

**Gillfloor™ 4417 Panel**

September 2005

Description

Gillfloor 4417 is a light weight aircraft flooring panel made from unidirectional fiberglass reinforced epoxy facings bonded to aramid honeycomb core.

Applications

Versatile aircraft flooring panels suitable for passenger compartment underseat, aisles, entries, and galleys, and cargo compartment, depending on type.

Features

- Fatigue and corrosion resistant.
- Very high impact facings.
- High strength-to-weight ratio.
- Service temperature range: to 180°F.

Specifications

- Boeing Specification BMS 4-17: Types I, II, III, IV, V, IX; Drawing 69B15779: Type VB; D204-30838-1: Types II, V.
- Douglas Products Div./Boeing Drawing BZZ7002: Types I, II.
- United Airlines Specification SHE 2903: Types 1, 2, 3, 4, 6.
- FAR 25.853 - fire resistant.

Construction

	Type I	Type II	Type III	Type IV	Type V	Type IX
Facings:	.015"	.015"	.022"	.015"	.030"	.030"
Core:	5 pcf	9 pcf	9 pcf	5 pcf	11 pcf	12 pcf
Adhesive:	Modified, Fire Retardant Epoxy					

Availability

Thickness:	Boeing and Douglas Div. Types I, II, III, V, and IX: 0.39" to 0.41" - Type IV: 0.65" to 0.68" United Airlines Types 1, 2, 3, 6: 0.39" – 0.41"; Type 4: 0.65" – 0.68"
Length:	Per specification to 144", or to 168" on special order.
Width:	Per specification to 48", or to 72" on special order.



Standard Tolerances

Thickness: $\pm .01$ "
 Length and Width: +0.5", -.062"
 Warpage: <.025"/ft. @ 0.4" thickness

Alternative Gill Products

Product Number	Difference
Gillfab 4017T	Qualified to McDonnell Douglas Drawing BZZ 7002. Qualified to British Aerospace MAT 003: Types 1 and 2. Embraer MEP 15-031: Types I, II, III.
Gillfab 4417A	Qualified to Boeing BMS 4-17 and D204-30838-1: Type VI.

**Properties of Gillfloor 4417
Typical Properties**

Property	Test Method	Type I	Type II	Type III
Weight, psf, max.	BMS 4-17	.515	.628	.758
Thickness, in.	BMS 4-17	.396	.397	.400
Long beam flexural strength	ASTM C 393			
Load, lb.		273	291	382
Deflection @ 100 lbs., in.		.796	.792	.540
After humidity exposure:				
Load, lb.		244	252	298
Panel shear, lb.	ASTM C 393	585	953	1,086
Sandwich peel, in.-lb./3 in.	ASTM D 1781	32	35	31
After humidity exposure:				
Sandwich peel, in.-lb./3 in.		39	52	49
In-plane shear, lb/in	BMS 4-17	385	444	382
Insert shear, lb.	BMS 4-17	1,839	1,957	1,931
Core compression, psi	ASTM C 365	846	2,030	2326
Roller cart test, lb/wheel	BMS 4-17	98	120/158	120/158
Number of cycles		83,964*	121,020/38,427*	120,001/35,083*
Impact strength, in.-lb.	ASTM D 3029	45	45	50
Flammability				
60 second vertical	BSS 7230 (F1)			
Self-extinguishing time, sec.		2.8	3.8	7.9
Burn length, in.		2.1	2.0	1.8
Drip extinguishing time, sec.		0	0	0
45 degree test	BSS 7230 (F5)			
Self-extinguishing time, sec.		1.8	2.4	2.8
Penetration		None	None	None
Glow time, sec.		0	0	0
*No Failure				



**Properties of Gillfloor 4417
Typical Properties**

Property	Test Method	Type IV	Type V, IX
Weight, psf, max.	BMS 4-17	.637	1.07
Thickness, in.	BMS 4-17	.659	.402
Long beam flexural strength	ASTM C 393		
Load, lb.		518	856
Deflection @ 100 lbs., in.		.261	.327
After humidity exposure:			
Load, lb.		460	524
Panel shear, lb.	ASTM C 393	840	1,190
Sandwich peel, in.-lb./3 in.	ASTM D 1781	32	39
After humidity exposure:			
Sandwich peel, in.-lb./3 in.		50	49
In-plane shear, lb/in	BMS 4-17	408	945
Insert shear, lb.	BMS 4-17	1,719	2,335
Core compression, psi	ASTM C 365	771	3,874
Roller cart test, lb/wheel	BMS 4-17	98	168/198
Number of cycles		83,804*	125,023/35,396*
Impact strength, in-lb	ASTM D 3029	45	120
Flammability			
60 second vertical:			
Self-extinguishing time, sec.	BSS 7230 (F1)	1.3	3.4
Burn length, in.		2.1	.8
Drip extinguishing time, sec.		0	0
45 degree test:			
Self-extinguishing time, sec.	BSS 7230 (F5)	2.1	1.4
Penetration		None	None
Glow time, sec.		0	0
*No Failure			
**NR Means Not Required			

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