

Test Report

Specification: Australian Standard AS 8811 testing infant products
Method 1: Sleep Surfaces – Test of Firmness

Client:	Hart Sport PO Box 379 Virginia BC Qld 4014 Australia
Contact:	Adrian Killorn
Date of Receipt:	10/01/2024
Date of Test:	20/01/2024
Date of Report:	13/03/2024
Report Number:	6747

Date

13th March 2024

Laboratory Director



Grant Humphreys

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Material Identification Sample As received:

23-130 density foam with red vinyle covering
Size 60 x 1360 x 51 mm, Volume= 2.08 m³, Density = 0.020 kg/m³.

Archiving:

The sample of the material archived for future identification purposes.

Preparation:

The samples were conditioned in laboratory at 23°C at humidity of 50%

Dates of test: 20/01/2024

Location of Testing: 44/59-69 Halstead Street, South Hurstville, NSW 2221

Testing Officer: Grant Humphreys

Temperature (surface): 23°C

Humidity 50 %

Testing to: Australian test method AS-NZS-8811-1-2013

Expert advice to caregivers, nationally and internationally, specifies a 'firm' sleep surface, without quantifying the minimum acceptable firmness or a method for determining it. This document presents a test method for evaluating the firmness of infant furniture items where an infant might be reasonably expected to fall asleep on a mattress or other approximately horizontal surface (e.g. cot, pram, infant cocoon, infant sleep mat, bassinet, cradle, carrycot, etc.).

Test equipment:

Apparatus

The apparatus, shown in Photo 1, consists of a circular bottom disk of specified diameter and thickness, with two flat, parallel faces, a feeler arm clamped tight to the centre of the upper disk face and extending over the edge of the disk by a specified amount, a linear level mounted on a parallel plane and in a parallel direction to the feeler arm, and a handle arrangement which includes a lower collar to clamp the centred end of the feeler arm in place.

The bottom disk shall have a diameter of 203 ± 1 mm, and a thickness of 15 ± 0.2 mm. The radius of the lower edge of the disk shall not be larger than 1 mm. The feeler arm shall be a lightweight, flexible, flat bar 12 ± 0.2 mm wide with square-cut ends, positioned over a radial axis of the disk (i.e. over an imaginary line radiating outward from the centre of the disk), and overhanging the edge of the disk by 40 ± 2 mm. Hacksaw blade material may be suitable for the feeler arm.

The level shall not overhang the edge of the disk.

A handle should be included to facilitate easy positioning of the apparatus. The total mass of the apparatus shall be 5200 ± 20 g

Procedure:

Allow the sleep surface to settle for at least five minutes.

Mark three equidistant points on the longitudinal centre-line of the sleep surface. One of the points shall be at the centre. The other two shall be symmetrically located at opposite sides of the centre, and each shall be equidistant between the centre and the corresponding end. The test apparatus shall be placed in turn on each of these marks, with the bottom disk approximately centred on the mark and with the feeler arm aligned with the centre-line of the sleep surface and pointing in the same direction for each test. In addition, nominate a single location, on or away from the longitudinal centre-line, that represents a subjective 'worst case' scenario, where an infant's head might lay in a particularly soft spot, or an infant's nose/mouth might contact a fold or undulation protruding above the average plane of the sleep surface. In this case, the test apparatus shall be placed such that the feeler arm, representing the infant's nose/mouth, covers the section of the sleep surface that would pose the greatest potential to block the infant's airway.

Holding the apparatus with its base in a horizontal orientation and rotating the apparatus to align the feeler arm as required, set the apparatus down gently on one of the locations identified in Step (e), ensuring that the edge of the bottom disk does not overhang the edge of the sleep surface. If the level indicates an approximately level orientation of the feeler arm when the apparatus rests on the sleep surface, observe whether the feeler arm makes any contact with the top of the sleep surface or any covering thereof. If the feeler arm is not in an approximately level orientation while the apparatus rests on the surface, as indicated by the level, start again from Step (a) above. However, if the feeler arm contacts the sleep surface even when the test apparatus is tilted back so as to raise the feeler arm, it can be assumed that such contact would occur had the apparatus come to rest more horizontally.

Equipment	Acoustoscan Number
Weight 5,2kg	AS0242
Feeler probe	AS0172
Temperature Probe	AS0377
Temperature/Humidity Recorder	AS0370
Vernier Calliper	AS0093

Results: Photos Of the testing

Checked By GH Date 13/03/2024
Accredited for compliance with ISO /IEC 17025 - Testing .





Photo 1:
Depicts the feeler arm at 40mm



Photo 2:
Depicts the feeler arm 16mm above the surface Passing



Photo 3
Depicts the total weight of the apparatus
5.20 kg



Photo4
Shows the measure from the feller gauge to the mat 15mm

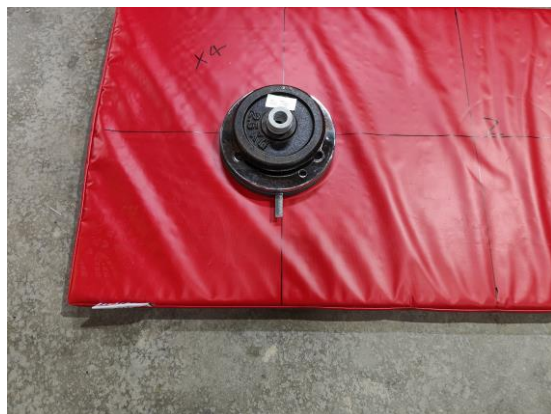


Photo 5
Shows the location of the test on the mat



Photo 6
Shows the 4 Positions to test
At each Position, the apparatus was rotated around the position four times, North , East, South, West



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TEST CERTIFICATE

**Sleep Surface to AS8811 "Red Mat " supplied by
"Hart Sports"**

This is to certify that the product, as received by **Hart Sports**, has been assessed according to the test procedure described in **Australian Standard: AS 8811**. The sample was conditioned at 23 deg and 50% Humidity for 48hrs before and during the test .

Sleep Compression test with 5.2kg on the Red Mat

Test Date	Location	N mm	E mm	S mm	W mm
20/01/2023	Position 1	15	15	15	15
20/01/2023	Position 2	15	15	15	15
20/01/2023	Position 3	15	15	15	15
20/01/2023	Position 4 Top Left	15	15	15	15

AcoustoScan is a NATA Laboratory but does not have AS8811 in its scope of accreditation. It has weight, temperature and humidity in its scope of accreditation.

The Red Mat supplied by Hart Sport **Passed** the testing to AS8811 Method 1: Sleep Surfaces – Test of Firmness.

A handwritten signature in blue ink, appearing to read 'Grant Humphreys'.

Grant Humphreys
Laboratory Director
Date: 06/04/2023

Checked By GH Date 13/03/2024
Accredited for compliance with ISO /IEC 17025 - Testing .

A handwritten signature in blue ink, appearing to read 'Grant Humphreys'.

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