

Sampling and testing carbon black for use in the rubber industry —

Part 10: Method for determination of iodine adsorption number

[ISO title: Rubber compounding ingredients — Carbon black —
Determination of iodine adsorption number — Titrimetric
method]

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Rubber Standards Committee (RUM/-) to Technical Committee RUM/41 upon which the following bodies were represented:

British Rubber Manufacturers' Association
Coopted members

This British Standard, having been prepared under the direction of the Rubber Standards Committee, was published under the authority of the Board of BSI and comes into effect on 29 February 1988

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National foreword

This Part of BS 5293 has been prepared under the direction of the Rubber Standards Committee and is identical with ISO 1304:1985 "*Rubber compounding ingredients — Carbon black — Determination of iodine adsorption number — Titrimetric method*", published by the International Organization for Standardization (ISO). This Part of BS 5293 supersedes 5.4 only of BS 5293:1976, which will be amended accordingly; 5.4 was technically equivalent to ISO 1304:1974. The second edition of ISO 1304 published in 1985 constitutes a revision of the first edition published in 1974. The revised version of ISO 1304 permits the use of an alternative higher temperature at which the carbon black may be dried; the drying temperature used is included in the test report.

With regard to sampling, and the degree of confidence that can be placed upon test results, attention is drawn to BS 2846 "*Guide to statistical interpretation of data*" and BS 6002 "*Specification for sampling procedures and charts for inspection by variables for percent defective*". It should also be noted that ISO 1124 "*Rubber compounding ingredients — Carbon black — Sampling shipments in bulk or in bins*" which is technically equivalent to 3.1 of BS 5293:1976, and ISO 1310 "*Carbon black for use in the rubber industry — Sampling packaged shipments*", which is technically equivalent to 3.2 of BS 5293:1976 are being revised and combined by the responsible ISO Technical Committee. The BSI committee responsible for this British Standard intends to implement the revised combined version of ISO 1124 and ISO 1310, when published, as Part 1 of BS 5293.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words "International Standard" appear, referring to this standard, they should be read as "Part of BS 5293".

Cross-reference

International Standard	Corresponding British Standard
	BS 5293 <i>Sampling and testing carbon black for use in the rubber industry</i>
ISO 1126:1985	Part 5:1988 <i>Method for determination of loss of mass on heating</i> (Identical)

Additional information. Attention is drawn to the fact that the concentration of the iodine solution throughout the text refers to the concentration of $1/2 I_2$ even though it is expressed in mol/dm^3 .

The reactions which take place when carrying out the procedure described in 4.3.2 are:

- $KIO_3 + 5KI + 3H_2SO_4 \xrightarrow{\text{excess KI}} 3I_2 + 3H_2O + 3K_2SO_4$
- $2Na_2S_2O_3 + I_2 \longrightarrow 2NaI + Na_2S_4O_6$