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BS ISO 34-2:2015



BSI Standards Publication

Rubber, vulcanized or thermoplastic — Determination of tear strength

Part 2: Small (Delft) test pieces

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This British Standard is the UK implementation of ISO 34-2:2015. It supersedes BS ISO 34-2:2011 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/22, Physical testing of rubber.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Rubber, vulcanized or thermoplastic — Determination of tear strength —

Part 2: Small (Delft) test pieces

*Caoutchouc vulcanisé ou thermoplastique — Détermination de la
résistance au déchirement —*

Partie 2: Petites éprouvettes (éprouvettes de Delft)



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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This fourth edition cancels and replaces the third edition (ISO 34-2:2011), which has been technically revised. Precision results from an interlaboratory have been updated as [Annex A](#).

ISO 34 consists of the following parts, under the general title *Rubber, vulcanized or thermoplastic — Determination of tear strength*:

- *Part 1: Trouser, angle and crescent test pieces*
- *Part 2: Small (Delft) test pieces*

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Rubber, vulcanized or thermoplastic — Determination of tear strength —

Part 2: Small (Delft) test pieces

WARNING 1 — Persons using this part of ISO 34 should be familiar with normal laboratory practice. This part of ISO 34 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

WARNING 2 — Certain procedures specified in this part of ISO 34 might involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

This part of ISO 34 specifies a method for the determination of the tear strength of small test pieces (Delft test pieces) of vulcanized or thermoplastic rubber.

NOTE The method does not necessarily give results agreeing with those given by the method described in ISO 34-1, which uses trouser, angle and crescent test pieces. It is used in preference to ISO 34-1 when the amount of material available is limited, and might be particularly suitable for testing small finished products.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification*

ISO 18899:2013, *Rubber — Guide to the calibration of test equipment*

ISO 23529:2010, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

3 Principle

The force required to tear across the width of a small test piece containing a slit in the centre is measured.

4 Apparatus

4.1 Tensile-testing machine, complying with the requirements of ISO 5893, capable of measuring force with an accuracy corresponding to class 1 as defined in ISO 5893, and with a rate of traverse of the moving grip of 500 mm/min $\pm$ 50 mm/min.

4.2 Die, for cutting out the test piece. The construction of the die and the knife which cuts the slit are shown in [Figure 1](#) and [Figure 2](#).