

Rubber, raw natural — Determination of plasticity retention index (PRI)

ICS 83.040.10

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National foreword

This British Standard is the UK implementation of ISO 2930:1995, incorporating amendment A1:2008. It supersedes BS 903-A59.2:1997, which is withdrawn.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 amendment. For example, text altered by ISO amendment 1 is indicated in the text by A1 A1.

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

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

The 1995 edition of ISO 2930 reflects the procedure that has become common practice throughout the world. Experience has shown that the conditions and tolerances given in the previous edition and in BS 903-A59:1990 were difficult to achieve. This latest edition allows a wider, alternative tolerance on the ageing oven temperature and a wider tolerance on the thickness of the test piece. The preferred method of test piece preparation is by two mill passes although three are still allowed for “old rubber” that may have undergone storage hardening.

Attention is drawn to the following particular points.

- a) Thickness gauge (see 4.3) – the recommendations given in ISO 4648 should be followed.
- b) Oven tolerance (see 4.5) – the preferred tolerance of $\pm 0.2\text{ }^{\circ}\text{C}$ should be used if possible, but the wider alternative is in common use. A larger coefficient of variation will result with the larger tolerance.
- c) Oven air change (see 4.5) – a tolerance of ± 1 on the nominal value of 10 times per hour is recommended.
- d) Tissue paper (see 4.7) – two types of paper are allowed. For inter-laboratory testing the same type of paper should be used.

This British Standard, having been prepared under the direction of the Sector Board for Materials and Chemicals, was published under the authority of the Standards Board and comes into effect on 15 January 1997

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Amendments/corrigenda issued since publication

Date	Comments
30 September 2009	BS 903-A59.2:1997 renumbered as BS ISO 2930:1995 ISO amendment 1:2008 implemented

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e) Preparation of test pieces (see 5.1) – expert opinion is that in most cases preparation by two mill passes will not produce a smooth enough sheet and that three passes are necessary. Concern has been expressed that three passes will cause excessive breakdown of the rubber. However, the degree of milling will principally affect the rapid plasticity number rather than the PRI¹⁾.

f) Test piece thickness (see 5.1) – a wider, more practical tolerance of ± 0.4 mm has been adopted.

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.

¹⁾ Sambhi, M. Rubb. Chem. Tech. 55, 181, 1982.