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Building construction — Jointing products — Classification and requirements for sealants

*Construction immobilière — Produits pour joints — Classification et
exigences pour les mastics*



Reference number
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11600 was prepared by Technical Committee ISO/TC 59, *Building construction*, Subcommittee SC 8, *Jointing products*.

This second edition cancels and replaces the first edition (ISO 11600:1993), clauses 7 and 8 of which have been technically revised.

Building construction — Jointing products — Classification and requirements for sealants

1 Scope

This International Standard specifies the types and classes of sealants used in building construction according to their applications and performance characteristics.

The requirements and respective test methods for the different classes are also given.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6927, *Building construction — Jointing products — Sealants — Vocabulary*

ISO 7389, *Building construction — Jointing products — Determination of elastic recovery of sealants*

ISO 7390, *Building construction — Jointing products — Determination of resistance to flow of sealants*

ISO 8339, *Building construction — Sealants — Determination of tensile properties (Extension to break)*

ISO 8340, *Building construction — Sealants — Determination of tensile properties at maintained extension*

ISO 9046, *Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at constant temperature*

ISO 9047, *Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at variable temperatures*

ISO 10563, *Building construction — Jointing products — Determination of change in mass and volume of sealants*

ISO 10590, *Building construction — Jointing products — Determination of tensile properties of sealants at maintained extension after immersion in water*

ISO 10591, *Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants after immersion in water*

ISO 11431:2002, *Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants after exposure to heat, water and artificial light through glass*

ISO 11432, *Building construction — Jointing products — Determination of resistance to compression of sealants*

ISO 13640, *Building construction — Jointing products — Specifications for test substrates*

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3 Terms and definitions

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

4 Classification

4.1 Types

According to their applications, sealants are separated into two types:

Type G: glazing sealants for use in glazing joints;

Type F: construction sealants for use in building joints other than glazing.

4.2 Classes

Sealants are classified according to their ability to fulfil sealing functions in joints with movement parameters as given in Table 1.

Table 1 — Sealant classes

| Class ^a | Test amplitude % | Movement capability ^b % |
|--------------------|---------------------|---------------------------------------|
| 25 | ± 25 | 25,0 |
| 20 | ± 20 | 20,0 |
| 12,5 | ± 12,5 | 12,5 |
| 7,5 | ± 7,5 | 7,5 |

^a Classes 25 and 20 apply to both types of sealant G and F, while classes 12,5 and 7,5 apply to sealants of type F only.

^b For the correct interpretation and application of movement capability to the design of joints, relevant national standards and advisory documents should be considered.

4.3 Subclasses

4.3.1 Sealants of class 25 and 20 are additionally sub-classified according to their secant tensile modulus (see ISO 6927):

low modulus: code LM;

high modulus: code HM.

If the measured secant tensile modulus value exceeds the values specified below for either or both temperatures, the sealant shall be classified as **high modulus**. Specified values (see Tables 2 and 3, second row) are as follows:

0,4 N/mm² at + 23 °C;

0,6 N/mm² at – 20 °C.

The secant modulus shall be the mean value of the three measured values. Round the mean value to one decimal place.

EXAMPLE Measured values 0,43 N/mm², 0,40 N/mm² and 0,46 N/mm². Mean value 0,43 N/mm². Reported value 0,4 N/mm².