

TECHNICAL REPORT



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Our Ref: **TFFOF22276**
Date: 8 May 2008
Delivery Date: 24 April 2008
Test Dates: 25 April – 7 May 2008

For the attention of Morgan O'Hara

SAMPLE (S) FOR TEST:

One, white foam Ref: CMHR 25HC

Note: The above descriptions are as supplied by the client and have not been verified by FIRA who can take no responsibility for the accuracy of the description.

TEST REQUIREMENTS:

BS EN ISO 3385: 1995 – constant load pounding test
BS EN ISO 845: 1995 – determination of bulk density
BS EN ISO 1856: 2001 – compression set test
BS ISO 13362: 2000 – humid compression set test

RESULT:

Average
N/A
Extremely Severe
Severe

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DESCRIPTION

Item: One, white foam Ref: CMHR 25HC

Initial Inspection: Condition as new

Conditioning: ≥ 16 hours at $23 \pm 2^\circ\text{C}$ & $50 \pm 5\%$ rh

TEST RESULTS

DETERMINATION OF FATIGUE CLASS BY CONSTANT LOAD POUNDING – BS EN ISO 3385: 1995

	1 (A)	2 (B)	3 (C)
Thickness (mm)	50.67	49.46	50.82
Indentation Hardness Index (N) <i>(according to BS EN ISO 2439)</i>	(101.0) 100	(100.7) 100	(103.6) 105
Hardness grade	100	100	100
Thickness after Pounding (mm)	49.15	47.70	49.18
Hardness after Pounding (N)	(61.9) 62	(61.3) 61	(65.5) 66
Thickness Loss (mm)	1.52	1.76	1.64
	(%) 3	(%) 4	(%) 3
Hardness Loss (N)	38	39	39
	(%) 38	(%) 39	(%) 37
Fatigue Class	Average	Average	Average

Temperature		RH	
Min	Max	Min	Max
16°C	23°C	32%	44%

This test was conducted on the original FIRA pounding machine.

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DETERMINATION OF APPARENT (BULK) DENSITY TO BS EN ISO 845: 1995

Sample No.	1
Volume (m)	0.0072
Mass (kg)	0.209
Density (kg/m ³)	29.0

COMPRESSION SET – BS EN ISO 1856: 2001 Method A (70°C for 22 hours at 75% compression)

Specimen	Before	After	% Compression Set
1	25.45	23.59	7
2	25.43	23.49	8
3	25.35	23.46	7
4	25.37	23.48	7
5	25.34	23.39	8
MEAN % COMPRESSION SET – 7%			

HUMID COMPRESSION SET – BS ISO 13362: 2000 (40°C and relative humidity of 95-100% for 22 hours at 70% compression)

Specimen	Before	After	% Compression Set
1	51.32	28.51	44
2	51.81	30.91	40
3	51.71	27.93	46
MEAN % COMPRESSION SET – 43%			

Tested, reported and approved by:

Katie Donovan
Section Leader, Physical Upholstery Testing

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Typical applications for different class foams
(Taken from BS 3379: 2005)

Class	Type of Service	Recommended Application
X	Extremely severe	Heavy duty contract seats Heavy duty public transport seats
V	Very severe	Public transport seats Cinema and theatre seats Contract furniture seats
S	Severe	Private and commercial vehicle seats Domestic furniture seats Public transport backs and armrests Cinema and theatre backs and armrests Contract furniture backs and armrests Domestic foam mattresses (excluding cores)
A	Average	Private vehicle backs and armrests Domestic furniture backs and armrests Component layers for domestic mattresses (excluding cores)
L	Light	Padding Scatter cushions Pillows