

# TECHNICAL DATA SHEET

Permal  
Gloucester

## PERMAGLASS CARGO LINING

09/03/01 Issue 05

### XERTT6/9

#### BENEFITS

- ♦ Very high mechanical strength and stiffness
- ♦ Excellent durability in service

Permaglass XERTT6/9 is a self extinguishing, unidirectional, glass-fibre/epoxy cargo lining laminate offering excellent in-service life. This material is approved by Boeing to specification BMS 8-100J and by British Aerospace to specification AVN 3-004.

#### Impact Strength

<u>Type</u>	<u>Nominal Thickness</u>		<u>Impact Strength (BMS8-100 minimum)</u>		<u>Impact Strength (typical)</u>	
	<u>ins.</u>	<u>mm</u>	<u>ft.lbs</u>	<u>kg.cm</u>	<u>ft.lbs</u>	<u>kg.cm</u>
20	0.02	0.5	6	83	7	97
30	0.03	0.76	10	138	12	166
40	0.04	1	12	166	14	193
50	0.05	1.27	20	276	21	291
60	0.06	1.52	-	-	30	414
70	0.07	1.78	40	552	44	605

#### Thickness tolerance and weight

<u>Type</u>	<u>Thickness Tolerance</u>		<u>Weight (BMS8-100 maximum)</u>		<u>Weight (typical)</u>	
	<u>ins.</u>	<u>mm</u>	<u>lbs/sq.ft</u>	<u>Kg/m<sup>2</sup></u>	<u>lbs/sq.ft</u>	<u>kg/m<sup>2</sup></u>
20	+/-0.002	+/-0.05	0.24	1.17	0.23	1.12
30	+/-0.003	+/-0.75	0.35	1.71	0.33	1.61
40	+/-0.004	+/-0.10	0.46	2.25	0.43	2.1
50	+/-0.005	+/-0.125	0.57	2.78	0.57	2.78
60	+/-0.006	+/-0.15	-	-	0.68	3.32
70	+/-0.007	+/-0.175	0.81	3.95	0.79	3.86

#### Other Properties

<u>Property</u>	<u>Units</u>	<u>Direction</u>	<u>BMS 8-100</u>	
			<u>Specification Minimum</u>	<u>Typical</u>
Compressive	Kg/cm <sup>2</sup>	Warp (A)	3,900	4,300
Ultimate	Kg/cm <sup>2</sup>	Fill (B)	3,200	3,900
	psi	Warp (A)	55,000	61,000
	psi	Fill (B)	45,000	55,000

<u>Property</u>	<u>Units</u>	<u>Direction</u>	<u>BMS 8-100 Specification Minimum</u>	<u>Typical</u>
<b>Compressive Modulus</b>	Kg/cm <sup>2</sup> x 10 <sup>6</sup>	Warp (A)	0.32	0.42
	Kg/cm <sup>2</sup> x 10 <sup>6</sup>	Fill (B)	0.30	0.44
	psi x 10 <sup>6</sup>	Warp (A)	4.5	6.25
	psi x 10 <sup>6</sup>	Fill (B)	4.2	6.15
<b>Tensile Ultimate</b>	Kg/cm <sup>2</sup>	Warp (A)	5,500	7,250
	Kg/cm <sup>2</sup>	Fill (B)	5,250	6,550
	psi	Warp (A)	77,800	103,000
	psi	Fill (B)	75,000	93,000
<b>Flexural Ultimate</b>	Kg/cm <sup>2</sup>	Warp (A)	6,300	9,650
	Kg/cm <sup>2</sup>	Fill (B)	5,250	7,650
	psi	Warp (A)	90,000	137,000
	psi	Fill (B)	75,000	109,000
<b>Flexural Modulus</b>	Kg/cm <sup>2</sup> x 10 <sup>6</sup>	Warp (A)	0.25	0.33
	Kg/cm <sup>2</sup> x 10 <sup>6</sup>	Fill (B)	0.22	0.26
	psi x 10 <sup>6</sup>	Warp (A)	3.6	4.75
	psi x 10 <sup>6</sup>	Fill (B)	3.1	3.75
<b>Water Absorption (Percentage weight increase)</b>			0.5	0.03
<b>Bond Strength</b>	Kg/cm <sup>2</sup>		56	81
	psi		800	1160

## FLAMMABILITY

(a) 12 secs vertical		
Self extinction time	15 secs (Max)	0 secs
Burn length	8 inch (203mm) (Max)	0.5" (12.7mm)
Drip extinction time	5 secs (Max)	No drip
(b) 60 secs vertical		
Self extinction time	15 secs (Max)	0 secs
Burn length	6" (152mm) (Max)	1.5" (38mm)
Drip extinction time	3 secs	No drip
(c) Fire Resistance 30 secs @ 45°		
Self extinction time	15 secs (Max)	0 secs
Afterglow	10 secs (Max)	<1 sec
Flame Penetration	None	None

(d) Meets FAR25.855 App.F Part III Amendment 25-60, ceiling and sidewall burn-through test.

Figures quoted are typical, but the requirements of BMS8-100J/AVN3-004 are always met.

### **Finish**

This material is normally supplied with white Tedlar surfaces.

### **Standard sheet sizes:**

96" x 48", 144" x 48", 124" x 65". Other sizes may be available on request.