

Rubber, vulcanized or thermoplastic — Determination of indentation hardness —

Part 1: Durometer method (Shore hardness)

ICS 83.060

National foreword

This British Standard is the UK implementation of ISO 7619-1:2004+A1:2008. It supersedes BS ISO 7619-1:2004 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by **A1** **A1**.

The UK participation in its preparation was entrusted to Technical Committee PRI/22, Physical testing of rubber.

The responsible UK committee gives the following advice concerning the contents of ISO 7619-1:2004.

The changes in tolerances of the indentors, feet and springs of the Shore A and D durometers will mean that some existing instruments will no longer meet the standard. Also, because the new requirements are now not in agreement with ISO 868 for plastics there will be some difficulties for calibration laboratories. It is expected that some laboratories will prefer to use durometers conforming to ISO 868 for testing rubbers, although using the test conditions of ISO 7619-1.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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Rubber, vulcanized or thermoplastic — Determination of indentation hardness — Part 1: Durometer method (Shore hardness)

*Caoutchouc vulcanisé ou thermoplastique — Détermination de la
dureté par pénétration —*

Partie 1: Méthode au duromètre (dureté Shore)



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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. 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 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 7619-1 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analyses*.

This first edition of ISO 7619-1, together with ISO 7619-2, cancels and replaces ISO 7619:1997, which has been technically revised as follows in respect of the durometer method now covered exclusively by Part 1:

- a specified pressure-foot area has been introduced;
- a test time of 3 s replaces the formerly specified "within 1 s", giving a more accurate value, as the hardness value drops significantly during the first few seconds;
- a test time of 15 s has been introduced for TPE materials, as the hardness value continues to decrease over a longer period of time than for vulcanized rubber, this test time being the same as that specified for plastics in ISO 868 ^[1];
- the AO scale for soft materials has been added;
- the AM scale for thin samples has been added;
- the use of stands is described in more detail;
- changes of tolerances, etc. have been made to improve precision.

ISO 7619 consists of the following parts, under the general title *Rubber, vulcanized or thermoplastic — Determination of indentation hardness*:

- *Part 1: Durometer method (Shore hardness)*
- *Part 2: IRHD pocket meter method*