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**Rubber — Tolerances for products —**  
**Part 2:**  
**Geometrical tolerances**

*Caoutchouc — Tolérances pour produits —*  
*Partie 2: Tolérances géométriques*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3302-2 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

This second edition cancels and replaces the first edition (ISO 3302-2:1998), of which it constitutes a minor revision, the main purpose of which was to correct Figure 5, revise Subclause 4.2.1 and update the normative references.

ISO 3302 consists of the following parts, under the general title *Rubber — Tolerances for products*:

- *Part 1: Dimensional tolerances*
- *Part 2: Geometrical tolerances*

# Rubber — Tolerances for products —

## Part 2: Geometrical tolerances

### 1 Scope

This part of ISO 3302 specifies the following geometrical tolerances for moulded and extruded solid rubber products, including those with metal inserts:

- flatness tolerance;
- parallelism tolerance;
- perpendicularity tolerance;
- coaxiality tolerance;
- positional tolerance.

The tolerances are primarily intended for use with vulcanized rubber but may also be suitable for products made of thermoplastic rubbers.

### 2 Normative references

The following referenced documents are indispensable for the application 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 1101:2004, *Geometrical Product Specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 2230, *Rubber products — Guidelines for storage*

ISO 23529, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

### 3 Classes of tolerances

Three classes of tolerance are specified, as follows:

- P Precision
- M Medium
- N Non-critical