

Rubber and plastics hoses - Determination of adhesion
between components (ISO 8033:2016)

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EUROPEAN STANDARD

EN ISO 8033

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English Version

Rubber and plastics hoses - Determination of adhesion between components (ISO 8033:2016)

Tuyaux en caoutchouc et en plastique - Détermination
de l'adhérence entre éléments (ISO 8033:2016)

Gummi- und Kunststoffschläuche - Bestimmung der
Haftung zwischen den einzelnen Schichten (ISO
8033:2016)

This European Standard was approved by CEN on 24 September 2016.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 8033:2017) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8033:2006.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8033:2016 has been approved by CEN as EN ISO 8033:2017 without any modification.

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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).

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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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

This fourth edition cancels and replaces the third edition (ISO 8033:2006), which has been technically revised with the following changes:

- [Figure 3](#), [6.3.8](#) and [Figure 7](#) have been technically revised.

Rubber and plastics hoses — Determination of adhesion between components

1 Scope

This document specifies methods for the determination of the adhesion between lining and reinforcement, between cover and reinforcement, between reinforcement layers, between cover and outer lamination (thin layer of material outside the cover for protection) and between lining and inner lamination (thin layer of material inside the lining to reduce permeation of fluid into the lining). It covers all bore sizes and the following types of hose construction:

- woven textile fabric;
- braided textile fabric;
- knitted textile fabric;
- circular-woven textile fabric;
- textile spiral;
- textile cord;
- wire braid;
- wire spiral;
- hoses containing a supporting helix.

Adequate adhesion between the various components of a hose is essential if it is to perform satisfactorily in service.

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 6133, *Rubber and plastics — Analysis of multi-peak traces obtained in determinations of tear strength and adhesion strength*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>