
**Rubber compounding ingredients —
Carbon black — Determination of light
transmittance of toluene extract**

*Ingrédients de mélange du caoutchouc — Noir de carbone —
Détermination de la transmittance spectrale de l'extrait toluénique*





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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 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 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 fourth edition cancels and replaces the third edition (ISO 3858:2008), which has been technically revised. The main changes compared to the previous edition are as follows:

- update of the normative references in [Clause 2](#);
- addition of a clause for terms and definitions ([Clause 3](#));
- changes in the Notes in [Clause 6](#);
- modification of the conditions of test ([Clause 8](#)).

Rubber compounding ingredients — Carbon black — Determination of light transmittance of toluene extract

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.

1 Scope

This document specifies a method for the determination of the light transmittance of the toluene extract from carbon black for use in the rubber industry, as a means of measuring the discolouration caused by the extractable matter.

The light transmittance value provides an estimate of the degree of discolouration caused by the toluene-extractable matter present on the surface of the carbon black.

This method might not be applicable to carbon blacks with a high extractable-matter content.

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 1124, *Rubber compounding ingredients — Carbon black shipment sampling procedures*

ISO 1126:2015, *Rubber compounding ingredients — Carbon black — Determination of loss on heating*

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

4 Principle

A sample of the carbon black is dried and a test portion weighed out and mixed with a measured volume of toluene at room temperature. The mixture is filtered and a portion of the filtrate transferred to an absorption cell. The light transmittance of the filtrate is measured against pure toluene at a set wavelength using a spectrophotometer.

5 Reagents

Use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

5.1 Toluene, analytical reagent grade, CAS No. 108-88-3.