



Through our consultant Jo Wynendaele

Your notice of  
04-06-2020

Your reference

Date  
29-06-2020

## Analysis Report 20.03496.04

Required tests :

ISO 13934-1 (2013)  
ISO 105-X12 (2016)  
ISO 4919 (2012)

ISO 105-B02 (2014)  
ISO 18168 (2015)  
ISO 1765 (1986)  
ISO 1766 (1999)

ISO 8543 (1998)

ISO 8543 (1998)

ISO 1763 (1986)

ISO 10361-MethodeA (2015)

Determination of the breaking strength and elongation  
Determination of the colour fastness to rubbing  
Determination of the tuft withdrawal force of textile floor covering  
Determination of the colour fastness to light - floor covering  
Determination of the colour fastness to shampooing  
Determination of the total thickness of floor coverings  
Determination of surface pile thickness of textile floor coverings  
Determination of the total mass per unit area of textile floor coverings  
Determination of the surface pile mass per unit area of textile floor coverings  
Determination of number of tufts or loops per unit length and per unit area  
Determination of changes in appearance of textile floor coverings using the Vettermann drum

Identification number	Information given by the client	Date of receipt
T2012250	Marvelous	04-06-2020

Kristina De Temmerman  
Order responsible

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The results of the analysis cover the received samples. Centexbel is not responsible for the representativeness of the samples.  
In assessing compliance with the specifications, we did not take into account the uncertainty on the test results.

**Reference:** T2012250 - Marvelous

**Determination of the breaking strength and elongation**

Date of ending the test 23-06-2020  
Standard used ISO 13934-1 (2013)

Deviation from the standard -  
Conditioning 20°C, relative humidity 65%  
Apparatus Instron, type CRE, class 0,5  
Cell 5 kN (Machine direction)  
5 kN (cross direction)

Pretension (automatically) 10 N  
Clamps sheeting Covered with rubber  
Rate 100 mm/min  
Number of test specimens 5 (Machine direction)  
5 (cross direction)

Gauge length 200 mm  
Width Punched, 50 mm

**Conditioned**

Specimen	Machine direction		Cross direction	
	Force (N)	Elongation (%)	Force (N)	Elongation (%)
#1	1 699	12.5	1 519	17.2
#2	1 699	13.2	1 572	16.5
#3	1 878	13.4	1 576	16.8
#4	1 785	13.3	1 581	17.5
#5	1 755	12.7	1 650	17.7
Average	1 800 N	13.0 %	1 600 N	17.0 %



**Reference:** T2012250 - Marvelous

**Determination of the colour fastness to rubbing**

Date of ending the test 25-06-2020  
 Standard used ISO 105-X12 (2016)

Deviation from the standard -  
 Conditioning 20°C, relative humidity 65%  
 Apparatus Crockmeter  
 Applied finger 19 mm x 25 mm  
 Pressure on test specimen 9 N  
 Number of cycles 10

Assessment of staining according to the grey scales (ISO 105 A03)

Numerical rating

	Machine direction	Cross direction
Dry	4-5	4-5
Wet	4-5	4-5



**Reference:** T2012250 - Marvelous

**Determination of the tuft withdrawal force of textile floor covering**

Date of ending the test	25-06-2020
Standard used	ISO 4919 (2012)
Deviation from the standard	-
Conditioning	20°C, relative humidity 65%
Apparatus	Instron, type CRE, class 0,5
Cell	100 N
Duration of the test	5" - 10"
Number of measurements	20
Type of pile	U-pile cut

Securing force (N)	
12.42	9.25
12.28	10.17
8.62	7.42
9.75	10.32
14.64	8.31
9.63	8.45
8.43	11.85
6.61	12.29
6.91	9.66
12.83	13.59
average	10.2 N

**Reference:** T2012250 - Marvelous

**Determination of the colour fastness to light - floor covering**

Date of ending the test	23-06-2020
Standard used	ISO 105-B02 (2014)
Deviation from the standard	-
Method	1
Apparatus	Xenotest 220+ Atlas
Exposure	Constant
Irradiance	42 W/m <sup>2</sup> @ 300-400 nm
Black standard temperature	47±3°C
Effective humidity	±40%
Assessment according the blue scale standard	
Numerical rating	Blue scale grade 5



**Reference:** T2012250 - Marvelous

**Determination of the colour fastness to shampooing**

Date of ending the test 29-06-2020  
 Standard used ISO 18168 (2015)

Deviation from the standard -

**Results**

**Multifibre Type DW**

Numerical rating	
Change in colour	5
Staining on diacetate	5
Staining on cotton	5
Staining on polyamide	5
Staining on polyester	5
Staining on acrylic	5
Staining on wool	5

Grading against grey scale for change in colour and/or staining:

Use of a 9 point scale from 5 to 1; where 5 is excellent and 1 is poor. Intermediate values like 2-3 are possible.

**Reference:** T2012250 - Marvelous

**Determination of the total thickness of floor coverings**

Date of ending the test 25-06-2020  
Standard used ISO 1765 (1986)

Deviation from the standard  
Conditioning 20°C, relative humidity 65%  
Number of test specimens 4

Measurement	Test specimen 1	Test specimen 2	Test specimen 3	Test specimen 4
1	6.85	6.13	6.63	6.23
2	6.88	6.56	7.06	6.13
3	7.13	6.63	6.70	7.04
4	6.43	6.43	6.55	6.44
5	6.61	6.69	6.67	6.85
Average	6.78 mm	6.49 mm	6.72 mm	6.54 mm

Total thickness (mm) 6.6  
Coefficient of variation (%) 2.12

**Reference:** T2012250 - Marvelous

**Determination of surface pile thickness of textile floor coverings**

Date of ending the test 25-06-2020  
Standard used ISO 1766 (1999)

Deviation from the standard  
Conditioning 20°C, relative humidity 65%  
Number of test specimens 4  
Apparatus Band knife machine

Test specimen	Thickness of the specimen before shearing	Thickness of the specimen after shearing	Surface pile thickness
1	6.78	1.86	4.92
2	6.49	1.84	4.65
3	6.72	1.86	4.86
4	6.54	1.86	4.68
Average	6.63 mm	1.86 mm	4.8 mm

Coefficient of variation (%) 2.77





**Reference:** T2012250 - Marvelous

**Determination of the total mass per unit area of textile floor coverings**

Date of ending the test 25-06-2020  
 Standard used ISO 8543 (1998)

Deviation from the standard  
 Conditioning 20°C, relative humidity 65%  
 Number of test specimens 4

Test specimen	Mass (g/m <sup>2</sup> )
1	1929
2	1954
3	1940
4	1982
Average	1950 g/m <sup>2</sup>

Coefficient of variation (%) 1.17

**Reference:** T2012250 - Marvelous

**Determination of the surface pile mass per unit area of textile floor coverings**

Date of ending the test 25-06-2020  
Standard used ISO 8543 (1998)

Deviation from the standard  
Conditioning 20°C, relative humidity 65%  
Number of test specimens 4  
Apparatus Band knife machine

Test specimen	Surface pile mass
1	741
2	766
3	759
4	788
Average	764 g/m <sup>2</sup>

Coefficient of variation (%) 2.59  
Surface pile density (g/cm<sup>3</sup>) 0.160



**Reference:** T2012250 - Marvelous

**Determination of number of tufts or loops per unit length and per unit area**

Date of ending the test 25-06-2020  
 Standard used ISO 1763 (1986)

Deviation from the standard  
 Conditioning 20°C, relative humidity 65%  
 Number of test specimens 4

Test specimen	S (parallel to the selvedge)	G (at right angles to the selvedge)	SxG (number per dm <sup>2</sup> )
1	78.0	108.0	8424
2	78.0	108.0	8424
3	78.0	108.0	8424
4	78.0	108.0	8424
Average	78.0 /100mm	108.0 /100mm	8424



**Reference:** T2012250 - Marvelous

**Determination of changes in appearance of textile floor coverings using the Vettermann drum**

Date of ending the test 25-06-2020  
 Standard used ISO 10361-MethodeA (2015)  
 Deviation from the standard Loss of mass and change in thickness are measured after 13.000 revolutions  
 Conditioning 20°C, relative humidity 65%  
 Apparatus Vettermann  
 Method A  
 Assessment KS ISO 10361

Cut pile	Percentage loss in thickness at 13.000 rev.	Percentage loss in mass at 13.000 rev.
T2012250	39.5	0.00



**Reference:** T2012250 - Marvelous

**Comments**

We hereby confirm that the pile fiber composition of the quality Marvelous is a mixture of ca. 63% Viscose and ca. 37% Polyester like mentioned in analysis report 20.01179.04 dated 27-03-20. This measurement was executed in accordance with ISO/TR 11827 and ISO 1833 if relevant.