
INTERNATIONAL STANDARD



1437

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Carbon black for use in the rubber industry — Determination of sieve residue

Noir de carbone pour l'industrie des élastomères — Détermination du refus sur tamis

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Descriptors : rubber industry, carbon black, determination of content, sieve residues, sieve analysis.

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 45 has reviewed ISO Recommendation R 1437 and found it technically suitable for transformation. International Standard ISO 1437 therefore replaces ISO Recommendation R 1437-1970 to which it is technically identical.

ISO Recommendation R 1437 was approved by the Member Bodies of the following countries :

| | | |
|---------------------|----------------|----------------|
| Australia | Greece | Spain |
| Austria | Hungary | Sweden |
| Brazil | India | Switzerland |
| Canada | Iran | Thailand |
| Colombia | Israel | Turkey |
| Cuba | Italy | United Kingdom |
| Czechoslovakia | Korea, Rep. of | U.S.A. |
| Egypt, Arab Rep. of | Netherlands | U.S.S.R. |
| France | New Zealand | |
| Germany | Poland | |

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 1437 into an International Standard.

Carbon black for use in the rubber industry – Determination of sieve residue

1 SCOPE AND FIELD OF APPLICATION

This International Standard 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 REFERENCE

ISO 565, *Test sieves – Woven metal wire cloth and perforated plate – Nominal sizes of apertures.*

3 PRINCIPLE

Washing of a known mass of carbon black through a test sieve by a controlled flow of water, and drying and weighing of the residue.

The test sieve aperture is chosen from the range given as required by the appropriate material specification.

4 APPARATUS

4.1 **Sieving apparatus** comprising the following main items:

4.1.1 **Test sieve**, on which the residue is retained. Test

sieves shall be of phosphor bronze or stainless steel, having the characteristics described in ISO 565, and shall have nominal apertures of 500 and 45 μm .

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

4.1.3 **Nozzle**, fed with clean water under controlled pressure by which the carbon black is washed through the sieve.

4.1.4 **Water pressure regulating device.**

4.1.5 **Filter**, in the water supply line, incorporating a wire screen at least as fine as that in the test sieve.

NOTE – Suitable apparatus includes the Gallie-Porrit type of apparatus and that recommended in ASTM D – 1514.

4.2 **Balance**, with an accuracy of 0,1 g.

4.3 **Analytical balance**, with an accuracy of 0,1 mg.

4.4 **Weighing dishes.**

4.5 **Oven** capable of being regulated at 105 ± 2 °C.

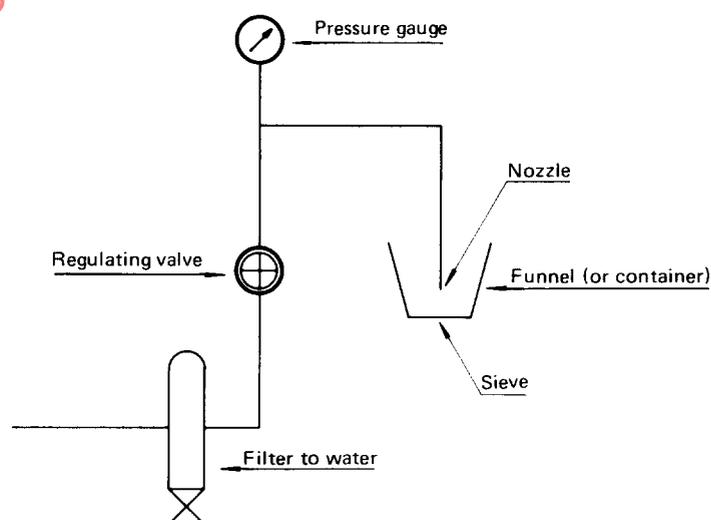


FIGURE – Schematic diagram of apparatus