

TFI-Report 23-000189-03

Functional and Quality Testing

Customer EGE Carpets A/S
Industrivej Nord 25
7400 Herning
DK

Product Textiler Bodenbelag/Textile floor covering
Colortec 80/20 1100 LF

This report includes 12 pages.



Aachen, 21.06.2023

Dr. Andreas Zoëga
Head of Testing Laboratory



The present document is provided with an advanced electronic signature.

This report only applies to the tested samples and has been established to the best of our knowledge. Only the entire report shall be reproduced. Under no circumstances, extracts shall be used. Furthermore, we apply the "General Terms and Conditions for the Execution of Contracts" of the TFI Aachen GmbH, also with regard to the order execution.

The test result does not include any addition or deduction for uncertainties due to measurement, sample preparation, sample collection and production tolerances.

1 Transaction

| | |
|------------------------|------------------------|
| Order date | 30.01.2023 |
| Your reference | Dorthe Daa Pedersen |
| Product designation | Colortec 80/20 1100 LF |
| Charge | - |
| item number | - |
| TFI sample number | 2300174 |
| Date of sample receipt | 06.02.2023 |

Testing period 21.02.2023 - 02.05.2023

Test order:

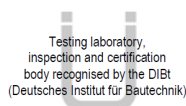
Change in appearance according ISO 10361 ^a
Colour fastness to artificial light according EN ISO 105-B02 ^a
Colour fastness to rubbing according EN ISO 105-X12 ^a
Colour fastness to water according EN ISO 105-E01 ^a
Characteristics of textile floor coverings according EN 1307+A3 ^a

a ... Die mit a gekennzeichnete Prüfung basiert auf nach EN ISO/IEC 17025 akkreditierten Prüfungen./The test marked a are based on tests accredited in accordance with EN ISO/IEC 17025.

A. Boigga



Notified Body
No. 1656



Testing laboratory,
inspection and certification
body recognised by the DIBT
(Deutsches Institut für Bautechnik)



Accredited for the methods indicated in
the partial reports to the DAKKS certificate

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2 Product description

TFI sample number 2300174



| | |
|----------------------------------|----------------------|
| Thickness [mm] | 12,90 |
| Area density [g/m ²] | 2223 |
| Type of delivery | Bahnenware/broadloom |

3 Results

| | |
|---|--------------------|
| Change in appearance (median) - shortterm | 3.5 |
| Change in appearance (median) - longterm | 2.5 |
| Colour fastness to artificial light (Colour change) | 6 |
| Colour fastness to rubbing - dry | 4 |
| Colour fastness to rubbing - wet | 3-4 |
| Colour fastness to water - change in colour | 5 |
| Colour fastness to water - staining | 2-3 |
| Characteristics | see Partial Report |

4 Partial Reports

- Changes in appearance according to ISO 10361
- Colour fastness to artificial light according EN ISO 105-B02
- Colour fastness to rubbing according EN ISO 105-X12
- Colour fastness to water according EN ISO 105-E01
- Characteristics of textile floor coverings according EN 1307+A3

Partial Report SK – Use Classification and Luxury Rating

1 Transaction

TFI sample number 2300174

2 Test Method / Requirements

EN 1307:2014+A3:2019 Textile floor coverings - Classification
 Deviations None

3 Results

3.1 Basic Requirements

| Parameter | Result | Annex |
|--|----------------------|-------|
| Colour fastness to light | grade 6 | LE |
| Colour fastness to rubbing - wet - dry | grade 3-4 grade 4 | RE |
| Colour fastness to water - change in colour - staining | grade 5 grade 2-3 | WE |
| Basic requirements | fulfilled | |

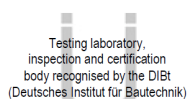
3.2 Use Classification

| Parameter | Result |
|---|-----------------|
| Changes in appearance | |
| Short term testing (median value) | 3.5 AV |
| Long term testing (median value) | 2.5 AV |
| Classification for change in appearance | class 31 |
| Level of Use | class 31 |



3.3. Luxury Rating

| Luxury class | Annex |
|--------------|-------|
| LC 3 | KM |





Partial Report AV - Changes In Appearance

1 Transaction

TFI sample number 2300174

2 Test Method / Requirements

ISO 10361:2015 Production of changes in appearance by means of Vettermann drum and hexapod tumbler tester

Assessment standard EN ISO 9405:2017

Deviation

- No individual results of assessors given

Test method method A (Vettermann drum)

Type of underlay none

Number of assessors 3

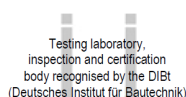
Type of vacuum cleaner Vorwerk Kobold VT270 / EB370 with rotating brush

Assessment scale ISO cut

3 Results

| Parameter | Short-term wear (5,000 cycles) | | Long-term wear (20,000 cycles) | |
|-------------------|-----------------------------------|--------------|-----------------------------------|--------------|
| | Mean value | Median value | Mean value | Median value |
| Assessment | 3.3 | 3.5 | 2.6 | 2.5 |
| Grey Scale | 4.3 | 4-5 | 3.8 | 4 |
| Dominant property | structure, colour, pattern | | structure, colour, pattern | |

Comments / special observations: none



Partial Report KM - Characteristics

1 Transaction

TFI-sample number 2300174

2 Test Method / Requirements

| | |
|--------------------------|--|
| ISO 1765:1986 | Determination of thickness |
| ISO 1766:1999 | Determination of thickness of pile |
| ISO 1763:2020 | Determination of number of tufts |
| ISO 8543:2020 | Methods for determination of mass |
| EN 984:2002 | Determination of the mass per unit area of the use surface of needed floor coverings |
| Deviations | <ul style="list-style-type: none"> Determination of mass of pile per unit area on sample size : |
| Number of samples | 4 |
| History of the sample | not known |
| Tested with guarded ring | yes |
| Test climate | (20 ± 2) °C, (65 ± 4) % rel. Humidity |
| Type of shearing machine | Bandknife splitting machine |

3 Ergebnisse

| Parameter | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Mean value | CV |
|---|-------------|-------------|-------------|-------------|-------------|------------|
| Total thickness [mm] | 13,0 | 13,0 | 12,9 | 13,0 | 13,0 | 0,4 |
| Total mass per unit area [g/m ²] | 2189 | 2171 | 2117 | 2190 | 2167 | 1,6 |
| Thickness of pile [mm] | 7,7 | 7,6 | 7,5 | 7,6 | 7,6 | 0,9 |
| Mass of pile per unit area [g/m ²] | 622 | 623 | 586 | 612 | 611 | 2,8 |
| Number of tufts length [/10 cm] | 27,0 | 27,0 | 26,0 | 27,0 | 26,8 | - |
| Number of tufts cross [/10 cm] | 26,0 | 26,0 | 27,0 | 27,0 | 26,5 | - |
| Number of tufts per unit area [dm ²] | 7020 | 7020 | 7020 | 7290 | 7088 | 1,9 |
| Surface pile density [g/cm ³] | 0,08 | 0,08 | 0,08 | 0,08 | 0,08 | 2,0 |
| Mass per unit area of use surface [g/m ²] | 622 | 623 | 586 | 612 | 611 | 2,8 |

Comments: none

CV=Coefficient of friction



Partial Report LE - Light Fastness

1 Transaction

TFI sample number 2300174

2 Test Method / Requirements

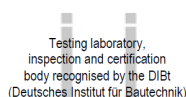
ISO 105-B02:2014 Colour fastness to artificial light: Xenon arc fading lamp
 Test device Q-Sun Xe-2
 Test method 2
 Illumination conditions A - Normal conditions (moderate zone)
 Turning of the specimen holder no
 Deviations None

3 Results

| Rating scale | Colour fastness (grade) | Type of colour change |
|--|-------------------------|-----------------------|
| Grade 1: BS 2 ~ GS 3 (preliminary assessment) | 7 | lighter |
| Grade 2: BS 4 ~ GS 4 | 7 | lighter |
| Grade 3: BS 6 ~ GS 4 | 6 | lighter |
| Grade 4: BS 7 ~ GS 4 | 4 | light pink |
| Overall grade (arithmetic mean of Grade 2, 3 and 4) | 6 | light pink |

BS: Blue scale, GS: Grey scale

Comments: none



Partial Report RE – Rubbing Fastness

1 Transaction

TFI sample number 2300174

2 Test Method / Requirements

| | |
|---|---|
| ISO 105-X12:2016 | Colour fastness to rubbing |
| Deviation | <ul style="list-style-type: none"> Size of the rubbing cloth 50 mm x 50 mm |
| Conditioning of specimens and rubbing cloth | At least 24 h at (20 ± 2) °C and (65 ± 4) % rel. humidity |
| Test climate | (20 ± 2) °C, (65 ± 2) % rel. humidity |
| Rod and Force | Rectangular rod with force according standard |

3 Results

| Fastness grade for staining | | | |
|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| Production direction | | Cross production direction | |
| dry | wet (water absorption in %) | dry | wet (water absorption in %) |
| 4 | 3-4 (100) | 4 | 3-4 (100) |

Comments: none

Partial Report WE – Water Fastness

1 Transaction

TFI sample number 2300174

2 Test Method / Requirements

ISO 105-E01:2013

Colour fastness to water

Deviations

- Textile floor covering and adjacent fabric are not sewn together

Multi-fibre adjacent fabric

According to ISO 105-F10:2009

3 Results

| Parameter | Fastness (grey scale grade) |
|----------------------------------|-----------------------------|
| Change in colour of the specimen | 5 |
| Staining on acetate | 4 |
| Staining on cotton | 2-3 |
| Staining on polyamide 6.6 | 3-4 |
| Staining on polyester | 4 |
| Staining on polyacrylnitrile | 3-4 |
| Staining on wool | 3 |

Comments: none