INTERNATIONAL STANDARD

ISO 48

Third edition
1994-11-30

AMENDMENT 1
1999-08-15

Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)

AMENDMENT 1

Caoutchouc, vulcanisé ou thermoplastique — Détermination de la dureté (dureté comprise entre 10 DIDC et 100 DIDC)

AMENDEMENT 1

Reference number
ISO 48:1994/Amd. 1:1999(E)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Amendment 1 to ISO 48:1994 was prepared by ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Physical and degradation tests*.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)

AMENDMENT 1

Page 6

Clause 11

Replace by the following text:

"One measurement shall be made at a minimum of three different points on the test piece separated from each other by a minimum of 6 mm and the median taken, i.e. the middle value when these are arranged in increasing order."

Page 12

Annex A

Replace item a) by:

"a) the known relationship[1)], for a perfectly elastic isotropic material, between indentation D, expressed in hundredths of a millimetre, and Young's modulus E, expressed in megapascals, viz:

$$D = 61{,}5\ R^{-0{,}48}\left[\left(\frac{F}{E}\right)^{0{,}74} - \left(\frac{f}{E}\right)^{0{,}74}\right]$$

where

F is the total indenting force, in newtons;

f is the contact force, in newtons;

R is the radius of the ball, in millimetres."

---

1) Scott, J.R., *Physical Testing of Rubbers*, Maclaren and Sons, London, 1995.