

# TECHNICAL DATA SHEET

**Permal**  
**Gloucester**

## PERMAGLASS CARGO LINING

28/06/01 Issue 6

### WFT/3

#### BENEFITS

- ♦ High impact strength
- ♦ Excellent edge pull-out resistance
- ♦ Low smoke and toxic fume emissions

Permaglass WFT/3 is a woven glass/phenolic cargo liner offering very high impact resistance. It is approved by Boeing to BMS8-223, class 3, and is applicable to the 737, 747, 757 and 767 aircraft.

#### Impact Strength ( To Boeing BMS8-223 Class Drop Impact )

Type	Nominal Thickness		Impact ft.lbs	Weight lbs/ft <sup>2</sup>
	ins	Tolerance		
13	0.013	± .003	8	0.13
20	0.020	± .003	15	0.20
30	0.030	± .003	18	0.30
40	0.040	± .004	26	0.40
50	0.050	± .005	30	0.50
70	0.070	± .007	36	0.70

#### Edge Bearing ( To Boeing BMS8-223 Class 3 )

Type	psi	MPa
13	30,000	207
20	35,000	241
30	40,000	276
40	40,000	276
50	40,000	276
70	40,000	276

#### Flammability ( To Boeing BSS 7230 )

	Actual	BMS8-223
(A) 60 secs vertical		
Self extinction time	Inst	5 secs (max)
Burn length	3 in (75mm)	5 in (max)
Drip time	No Drips	0 secs (max)
(B) Fire resistance, 30 secs @ 45°		
Self extinction time	Inst	5 secs (max)
Afterglow	None	5 secs (max)
Flame Penetration	None	None

## Flammability to FAR 25.855 App.F Part 111 Amendment 25-60

	<b>Ceiling Specimen Type</b>	<b>Flame Penetration</b>	<b>Back Face Temperature (Mean)</b>
	13	NONE	215°F
	20	NONE	200°F
	30	NONE	215°F
	40	NONE	200°F
	50	NONE	190°F
Requirement	--	NONE	400°F

## Smoke Density and Toxicity of PERMAGLASS WFT/3

### Method of Test

- Defined in NBS Technical Note 708
- Samples subjected to flaming combustion
- Toxic gases analysed by Draeger Tube method

## Maximum Smoke Density (Dm) versus Time. ( Type 40 material )

<b>Time Mins (Dm)</b>	<b>Boeing Design Large Area (Dm)</b>	<b>Results</b>	<b>Anticipated F.A.A. Requirements Large Area</b>	
1.5	Not Specified	0	100	
4.0	50	5	200	

## Toxicity

Time in Minutes	4	4	4	4	4
Toxicant	CO	HCN	HF	HCL	NO <sub>2</sub>
Concentration p.p.m.	200	2	15	37	0
Boeing maximum p.p.m.	1,000	20	50	150	20

## Standard Sizes:

96" x 48" ( 2438 x 1220 mm )  
144" x 48" ( 3657 x 1220 mm )  
120" x 36" ( 3050 x 914 mm )  
124" x 65" ( 3150 x 1651 mm )  
144" x 60" ( 3657 x 1524 mm )

Other sizes available on application.

## Finish

Standard finish:- White Tedlar one side

Also available:- Tedlar both sides or without Tedlar

Figures quoted are typical but in all cases meet or exceed BMS8-223 Class 3 requirements