

Physical testing of rubber —

**Part A42: Method for determination of
stress relaxation in compression at
ambient and at elevated temperatures**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Plastics and Rubber Standards Policy Committee (PRM/-) to Technical Committee PRM/22, upon which the following bodies were represented:

- BP Chemicals Limited
- British Railways Board
- British Rubber Manufacturers' Association Ltd.
- GAMBICA (BEAMA Ltd.)
- Institution of Mechanical Engineers
- Institution of Water and Environmental Management
- Malaysian Rubber Producers' Research Association
- Ministry of Defence
- RAPRA Technology Ltd.
- SATRA Footwear Technology Centre

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National foreword

This Part of BS 903 has been prepared under the direction of the Plastics and Rubber Standards Policy Committee. It is identical with ISO 3384:1986 *Rubber, vulcanized or thermoplastic — Determination of stress relaxation in compression at ambient and at elevated temperatures*, published by the International Organization for Standardization (ISO). This edition supersedes BS 903-A42:1983 and BS 903-A34 which are withdrawn.

The measurement of the stress relaxation of rings is essentially similar to the method using other types of test piece. This Part of BS 903 has therefore been expanded to include the methods previously given in both Parts A42 and A34. Inter-laboratory comparisons showed poor reproducibility of results from stress relaxation tests. To try to overcome this problem, this Part of BS 903 was modified to specify the method used and parts of the apparatus more closely. In particular, the maximum rate of initial compression of the test piece is now specified.

Cross-references

International standard	Corresponding British Standard
ISO 471:1983	BS 903 <i>Physical testing of rubber</i> Part A35:1985 <i>Temperatures, humidities and times for conditioning and testing of test pieces</i> (Identical)
ISO 1817:1985	Part A16:1987 <i>Determination of the effect of liquids</i> (Identical)
ISO 3383:1985	Part A32:1988 <i>General directions for achieving elevated or subnormal temperatures for test purposes</i> (Identical)
ISO 4648:1991	Part A38:1991 <i>Determination of dimensions of test pieces and products for test purposes</i> (Identical)
ISO 4661-1:1986	Part A36:1988 <i>Preparation of samples and test pieces</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 37:1977, ISO 468:1982, ISO 1826:1981 and ISO 3601-1:1981, to which normative reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. Related British Standards for ISO 468:1982 and ISO 1826:1981 are BS 1134-1:1988 and BS 903-A19:1986 respectively. There is no British Standard corresponding to ISO 37:1977 but it is envisaged that ISO 37 will correspond to BS 903-A2:1989, after it has been revised.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

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This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.