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**Rubber — Identification of polymers  
— Pyrolytic gas-chromatographic  
method using mass-spectrometric  
detection**

*Caoutchouc — Identification des polymères — Méthode par  
pyrolyse et chromatographie en phase gazeuse avec détection par  
spectrométrie de masse*



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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](http://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](http://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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This second edition cancels and replaces the first edition (ISO 17257:2013), of which it consists a minor revision to correct a grammatical error in the Scope.

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](http://www.iso.org/members.html).



# Rubber — Identification of polymers — Pyrolytic gas-chromatographic method using mass-spectrometric detection

## 1 Scope

This document provides a qualitative method for the identification of rubbers by their pyrolysis products using tandem gas-chromatography/mass spectrometry.

The method applies to rubbers in the raw state and to unvulcanized and vulcanized compounds. Compounds can be based on a single rubber or a blend of two or more rubbers. Where the level of a particular rubber in a blend is <10 %, detection and identification can be difficult.

A non-restrictive list of rubbers is given in [Clause 4](#).

## 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 1407, *Rubber — Determination of solvent extract*

ISO 1629, *Rubber and latices — Nomenclature*

## 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 List of rubbers

The following list is not restrictive.

Rubbers are presented according to ISO 1629.

### 4.1 Group M

#### 4.1.1 Chloropolyethylene (CM)

#### 4.1.2 Chlorosulfonylpolyethylene (CSM)

#### 4.1.3 Ethylene-propylene copolymer (EPM) and Ethylene-propylene-diene terpolymer (EPDM)

The method cannot distinguish between them.