
**Rubber compounding ingredients —
Carbon black — Determination of
sieve residue**

*Ingrédients de mélange du caoutchouc — Noir de carbone —
Détermination du refus sur tamis*

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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).

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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.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw materials (including latex) for use in the rubber industry*.

This fifth edition cancels and replaces the fourth edition (ISO 1437:2007), which has been technically revised. The main changes compared to the previous edition are as follows:

- in the list of apparatus (see [Clause 5](#)), a rubber hose has been added in [5.1.6](#);
- [Figure 1](#) has been revised to include a rubber hose;
- precision data have been moved in [Annex A](#).

Rubber compounding ingredients — Carbon black — Determination of sieve residue

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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.

1 Scope

This document specifies a method for determining the water-wash sieve residue from regular, untreated carbon black for the rubber industry. It may not be applicable to oil-treated blacks because the oil could prevent proper wetting of the black by water.

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 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

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:

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

4 Principle

A known mass of carbon black is washed through a test sieve by a controlled flow of water, and the residue dried and weighed. The test sieve aperture is chosen from the range given in the appropriate material specification.

5 Apparatus

5.1 Sieving apparatus ([Figure 1](#)), comprising the following main items.

5.1.1 Test sieve, on which the residue is retained. Test sieves shall be of phosphor bronze or stainless steel, according to the characteristics given in ISO 565. Typical nominal apertures are 500 µm, 125 µm and 45 µm.

NOTE By mutual agreement between the interested parties, it is permissible to use sieves with a different aperture size.

5.1.2 Funnel or container, into the bottom of which the test sieve fits.