

Transformed

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1126

DETERMINATION OF LOSS ON HEATING OF CARBON BLACK

FOR THE RUBBER INDUSTRY

1st EDITION

October 1969

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 1126, *Determination of loss on heating of carbon black for the rubber industry*, was drawn up by Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led to the adoption of a Draft ISO Recommendation.

In September 1967, this Draft ISO Recommendation (No. 1309) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	India	Spain
Austria	Iran	Sweden
Brazil	Israel	Switzerland
Canada	Italy	Thailand
Czechoslovakia	Japan	U.A.R.
France	Netherlands	United Kingdom
Germany	New Zealand	U.S.A.
Greece	Poland	U.S.S.R.
Hungary	Portugal	Yugoslavia

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in October 1969, to accept it as an ISO RECOMMENDATION.

DETERMINATION OF LOSS ON HEATING OF CARBON BLACK

FOR THE RUBBER INDUSTRY

1. SCOPE

This ISO Recommendation describes a method for determining the loss on heating of carbon black for use in the rubber industry. This loss on heating consists primarily of moisture, but traces of other volatile materials may also be lost. This method is not applicable to treated carbon blacks which contain added volatile materials.

2. PRINCIPLE OF METHOD

A quantity of carbon black is accurately weighed and heated for 1 hour at a temperature of $105 \pm 2^\circ\text{C}$ in a weighing bottle with a ground glass stopper.

The weighing bottle is then cooled in a desiccator, weighed, and the percentage loss on heating is calculated.

3. APPARATUS

- 3.1 *Oven*, preferably gravity convection type, capable of maintaining a temperature of $105 \pm 2^\circ\text{C}$.
- 3.2 *Weighing bottle*, squat-form, 30 mm in height and 60 mm in diameter, fitted with a ground glass stopper.
- 3.3 *Analytical balance*, accurate to ± 0.1 mg.
- 3.4 *Desiccator*.

4. PROCEDURE

- 4.1 Dry the weighing bottle and the stopper, with the stopper removed, in the oven at a temperature of $105 \pm 2^\circ\text{C}$ for 30 minutes. Place the bottle and the stopper in the desiccator and allow to cool to ambient temperature. Weigh the bottle with stopper to the nearest 0.1 mg.
- 4.2 Weigh to the nearest 0.1 mg about 2 g of carbon black into the weighing bottle.
- 4.3 Place the weighing bottle, test portion and stopper in the oven for 1 hour at a temperature of $105 \pm 2^\circ\text{C}$ with the stopper removed.
- 4.4 Replace the stopper and transfer the bottle and contents to the desiccator. Remove the stopper and allow to cool to ambient temperature. Replace the stopper on the weighing bottle and reweigh to the nearest 0.1 mg.

NOTE. — *Precautions*

- (a) Take the sample of carbon black in a tightly stoppered glass bottle or friction-top can. Allow the closed container to reach ambient temperature before starting the test.
- (b) Keep the weighing bottle stoppered when transferring to and from the desiccator, to prevent loss of carbon black due to air currents.