
**Rubber compounding ingredients —
Carbon black — Determination of
loss on heating**

*Ingrédients de mélange du caoutchouc — Noir de carbone —
Détermination de la perte à la chaleur*

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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 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 3, *Raw materials (including latex) for use in the rubber industry*.

This fifth edition cancels and replaces the fourth edition (ISO 1126:2006), of which it constitutes a minor revision with the following changes:

- method 1 is stated as the preferred method in the scope;
- precision data were moved in an informative annex.

Rubber compounding ingredients — Carbon black — Determination of loss on heating

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International Standard 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 International Standard specifies methods for determining the loss on heating of carbon black for use in the rubber industry. This loss on heating is due primarily to loss of moisture, but traces of other volatile materials may also be lost.

These methods are not applicable to treated carbon blacks which contain added volatile materials.

One of the following three methods is used:

- method 1: gravity-convection oven method;
- method 2: moisture balance method;
- method 3: infrared irradiation method (rapid method).

Method 1 is the preferred method.

2 Method 1: Gravity-convection oven method

2.1 Principle

A test portion of carbon black is heated for 1 h at a temperature of 125 °C in a weighing bottle. The weighing bottle plus contents is allowed to cool in a desiccator to room temperature and weighed, and the percentage loss on heating calculated.

Apparatus equivalent to that specified may be used provided the same results are obtained.

2.2 Apparatus

2.2.1 Oven, gravity-convection type, the temperature of which can be regulated to within ± 1 °C at 125 °C and the temperature uniformity of which is ± 5 °C or better.

2.2.2 Weighing bottle, squat-form, 30 mm in height and 60 mm in diameter, fitted with a ground-glass stopper.

When larger samples are required for other tests, use an open vessel of dimensions such that the depth of the black is not greater than 10 mm during conditioning.

2.2.3 Analytical balance, accurate to $\pm 0,1$ mg.

2.2.4 Desiccator.