	-	20x10 <sup>-6</sup> /°F	20x10 <sup>-6</sup> /°F	20x10 <sup>-6</sup> /°F	20x10 <sup>-6</sup> /°F
On set Tg	-	-	401°F	401°F	401°F	401°F
Tg	-	-	437°F	437°F	437°F	437°F
Open cell	ASTMD 6226	-	<10%	<10%	<10%	<10%
Dissipation Factor	ASTMD 2520	Method A	0.0011	0.0009	0.0022	0.0070
Dielectric Constant			1.06	1.06	1.13	1.17
Thermal Conductivity, Btu x in / (ft <sup>2</sup> x hr x °F) at 73,4°C	ASTMC 177	-	0.27	-	0.25	0.27
	ASTMC 518	-	-	0.25	-	-
Vertical Burn, 60 sec	FAR / CS 25, Appendix F	Part I (a)(1)(i)	Pass	Pass	Pass	Pass
Heat Release, Peak / Total	FAR / CS 25.853 Appendix F	Part IV	<25 / <20	<25 / <20	<25 / <20	<25 / <20
	Airbus ABD 0031	AITM 2.0006				
	Boeing BSS 7322	ASTM E906				
Smoke Density <sup>2</sup> , Ds4, Ds1.5	FAR / CS 25.853 Appendix F	Part V	<1	<1	2	2
	Airbus ABD 0031	AITM 2.0007				
	Boeing BSS 7238	ASTM E662				
Combustion Toxicity <sup>2</sup>	Airbus ABD 0031	AITM 3.0005	Pass	Pass	Pass	Pass
	Boeing BSS 7239	ASTM E662				

1. Typical value
2. Flaming mode

Maximum temperature is dependent on time, pressure and process conditions. Therefore users are advised to contact Diab Technical Services to confirm that Divinycell F is compatible with their particular processing parameters.

## Dimensions

Format		Unit	F40	F50	F90	F130
Plain sheets	Length	inch	96	96	96	96
	Width	inch	48	48	42	38
Colour			White	White	White	White

Tolerances	Unit	Length	Width	Thickness
Plain sheets	inch	-0.12/+0.24	-0.12/+0.12	-/+0.0098

1. Thickness tolerance of -/+ 0.0079 inch is available upon request.

## Storage of product

The shelf life of Divinycell is unlimited when it is stored in its original package on ambient indoor storage conditions and protected against UV exposure.

### Disclaimer:

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