International Standard 1437

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Rubber compounding ingredients — Carbon black — Determination of sieve residue

Ingrédients de mélange du caoutchouc — Noir de carbone — Détermination du refus sur tamis

Second edition — 1985-05-01

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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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1437 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

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Rubber compounding ingredients — Carbon black — 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, perforated plate and electroformed sheet — Nominal sizes of openings.*

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, 125 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. Details may be obtained from the Secretariat of ISO/TC 45 (BSI) or from the ISO Central Secretariat.

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 or 125 ± 2°C.

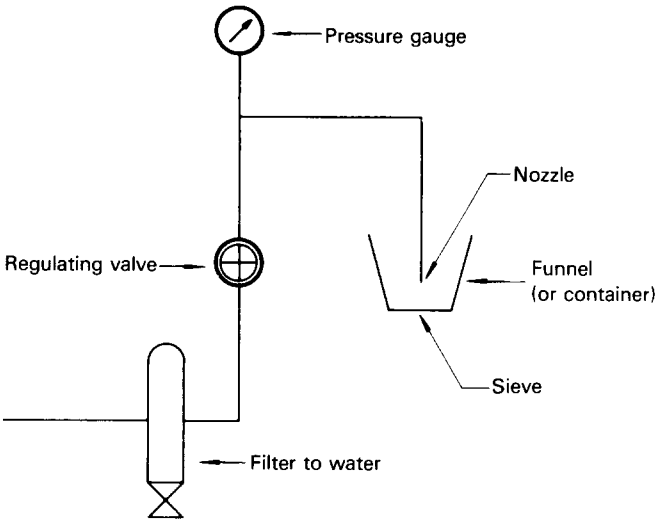

Figure — Schematic diagram of appartus