INTERNATIONAL STANDARD

ISO 1126

Fourth edition
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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

Reference number
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 1126 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 fourth edition cancels and replaces the third (ISO 1126:1992). Two additional methods have been included: a moisture balance method and an infrared irradiation method.

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

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This 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).

Note that method 1 is considered as the reference method. Apparatus equivalent to that specified may be used provided the same results are obtained.

2 Method 1: Gravity-convection oven method

2.1 Principle

A test portion of carbon black is heated for 1 h at a temperature 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.

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 ± 0,1 mg.