

**CONFIDENCIALU**

# TEST REPORT

**CUSTOMER:**

**SAMPLE:**  
(according to the customer order)

**Woven fabric:**  
Fibre composition:  
Upper layer -  
Middle layer -  
Bottom layer -  
Colour: navy

**CONDITIONS OF  
APPLICATION OF THE TEST  
REPORT:**

The laboratory is not responsible for information supplied by the customer that may affect the validity of test results.

Test Report contains results of the tests related to the submitted sample only. Sampling has been done by the customer. The Report may not be reproduced in any way other than as a complete set. Reproduction of certain parts of the Report is subject to approval of the test laboratory, which has issued it. All information about subcontracted tests results or unaccredited test methods is presented in text part of the test report. Unless otherwise stated, all tests were performed at the address, listed in the header.

**PREPARED BY:**  
**CHECKED BY:**  
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EXAMINATION:**  
11.06.-24.06.2024

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ISSUE:**  
24.06.2024

**Quantitative fibre composition**

was determined according to the Regulation No. 1007/2011(2011) of the European Parliament and of the Council. Before the analysis all fibres in the sample were examined and identified microscopically.

- test method: No. 4 with formic acid 80 % - content of polyamide fibres
- test method: No. 14 with sulfuric acid 96 % - content of polyester fibres

Content of polyurethane membrane was determined after dissolving of polyester and polyamide fibres and confirmed using [redacted] by non-accredited Internal Method No. 7.

Results: content of analysed fibres as a percentage corrected using agreed allowances (annex IX)

Results (%)*	
upper layer (face)	polyamide
middle layer (membrane)	polyurethane
bottom layer (back)	polyester

\* Test result was taken from the Test Report No. A [redacted]

**Determination of the abrasion resistance of fabrics using a [redacted]**

was performed according to ČSN EN ISO 12947-2:2017

- conditioning: temperature (20±2) °C; RH (65±4) %
- mass and nominal pressure used: (795±7) g/ 12 kPa
- specimen treatment before testing: tested in original state
- specimens tested: 2 - face side, 2 - back side
- foam backing: used
- specimen fabric type/end-point assessment: woven fabric (without pile) / 2 threads broken

Result: the lowest individual result of all test specimens expressed by the number of rubs, prior to the end-point being reached.

*In case the test was stopped before reaching its end-point, result is expressed as „≥“, indicating the successfully reached number of rubs*

Results*	Face side	Back side
<b>Abrasion resistance</b>		
specimen 1	[redacted]	[redacted]
specimen 2	[redacted]	[redacted]
specimen 3	[redacted]	[redacted]

\* Test result was taken from the Test Report [redacted]





**Determination of mass indicators - mass per unit area using small samples**

was performed according to ČSN EN 12127:1998

- conditions of testing: ČSN EN ISO 139:2005; temperature (20±2) °C; RH (65±4) %
- specimens tested: 5
- specimen dimensions: 10 x 10 cm

Results*	
Mean mass per unit area (g.m <sup>-2</sup> )	
coefficient of variation (%)	

\* Test result was taken from the Test Report No. [Redacted]

**Determination of tear resistance**

was performed according to ČSN EN ISO 4674-1:2017

- method used: A (tongued – double tear)
- specimens state: 24 hours; temperature (20±2) °C; RH (65±4) %

Results*	across to the warp / across to the weft
Mean tear strength (N)	

\* Test result was taken from the Test Report No. [Redacted]

**Determination of number of threads per unit length**

was determined according to ČSN EN 1049-2:1995

- standard atmosphere used: ISO 139; temperature (20±2) °C; RH (65±4) %
- method used: A
- number of measurements: 5

Results*	warp / weft direction
Mean value (threads per 1 cm)	

\* Test result was taken from the Test Report No. [Redacted]





**Testing the resistance to pilling and matting of textile fabrics. and assessment of pilling, fuzzing and matting by visual analysis**

was performed according to ČSN EN ISO 12945-2:2021 – modified

- conditioning: temperature (20±2) °C; RH (65±4) %
- specimens' treatment before testing: tested in original state
- loading mass and nominal pressure used:(415±2) g
- number of specimens tested / evaluators: 3 / 3
- abradant: wool

Results: Evaluation of surface change in grades according to ČSN EN ISO 12945-4:2021

Results*												
Pilling rubs	Pilling				Fuzzing				Matting			
	sp.1	sp.2	sp.3	average	sp.1	sp.2	sp.3	average	sp.1	sp.2	sp.3	average
125												
500												
1000												
2000												
5000												
7000												

\* Test result was taken from the Test Report No. issued 04.05.2023 delivered by customer.

**Weave**

was determined according to ČSN 80 0018:1993

- testing and conditioning atmosphere: temperature (20±2) °C; RH (65±4) %

Result: verbal description of the weave

*This test is outside of the accreditation scope.*

Results*

\* Test result was taken from the Test Report No. 05.2023 delivered by customer.





**Dimensional change after wet treatment**

was evaluated according to ČSN EN ISO 5077:2008. The samples for evaluation were prepared according to ČSN EN ISO 3759:2012. Washing was carried out according to ČSN EN ISO 6330:2022

- conditioning: ČSN EN ISO 139:2005; temperature (20±2) °C, RH (65±4) %
- washing machine: [redacted]
- specimens tested: 1
- procedure: 4N (40±3) °C
- detergent: standard 3 ECE
- ballast used: type III (ČSN EN ISO 6330:2022)
- total ballast load: 2 kg
- number of washing cycles: 1
- drying procedure: procedure A – Line dry
- measuring positions number: three pairs of markers
- specimen type: flat textile

The combined measurement uncertainty is approximately 0.1%

Results	warp / weft direction
Dimensional change (%)	[redacted]

**Determination of the elasticity of the fabrics**

was performed according to ČSN EN ISO 20932-1:2020 (Strip method)

- conditioning and testing environment: temperature (20±2) °C; RH (65±4) %
- specimens tested: 5 / 5 warp / weft direction
- condition of test specimens: in original state, washed, subjected to aging
- type of prepared test sample: strip (method A) or loop (method B)
- rate of elongation used: 100 mm.min<sup>-1</sup>
- gauge length used: 100 mm
- specimens' width: 50 mm
- maximum force under cyclic loading: 30N
- cycle when test results were recorded: after 5 cycles

Results	warp / weft direction
Elongation S (%)	[redacted]
Coefficient of variation (%)	[redacted]
Permanent deformation C (after 30 min) (%)	[redacted]
Recovered elongation D (after 30 min) (%)	[redacted]





**Determination of maximum force and elongation at maximum force**  
was performed according to ČSN EN ISO 13934-1:2013 (Strip method)

- conditioning: temperature (20±2) °C; RH (65±4) %
- specimens state: conditioned
- gauge length used: 200 mm
- specimens' width: 50 mm
- rate of extension used: 100 mm.min<sup>-1</sup>
- pretention applied: 2 N
- specimens tested: 5 / 5 warp / weft direction

Results	warp / weft direction
Arithmetic mean of the maximum force (N)	
. coefficient of variation (%)	

**Determination of colour fastness to water**

was tested according to ČSN EN ISO 105-E01:2013

- adjacent fabrics: polyamid/cotton
- the option used: samples tested horizontally

Result: grade of grey scale (colour change according to ČSN EN 20105-A02:1995, staining according to ČSN EN ISO 105-A03:2020)

Results
colour change / staining

**Determination of colour fastness to washing**

was tested according to ČSN EN ISO 105-C06:2010

- test conditions: A1S (40 °C)
- steel balls number: 10
- washing detergent: [redacted]
- souring treatment: not used
- adjacent fabrics: polyamid/cotton
- treatment before testing: 5x washing according to ČSN EN ISO 6330:2022 (4N, A)

Result: grade of grey scale (colour change according to ČSN EN 20105-A02:1995, staining according to ČSN EN ISO 105-A03:2020)

Results
colour change / staining





**Determination of colour fastness to rubbing**

was tested according to ČSN EN ISO 105-X12:2016

- rubbing conditions: dry / wet (wetting of rubbing cloth: 100 %)
- rubbing finger: for textiles [diameter (16±0,1) mm; downward force (9±0,2) N]
- climatic conditions during testing: temperature (20±2) °C, RH (65±2) %
- time of air-conditioning of samples: 4 hours

Result: grade of grey scale (staining to cotton rubbing cloth according to ČSN EN ISO 105-A03:2020)

Results	
staining in warp / weft direction	
dry conditions	
wet conditions	

**Determination of colour fastness to artificial light:**

was tested according to ČSN EN ISO 105-B02:2015

- instrument:
- lighting procedure: method 2
- sample's rotation: not used
- exposure conditions: A1 - normal, adequate to mild zone (RH 40 %, BST (45±3) °C)
- approximate radiation energy: (300-400 nm): 20,1 MJ/m<sup>2</sup>

Result: grade of blue scale

Results
colour change 

**Determination of colour fastness to organic solvents**

was determined according to ČSN EN ISO 105-X05:1998

- solvent used:
- adjacent fabrics used: polyamide/cotton

Results: grade of grey scale (colour change according to ČSN EN 20105-A02:1995, staining according to ČSN EN ISO 105-A03:2020)

Results
colour change / staining 



**Determination of resistance to water penetration**

was performed according to ČSN EN ISO 811:2018

- atmosphere used: standard temperature (20±2) °C; RH (65±4) %
- water pressure applied: from below
- water temperature: (20±2) °C
- water pressure rate increase: 60 cm.min<sup>-1</sup>
- pressure manometer accuracy: 0,5 cm of water column
- results assessment: penetration of the 3. drop
- samples tested: 5 in a new state, 5 after 3 washings
- treatment before testing: 3x washing according to ČSN EN ISO 6330:2022 (4N, A)

Results - new sample	
Mean value (H <sub>2</sub> O cm)	
Individual results	

Results - sample after 3 washings (4N, A drying procedure)	
Mean value (H <sub>2</sub> O cm)	
Individual results	

**Measurement of water-vapour resistance under steady state-conditions**

was performed according to ČSN EN ISO 11092:2015

- arrangement of test specimens: side facing the human body towards the measuring unit
- specimens tested: 3
- individual measurement on each specimen: 1x
- atmosphere for testing: air temperature (35±0,1) °C, RH (40±3) %
- hotplate temperature: 35 °C
- measuring unit area: 0,044 m<sup>2</sup>

Results	
Mean value R <sub>et</sub> (m <sup>2</sup> .Pa.W <sup>-1</sup> )	
coefficient of variation (%)	

Approved by:

End of report