



## Gillfab™ 1367 Laminate

December 2002

### Description

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Gillfab 1367 is a very high impact resistant, low smoke and toxicity, fiberglass reinforced phenolic laminate.

### Applications

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Aircraft cargo compartment liner.

### Features

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- High mechanical strength, puncture resistance and corrosion resistance.
- Service temperature range: To 220F.
- White Tedlar overlay on face side for surface reflectivity.

### Specifications

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- Boeing BMS 8-223 CI 2 Gr B, all types
- McDonnell Douglas specification DMS 2419 Ty 50-90
- LAC-C-22-1249 CI 3
- FAR Part 25 Appendix F Parts I and III (Burn Through)
- ATS 1000.001.

### Availability

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Thickness:	.013", .020", .030", .040", .050" and .070"
Length:	Up to 168". Also available in rolls up to 150' (if .030" or thinner and 60" or narrower).
Width:	Up to 72".
Color:	White on face side, amber on back side.



## Construction

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Resin: Modified phenolic.  
Reinforcement: Woven glass cloth.  
Surface: 1 mil Tedlar overlay.

## Standard Tolerances

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Thickness: +/- .003" (.013" and .020"); all other  $\pm$  10%  
Length: + 0.5", - 0"  
Width: + 0.5", - 0"  
Warp Twist: 3% of dimension measured

## Alternative Gill Products

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Product Number	Difference
Gilliner 1366	Equivalent mechanical properties with 20-25% weight savings over 1367/1367A. Qualified to BMS 8-223 CI 4 Gr A.
Gillfab 1367A	High impact resistant cargo liner. Polyester resin system has higher smoke emission; qualified to Boeing Specification BMS 8-2 CI 2 Gr B.
Gillfab 1367B	Similar to 1367, but lower impact resistance.
Gillfab 1367C	Same as 1367A but manufactured in roll stock in lengths up to 150' and up to .030" thick



## Properties of Gillfab 1367

Typical Average Property Values

Property	Test Method	Unit	Type 13	Type 20
Weight	BMS8-223	lb/sq ft (kg/sq m)	0.121 (.59)	0.195 (0.95)
Thickness	BMS8-223	inch (mm)	0.013 (0.33)	0.021 (0.53)
Water Absorption	FTMS 406-7031	%	.8	1.1
Impact	BMS8-223 TESTER #3	ft-lb (N-m)	11 (14.9)	15 (20.4)
Impact	DMS2419	ft-lb (N-m)	>32 (>43.4)	>40 (>54.3)
Drum Peel Note 1 Warp Fill	BMS8-223	in-lb (N-m)/3 in width in-lb (N-m)/3 in width	56 (6.3) --	55 (6.2) 66 (7.5)
Edge Bearing Warp Fill	BMS8-223	ksi (MPa) ksi (MPa)	37 (254) 34 (235)	39 (268) 36 (249)
Tedlar Peel Warp Fill	BMS8-223	lb/in (kg/m) lb/in (kg/m)	3.0 (54) 2.6 (46)	3.7 (66) 2.7 (48)
Flexural Note 2 Strength Modulus	MIL-STD-401B	ksi (MPa) msi (GPa)	NR NR	27 (184) 2.1 (14.2)
Tensile Note 2 Strength Modulus	DMS 2226	ksi (MPa) msi (GPa)	54.5 (375.8) 3.16 (21.8)	60.6 (417.8) 2.5 (17.2)
Bolted Joint Strength	DMS 2226	lb (N)	103.3 (46.9)	193 (87)
Flammability - 60 Second Vertical Self-Extinguishing Time Burn Length Drip Extinguishing Time	BMS 7230	second inch (mm) second	0 2.3 (57) None	0 2.7 (68) None
Flammability - 45 Degree Self-Extinguishing Time Glow Time Penetration	DMS 1508	second second ---	0 1.7 None	0.5 1.8 None
Smoke Density	ASTM 662	D <sub>s</sub>	21.7	35.3
Oil Burner Note 3	FAR 25.855	---	Pass	Pass
<p>Note 1 - On Type 13, drum peel in the fill direction resulted in fabric tearing and no data could be obtained.</p> <p>Note 2 - Reported only in warp direction.</p> <p>Note 3 - Test performed by U. S. Testing in accordance with the procedure outlined in Appendix F, Part III of FAR 25.855, "Oil Burner - Burn through Resistance".</p> <p>NR = No Requirement</p>				



Property	Test Method	Unit	Type 30	Type 40
Weight	BMS8-223	lb/sq ft (kg/sq m)	0.293 (1.43)	0.375 (1.83)
Thickness	BMS8-223	inch (mm)	0.031 (0.79)	0.040 (1.02)
Water Absorption	FTMS 406-7031	%	0.9	1.1
Impact	BMS8-223 TESTER #3	ft-lb (N-m)	19 (25.8)	25 (33.9)
Impact	DMS2419	ft-lb (N-m)	>50 (>67.8)	>50 (>67.8)
Drum Peel Warp Fill	BMS8-223	in-lb (N-m)/3 in width in-lb (N-m)/3 in width	16 (21.7) 24 (32.6)	15.7 (21.3) 15.7 (21.3)
Edge Bearing Warp Fill	BMS8-223	ksi (MPa) ksi (MPa)	40 (275) 38 (262)	42 (290) 40 (275)
Flexural Note 1 Strength Modulus	MI-STD-401B	ksi (MPa) msi (GPa)	39.1 (267) 2.57 (17.7)	NR NR
Tedlar Peel Warp Fill	BMS8-223	lb/in (kg/m) lb/in (kg/m)	3.2 (57.1) 2.8 (50)	3.9 (69.6) 4.2 (75.0)
Tensile Note 1 Strength Modulus	DMS 2226	ksi (MPa) msi (GPa)	57.9 (399.2) 2.50 (17.2)	NR NR
Bolted Joint Strength	DMS 2226	lb (N)	286.9 (130.3)	NR
Flammability -60 Second Vertical Self-Extinguishing Time Burn Length Drip Extinguishing Time	BMS 7230	second inch (mm) second	0 2.6 (65) None	0 1.7 (44) None
Flammability - 45 Degree Self-Extinguishing Time Glow Time Penetration	DMS 1508	second second ---	0 1.7 None	0 0 None
Smoke Density	ASTM 662	D <sub>s</sub>	31.6	42.8
Oil Burner - Note 2	FAR 25.855	---	Pass	Pass

Note 1 - Reported only in warp direction.

Note 2 - Test performed by U. S. Testing in accordance to the procedure outlined in Appendix F, Part III of FAR 25.855, "Oil Burner - Burn through Resistance".

NR = No Requirement



Property	Test Method	Unit	Type 50	Type 70
Weight, psf	BMS8-223	lb/sq ft (kg/sq m)	0.465 (2.27)	0.658 (3.21)
Thickness, in.	BMS8-223	inch (mm)	0.050 (1.27)	0.065 (1.65)
Water Absorption	FTMS 406-7031	%	1.25	1.0
Impact	BMS8-223 TESTER #3 DMS2419	ft-lb (N-m)	37 (50.165)	47 (63.723)
Edge Bearing Warp Fill	BMS8-223	ksi (MPa) ksi (MPa)	42,000 (290) 40,000 (275)	47,000 (324) 45,000 (310)
Tedlar Peel Warp Fill	BMS8-223	lb/in (kg/m) lb/in (kg/m)	0 (0) 0 (0)	0 (0) 0 (0)
Flammability -60 Second Vertical Self-Extinguishing Time Burn Length Drip Extinguishing Time	BMS 7230	second inch (mm) second	3.0 1.6 No Drips	3.0 1.3 No Drips
Smoke Density	ASTM 662	D <sub>s</sub>	45	47
Oil Burner - Note 1	FAR 25.855	---	Pass	Pass

Note 1 - Test performed by SGS/US. Testing in accordance with the procedure outlined in Appendix F, Part III of FAR 25.855, "Oil Burner - Burn through Resistance".

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