



Instytut Techniki Budowlanej (ITB)

Group of Testing Laboratories

accredited by the Polish Centre for Accreditation

Accreditation Certificate No. AB 023

TEST REPORT

LZM00-02195/24/Z00NZM

Client:	J. van Walraven Holding B.V. 3641 RK Mijdrecht, Industrieweg 5, The Netherlands
Product name: (as specified by the Client)	Walraven Yeti® Type A Rubberfoot
Date of issue:	December 18, 2024

Building Materials Laboratory (LZM)
materialy@itb.pl

Instytut Techniki Budowlanej • 00-611 Warszawa • ul. Filtrowa 1 • tel. +48 22 825 04 71 • www.itb.pl • ci@itb.pl
KRS: 0000158785 • Regon: 000063650 • VAT: 525 000 93 58 • BDO: 000021645

Spis treści

1. Information on the tests	3
2. Product.....	3
2.1. Information provided by the Client.....	3
3. Test item, sample.....	3
3.1. Information obtained based on visual inspection in the Laboratory.....	3
4. Test results.....	4
4.1. Measurement uncertainty.....	4
4.1.1. Test methods giving qualitative results.....	4
4.1.2. Test methods giving quantitative results.....	4
4.2. Test of resistance to light (UV radiation).....	5
4.2.1. Test method.....	5
4.2.2. Results	5
4.3. Test of tensile strength.....	5
4.3.1. Test method.....	5
4.3.2. Results	6
5. Opinion on the test results (outside the scope of accreditation).....	6
6. Disclaimers.....	6

1. Information on the tests

Product manufacturer: J. van Walraven Holding B.V.
3641 RK Mijdrecht, Industrieweg 5, The Netherlands

Test start date: 13.08.2024

Test completion date: 28.11.2024

Test location:
In the laboratory LZM, in the following location: Filtrowa 1, 00-611 Warszawa.

2. Product

2.1. Information provided by the Client

Product: Walraven Yeti® Type A Rubberfoot

Declared range of application: For supporting small pipework systems, ductwork runs, cable trays, climate installations, walkways on flat roofs, etc.

Other information about the product:
Assortments consists of:

- 4 different length of standard rubberfoot (250, 400, 600, 1000 mm)
- 2 different length of low version (250, 400 mm)

3. Test item, sample

3.1. Information obtained based on visual inspection in the Laboratory

Acceptance of the test item into the laboratory:

Date: 24.07.2024

Acceptance protocol: LZM00-02195/24/Z00NZM

Condition of the test item:

A samples were provided in a condition and quantity suitable for testing.

Description of the test item:

Material for making Walraven Yeti® Type A Rubberfoot (photo no. 1).

Samples for testing (photo no. 2):

- black rubber plates, dimensions 75x100 mm, thickness about 5 mm (12 pcs.) cut from rubber roof feet

Storage of the test item:

The test samples immediately before the tests were conditioned at the temperature (23±2) °C and relative humidity (50±5)% for 48 h.

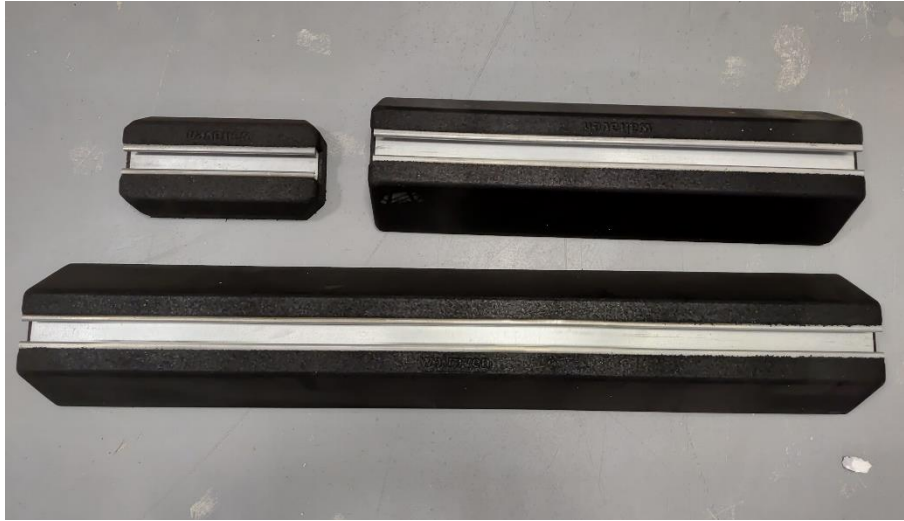


Photo 1. Walraven Yeti® Type A Rubberfoot



Photo 2. Samples provided by the Manufacturer

4. Test results

4.1. Measurement uncertainty

4.1.1. Test methods giving qualitative results

Due to the nature of the studies involving visual evaluation, it is not possible, at the current level of knowledge, to specify the uncertainty related to the presented results.

4.1.2. Test methods giving quantitative results

*) U – expanded measurement uncertainty, stated as the combined standard measurement uncertainty multiplied by the coverage factor $k = 2$ such that the coverage probability corresponds to approximately 95%. Uncertainty was determined based on available data including the accuracy of the measurement system used and the standard deviation of the current results. The uncertainty estimated in this way also includes a component related to the heterogeneity of the tested sample. The result with its uncertainty applies only to the tested samples. The uncertainty value cannot be assigned directly to the product performance level because the laboratory has no knowledge of the variability of its population, only of the test sample.

4.2. Test of resistance to light (UV radiation)

4.2.1. Test method

PN-EN ISO 16474-3:2021-06

Assessment of color change according to PN-EN ISO 4628-1:2016-03

Test conditions:

- Method: A, cycle 1
- Type of lamps: UVA-340
- Radiation intensity: 0.83 W/m²
- Exposure conditions: 4 hours irradiation (60±3°C) and 4 hours water condensation (50±3°C)
- Duration of the test: 2000 hours.

Test samples:

- Black rubber plates measuring 75x100 mm and thicknesses about 5 mm

The color change assessment was made in daylight from a distance of approximately 0.5 m.

The implementation of the test, environmental conditions and the accuracy of the measuring devices used are in accordance with the requirements of the above-mentioned standards.

4.2.2. Results

Table 1. Test results of resistance to light (UV radiation)

Test object	Test results (appearance assessment)	Duration of the test [h]
sample no. 1 sample no. 2 sample no. 3 sample no. 4 sample no. 5 sample no. 6	A change in the color of the material was observed: - intensity of change 1 (very slight, just perceptible change) - intensity of change 1 (very slight, just perceptible change) - intensity of change 1 (very slight, just perceptible change) - intensity of change 1 (very slight, just perceptible change) - intensity of change 1 (very slight, just perceptible change) - intensity of change 1 (very slight, just perceptible change)	2000

4.3. Test of tensile strength

4.3.1. Test method

PN-EN ISO 527-2:2012

Test parameters:

- Sample type: 1BA
- The speed of the measuring: 10 mm/min.

The implementation of the test, environmental conditions and the accuracy of the measuring devices used are in accordance with the requirements of the above-mentioned standards.

4.3.2. Results

Table 2. Test results of tensile strength

Sample No.	Tensile strength, MPa – unaged samples	Tensile strength, MPa – samples after exposure to UV radiation (2000 h)
1	1.69	1.77
2	1.40	1.60
3	1.41	1.53
4	1.28	1.71
5	1.56	1.77
6	1.66	1.88
Average value:	1.50	1.71
Standard deviation:	0.16	0.13

Expanded measurement uncertainty (related to the accuracy of the devices used), stated as the combined standard measurement uncertainty multiplied by the coverage factor $k = 2$ such that the coverage probability corresponds to approximately 95%, $U = 0.02$ MPa

5. Opinion on the test results (outside the scope of accreditation)

Subject of testing and evaluation

Material in black color cut from Walraven Yeti® Type A Rubberfoot.

Tests purpose

Assessment of the influence of UV radiation on the mechanical properties of rubber material under tensile strength.

Review of the research results

Samples in black color cut from Walraven Yeti® Type A Rubberfoot were subjected to exposure to light by PN-EN ISO 16474-3:2014-02 (method A, cycle 1). After exposure, the change in appearance was assessed according to PN-EN ISO 4628-1:2016-03 and tensile strength tests were performed according to PN-EN ISO 527-2:2012.

The samples were found to have barely perceptible color changes after exposure to UV radiation (2000 hours). Tensile strength tests showed that the mechanical properties did not decrease after stretching. An increase in tensile strength by an average of 14% was observed after exposure to UV radiation.

Conclusions

Based on the tests carried out, it was found that Walraven Yeti® Type A Rubberfoot, as shown in photo 1, are resistant to UV radiation according to PN-EN ISO 16474-3:2014-02 (method A, cycle 1).

6. Disclaimers

The Testing Laboratory declares that the test results relate only to the sample received.

The Test Report cannot be reproduced in any other form than as a whole without written permission of the Laboratory.



The Test Report does not replace documents required for placing construction products on the market or making them available.

This report has been issued in electronic form, with qualified electronic signatures of persons responsible. A printout of this report is not an original document.

M.SC. eng. Adrian Strąk

Person responsible for tests according to p. 4.2

/ qualified electronic signature/

M.SC. eng. Łukasz Ładosz

Person authorising the report

/ qualified electronic signature/

M.SC. eng. Cezary Strąk

Person responsible for tests according to p. 4.3

/ qualified electronic signature/

Ph.D. eng. Ewa Sudol

Head of the Laboratory LZM

/ qualified electronic signature/

A document with a qualified electronic signature whose certificate has expired is still valid (the certificate was valid on the day the document was signed).

END OF THE REPORT
