
**Flexible cellular polymeric
materials — Polyurethane foam for
laminated use — Specification**

*Matériaux polymères alvéolaires souples — Mousse de polyuréthane
pour utilisation sous forme de feuilles pour assemblages —
Spécifications*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 45, *Rubber and rubber products*, Subcommittee SC 4, *Products other than hoses*.

This third edition cancels and replaces the second edition (ISO 6915:1991), of which it constitutes a minor revision.

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

- normative reference has been updated

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.

This corrected version of ISO 6915:2019 incorporates the following corrections:

- in B.6.1, the measurements have been corrected from "250 pm" to "250 µm";
- in B.7.2, the key description for h_3 has been corrected from "the diameter of the test piece [...]" to "the thickness of the test piece[...]".

Flexible cellular polymeric materials — Polyurethane foam for laminate use — Specification

1 Scope

This document specifies the minimum requirements for flexible polyurethane foams up to and including 20 mm thick intended for combination with suitable substrates such as non-woven, woven or knitted fabrics, to form a laminate.

Three types of flexible polyurethane foam are specified as follows:

- type 1: polyether;
- type 2: polyester with minimum elongation at break of 200 %;
- type 3: polyester with minimum elongation at break of 300 %.

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 845, *Cellular plastics and rubbers — Determination of apparent density*

ISO 1798, *Flexible cellular polymeric materials — Determination of tensile strength and elongation at break*

ISO 1923:1981, *Cellular plastics and rubbers — Determination of linear dimensions*

ISO 2440, *Flexible and rigid cellular polymeric materials — Accelerated ageing tests*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological 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 Appearance

4.1 The material shall consist of a uniform network of cells and shall be free from any flaws, stains and other defects which might detrimentally affect the serviceability.

4.2 Material of thickness up to and including 6 mm shall lie flat when laid on a flat surface.

4.3 The material shall have no holes more than 3 mm in diameter through the full thickness of the foam. The maximum number of holes of diameter between 1,5 mm and 3 mm in any 60 m² of material shall be not more than four for material of thickness 2 mm or less, and not more than eight for thicker material.

4.4 The colour shall be reasonably uniform and shall be as agreed between the supplier and the purchaser, having regard to the tendency for polyurethane foam to change colour on exposure to light.

5 Joints

Where it is necessary to join lengths of material together, the joint shall be as strong as the foam itself, and the adhesive or method of joining used shall not be injurious to the foam or to the material to which it is to be laminated. The construction and minimum spacing of joints shall be as agreed between the purchaser and the supplier.

6 Odour

The material shall be free from objectionable odour. The degree of permissible odour shall be agreed between the purchaser and the supplier.

7 Dimensions

7.1 Thickness

The nominal thickness shall be agreed between the purchaser and the supplier.

Tolerances on thickness shall be as given in [Table 1](#).

Table 1 — Thickness tolerances

Values in millimetres

Thickness	Tolerance	
	+	-
Less than 4	0,3	0,2
4 and over	0,5	0,3

Thickness measurement shall be carried out in accordance with ISO 1923:1981, 4.3.

7.2 Width

The width of the material shall be agreed between the purchaser and the supplier.

Tolerances on width shall be as given in [Table 2](#).

Table 2 — Width tolerances

Values in millimetres

Width	Tolerance
Less than 1 200	+40
1 200 and over	+50

7.3 Length

The minimum length of a roll shall be agreed between the purchaser and the supplier.

The length of a roll shall be determined by winding the roll on a slack winding machine.