INTERNATIONAL STANDARD

ISO 11432

Third edition
2021-10

Building and civil engineering sealants — Determination of resistance to compression

Mastics pour bâtiments et ouvrages de génie civil — Détermination de la résistance à la compression

Reference number
ISO 11432:2021(E)

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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 8, *Sealants,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS B02, *Structures,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This 3rd edition cancels and replaces the 2nd edition (ISO 11432:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the title of the document has been modified;

— the range of variation of extension rate has been changed to (5,5 ± 0,5) mm/min;

— the range of variation of relative humidity has been changed to (50 ± 10) %.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Building and civil engineering sealants — Determination of resistance to compression

1 Scope

This document specifies a method for the determination of the resistance to compression of sealants used in joints in buildings and civil engineering works.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6927, *Building and civil engineering sealants — Vocabulary*

ISO 13640, *Buildings and civil engineering works — Sealants — Specifications for test substrates*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6927 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

Test specimens, in which the sealant to be tested is adhered to two parallel substrate surfaces, are compressed by a defined percentage of the original width and the force recorded.

5 Apparatus

5.1 Substrate material, used for the preparation of test specimens, which shall be as defined in ISO 13640. The materials shall be selected from mortar and/or anodized aluminium and/or glass. Other substrate materials may be used as agreed by the parties concerned.

For each test specimen, two substrate pieces of the same material are required; with dimensions as shown in Figures 1 and 2. Test substrates of other dimensions may be used, but then the dimensions of the sealant bead and the area of adhesion shall be the same as those shown in Figures 1 and 2.

5.2 Spacers, for the preparation of the test specimens, of cross-sections (12 mm × 12 mm) with anti-adherent surface.

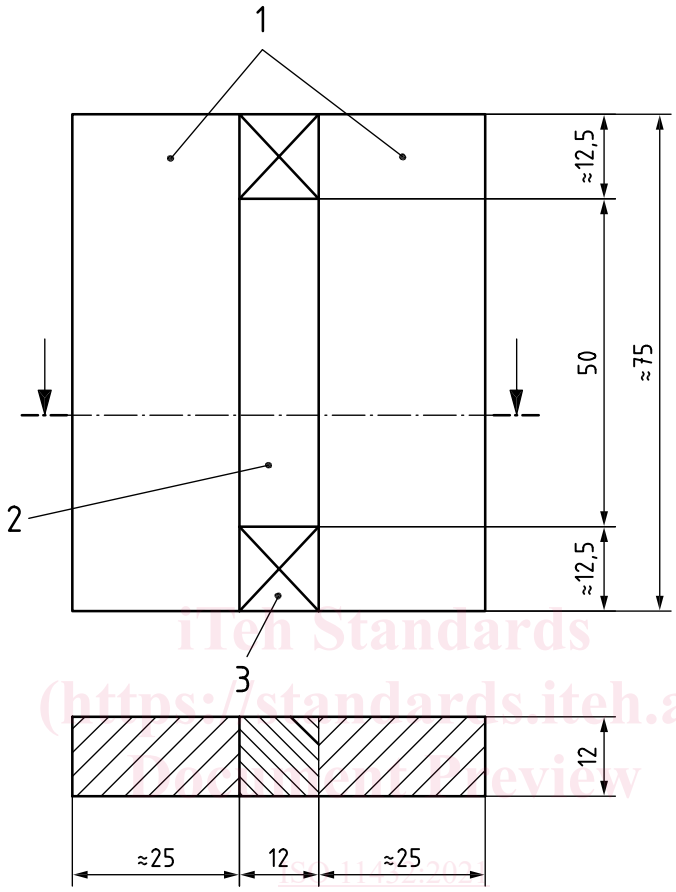
5.3 Anti-adherent substrate, for the preparation of test specimens, e.g. polyethylene (PE) film, preferably according to the advice of the sealant manufacturer.

5.4 Ventilated convection-type oven, capable of operating at (70 ± 2) °C for conditioning according to method B.

5.5 Container, for water immersion of the specimen.

5.6 Tensile test machine, capable of compressing the test specimens at a rate of (5,5 ± 0,5) mm/min.

Dimensions in millimetres



Key

1 mortar substrates
2 sealant
3 spacer

Figure 1 — Test specimen with mortar substrates