

Mfpa Leipzig GmbH

Leipzig Institute for Materials
Research and Testing

Testing, Inspection and Certification
Authority for Construction
Products and Constructions Types

Business Division II:
Load-Bearing Structures and
Sound Insulation

Head of Division:
Prof. Dr.-Ing. Elke Reuschel
Tel.: +49 (0) 341-6582-143
Fax: +49 (0) 341-6582-181
tragwerke@mfpa-leipzig.de

Work Group 2.1
Experimental Construction Me-
chanics

Contact Person:
Dipl.-Ing.- (FH) V. Ahnert, M.Sc.
Tel.: +49 (0) 341-6582-151
ahnert@mfpa-leipzig.de



Testing laboratory accredited by DAkkS
GmbH according to DIN EN ISO/IEC
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www.mfpa-leipzig.de

Test Report No. PB 2.1/23-049-1-2r1

15 November 2024

Replaces Test Report No. PB 2.1/23-049-1-2r1 from 19th October 2023

Subject matter: Determining the self weight (wet, reduced wet, dry) according to DIN EN 1794-1:2011 - Appendix B, DIN EN 1794-1:2018 – Appendix B and DIN EN 1794-1:2003* – Appendix B, for an reflective noise reducing element made of recycled PVC

Dimensions: (L x H x T) 2.97 m x 0.25 m x 0.050 m

Product designation: „KLIK-LOK Reflective “

Client: Genwork Ltd
Bromley Street,
Lye, Stourbridge, West Midlands,
DY9 8HU
United Kingdom

Test date: 25.10.2023 - 26.10.2023

Editor: Dipl.-Ing. (FH) Volker Ahnert, M.Sc.

This test report consists of 4 pages and 1 annex.

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1 Assignment

Genwork Ltd did assign MFPA Leipzig GmbH to perform tests in order to determine the self-weight of the noise reducing element „KLIK-LOK Reflective“ when dry, reduced wet and wet according to DIN EN 1794-1:2011-Annex B, DIN EN 1794-1:2003 – Annex B and DIN EN 1794-1:2018 – Annex B.

2 Test object

According to the information provided by the client, the noise reducing elements were wall elements made of mainly recycled PVC with additional additives and stabilisers. The exact composition was not specified by the client. Each noise reducing element consisted of a total of 5 chambers with an outer wall thickness of about 4.3 mm (inner web thickness about 3.0 mm). Each chamber of the noise reducing element has a bead on the side facing the roadway (see Figure A1-1 of Annex 1). The noise reducing elements are fitted over each other with a positive fit by means of the tongue-and-groove systems arranged on the long sides. In practice, the element is inserted into vertical steel profiles and fixed in the chamber on the side facing the roadway using spacers made of coniferous wood (45 mm x 85 mm; C24). The softwood spacers are fixed to the steel posts at a maximum distance of 1000 mm using M8 x 60 stainless steel screws as shown in Figure 2 (distance offset by 500 mm from opposite bearing side). The distance between the noise reducing elements and the web of the supporting steel post equals 10 mm. The size of the spacers is selected by the client in such a way that a firm bearing in the steel profile is ensured. A technical drawing of the noise reducing element is attached to Annex 1.

Dimensions

- Total length: 2,970 mm
- Height (as when installed): 250 mm
- Total thickness: 50 mm

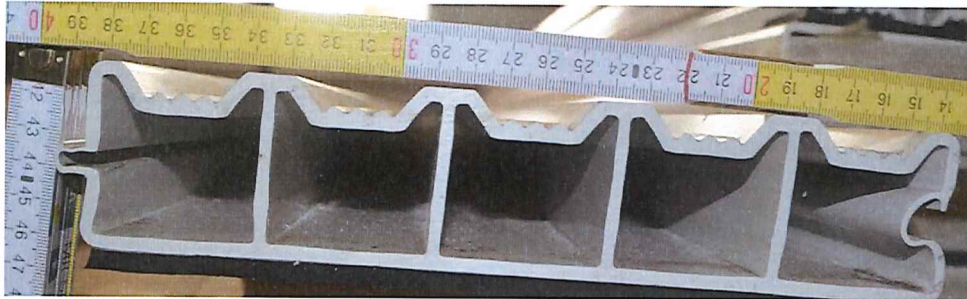


Figure 1: Structure of the tested noise reducing element in cross-section

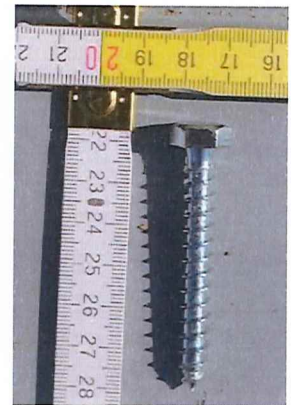


Figure 2: Screws M8 x 60

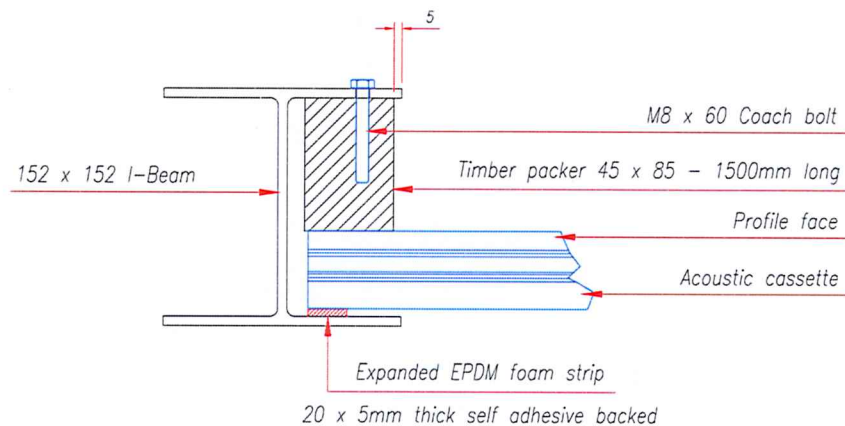


Figure 3: Structure of the tested noise reducing element in cross-section

3 Performing of the test

The test was performed according to the aforementioned standard. The element was initially weighed dry and then stored in water for 24 h. Then the element was removed, set up vertically as per the application and weighed again after 10 minutes (reduced wet). The determined weights in dry, wet and reduced wet condition are shown in Table 1.

The element's self weight when wet is a theoretical value that can only be reached if all of the porous materials and cavities absorb all the water and the openings are closed or other ways are prevented to keep the water from draining. Due to the increasing water pressure and the size of the present openings this event will not occur. The value was nevertheless determined and specified in the table. In the present case, due to the large openings, the water had also drained off quickly immediately after being lifted out of the water bath. The evaluation of the test was performed by the editor if not otherwise declared.

Table 1: The noise reducing element's (made of PVC) self-weight when dry, reduced wet or wet

state	kg	kN
dry	13.6	0.133
reduced wet	13.7	0.134
wet	13.9	0.136


On the basis of a rectangular probability distribution the measurement uncertainty equals to 0.99 %. This value is based on the following uncertainties:

- Measuring uncertainty of the measuring devices
- Procedural error


Within the scope of validity of ZTV Lsw 06 this test report is valid up to a maximum of 5 years from the date of issue.

The results of the tests exclusively relate to the items tested. This document does not replace a certificate of conformity or suitability according to national and European building codes. The sampling stage/test item production has not been carried out by the laboratory. The results of the test apply to the sample as received.

Leipzig, 15 November 2024


 Dr.-Ing. I. Wojan
 Head of Work Group




 Dipl.-Ing. - (FH) V. Ahnert, M.Sc.
 Project Engineer



Enclosure 1

Technical drawing provided by the client

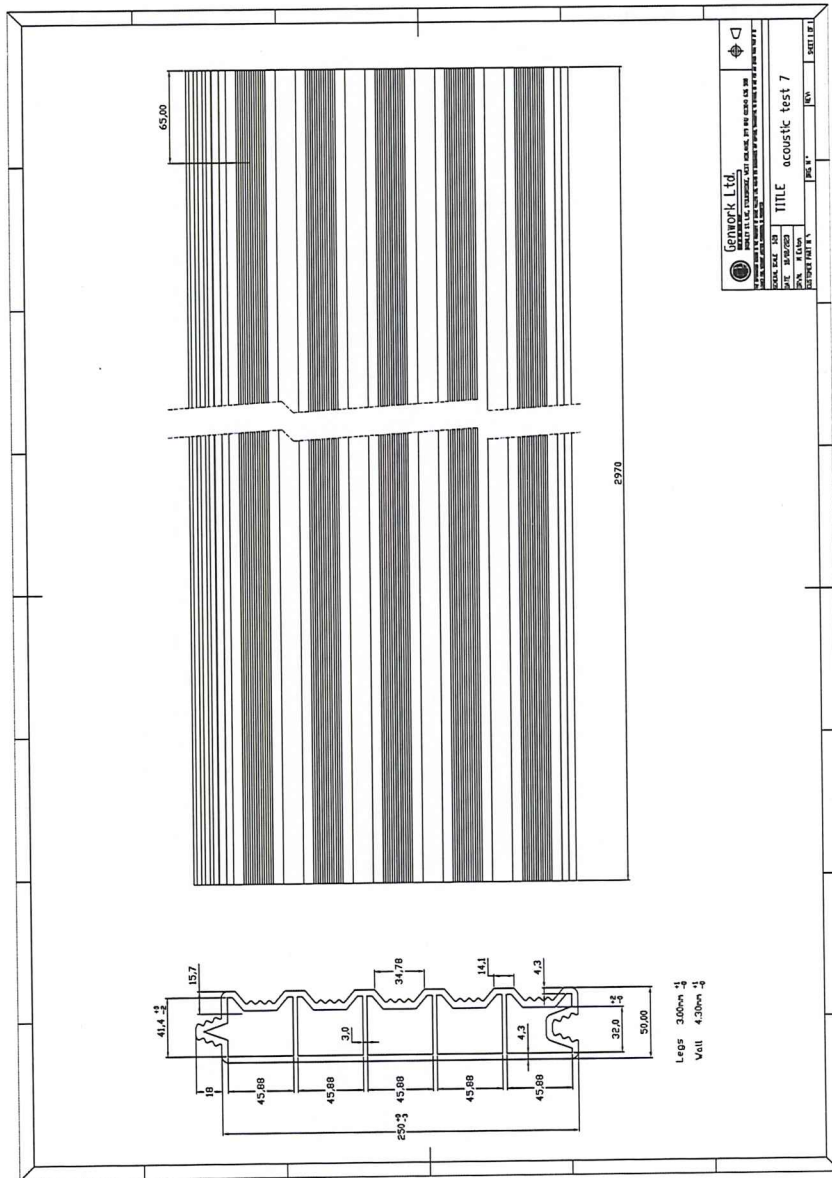


Figure A1-1: Technical drawing provided by the client

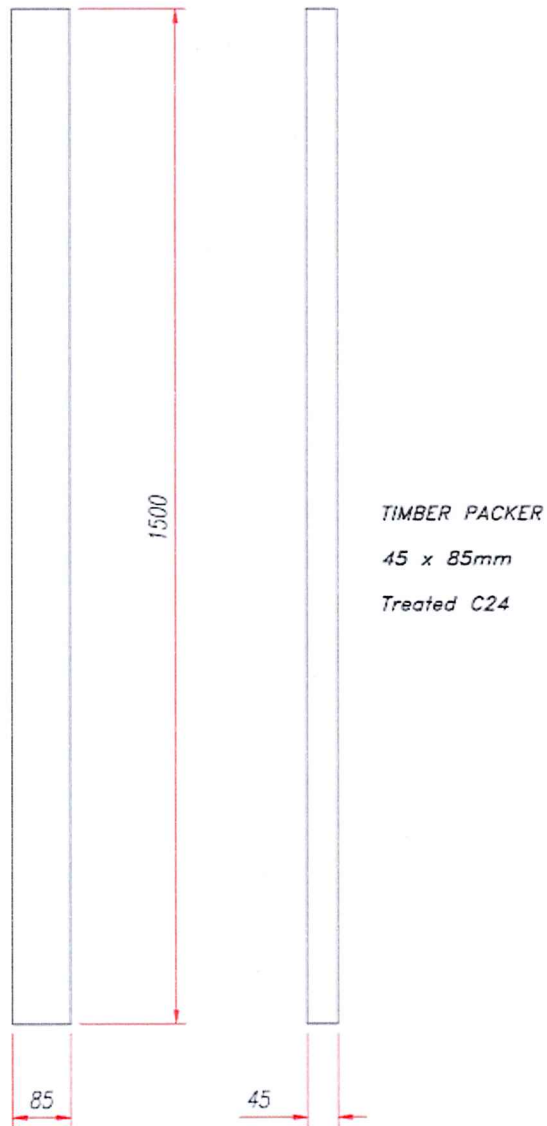


Figure A1-2: Technical drawing provided by the client – wood spacer

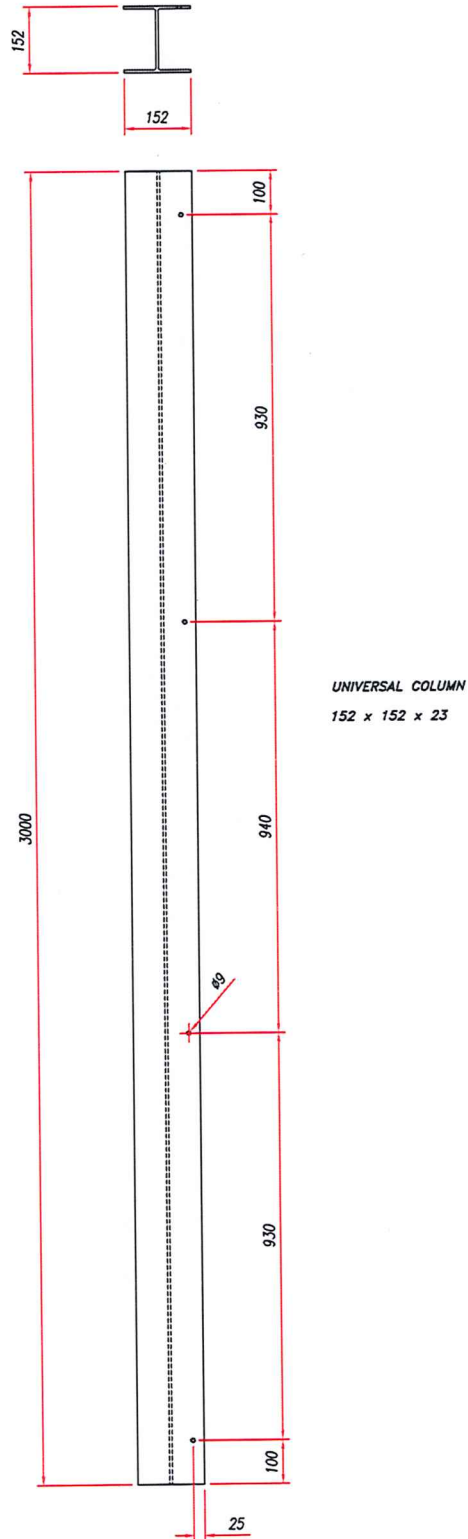


Figure A1-3: Technical drawing provided by the client – steel post – load bearing component