

SECTION 2

SUMMARY AND CONCLUSION

Date Received: 7-June-2019
Date(s) Tested: 10-June-2019 to 28-June-2019

DESCRIPTION OF SAMPLES

Part Description: Titan mattress, queen size
Condition of Test Sample: Vacuum wrapped, undamaged in corrugate carton. See "as received images under Photographs heading in body of report below.
Number of Samples Tested: One (1)

WORK REQUESTED/APPLICABLE DOCUMENTS

To test the submitted samples to the following tests according to ASTM F1566-14

#	SECTION	TEST DESCRIPTION	RESULT
1	6	Firmness Rating	Information only
2	7	Durability Test	Information only
3	6	Firmness Rating	Information only

CONCLUSION

ASTM F1566 – 14 does not specify acceptance criteria. Data and results are for informational purposes only.

SAMPLE DISPOSITION

Sample discarded at client request per e-mail dated 1-July-2019

LOCATION OF TESTING

All testing performed at Intertek in Kentwood, MI.

TEST EQUIPMENT:

ASSET	DESCRIPTION	CAL DATE	CAL DUE
138331	Dickson temp/humidity logger	1/29/2019	1/29/2020
138012	1,000lb x 0.25lb beam scale	10/15/2018	10/15/2019
138206	Load/Deflection machine	2/26/2019	2/27/2020
138206.1	Load cell, model U3-2KN	2/27/2019	2/26/2020
138500.08	Scientific stopwatch	10/2/2018	10/2/2019
138208	Rolling load mattress tester AX2	VBU	VBU
138208.2	ASTM F1566 roller	VBU	VBU

ASTM F1566 – 14, SECTION 6: FIRMNESS RATING

Date(s) Tested: 10-June-2019, 18-June-2019, 20-June-2019, 22-June-2019, 24-June-2019, 26-June-2019, 28-June-2019

TEST PROCEDURE:

Test Method: Per ASTM F1566 – 14, Section 6 Firmness Rating

Test Set-up:

- 1) Prior to testing the sample shall be conditioned according to ASTM F1566-14 Section 5 Place specimen directly onto a rigid flat surface.
- 2) Pre-flex the area to be tested by twice lowering the platen at a rate of 250mm/min to a load of 778±5N. Allow the sample to rest 6 ± 1 min after pre-flex.
- 3) Preload the sample to 4.4N. Record overall height of sample with 4.4N applied. Begin recording resistance values, rounded to the nearest 2N, at 12.5mm intervals with a tolerance of ±1mm until a 778N load is achieved.
- 4) The zero-reference point and height of sample shall be determined using a common contact force of 4.4N

Test Speed: 50 ± 5 mm/min

Firmness Rating Calculation: Determine mattress or mattress set, or both, firmness rating by dividing the 778N (175 lbf) test load by the deflection needed to achieve that load. Firmness value shall be recorded in N/mm.

ACCEPTANCE CRITERIA

None specified.

RESULTS

Firmness rating determination performed at 0 cycles, 100k cycles, 120k cycles, 140k cycles, 160k cycles, 180k cycles and 200k cycles at customer request. Data and results provided for informational purposes only. See “DATA” beginning on Page 6

ASTM F1566 – 14, SECTION 7: DURABILITY TEST (MODIFIED)

Dates Tested: 10-June-2019 through 28-June-2019
Location Tested: Intertek Kentwood, MI

TEST PROCEDURE:

Test Method: Per ASTM F1566 – 14, Section 7
Cycles Performed: 200,000 (Modified from 100,000 per customer request)
Roller type: Juggernaut, six sided
Cycle Rate: 8.75 cycles/minute
Length of Stroke: 940mm
Location: Testing shall be done in the center of the mattress (measured from head to foot) across the mattress surface from side to side.

ACCEPTANCE CRITERIA

None specified.

RESULTS

Data and results provided for informational purposes only. See "DATA" beginning on Page 6.

DATA

Cycles	Height @ 0N	Height @ 778N	Firmness (N/mm)	Height Δ (mm)
0	285.73	181.70	7.48	-
100k	285.78	181.16	7.44	0.05
120k	285.44	180.79	7.43	-0.29
140k	286.16	180.59	7.37	0.43
160k	286.39	180.80	7.37	0.66
180k	286.65	180.92	7.36	0.92
200k	286.34	180.38	7.34	0.61

Table 1

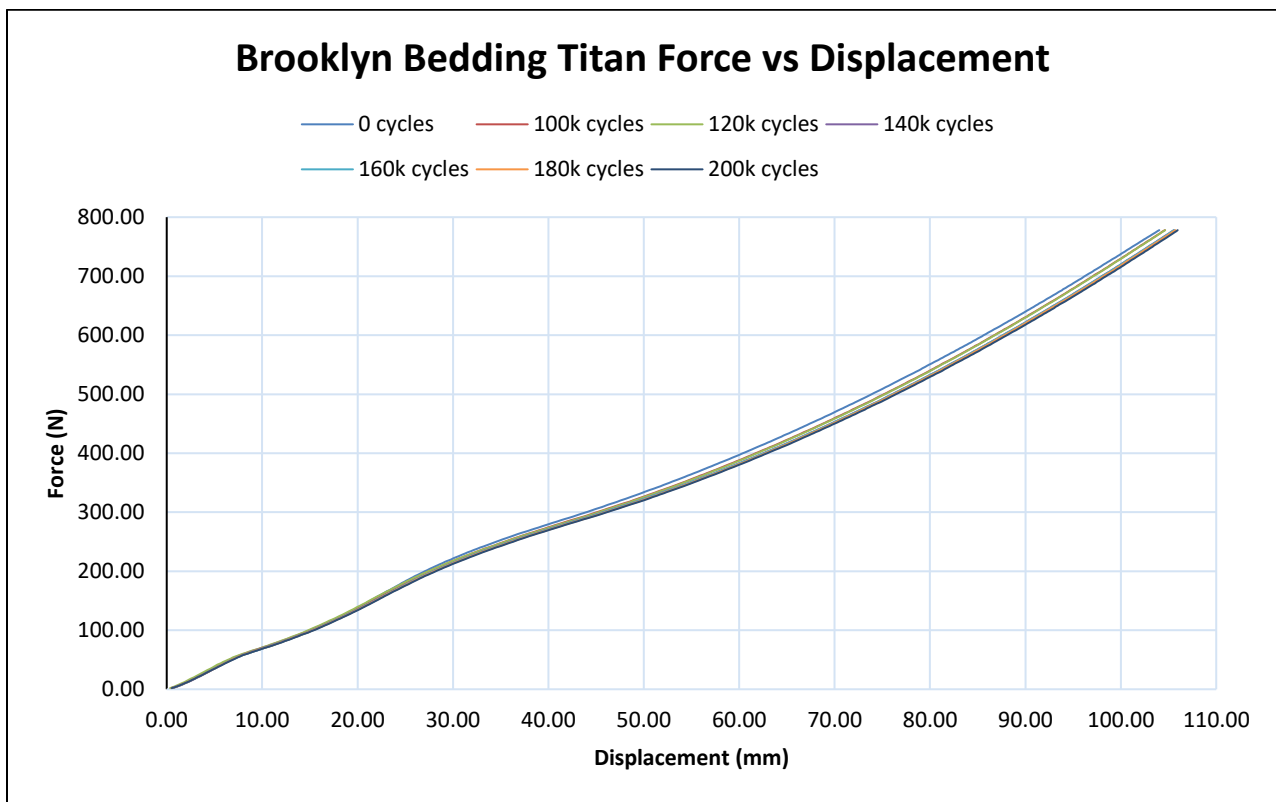


Figure 1



Figure 4 – Mattress as Received



Figure 5 – Firmness Rating Determination



Figure 6 – Durability Test

