

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 33 *withdrawn 1970*

DU PONT CONSTANT LOAD METHOD OF MEASURING ABRASION RESISTANCE OF VULCANIZED NATURAL AND SYNTHETIC RUBBERS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 33, *Du Pont Constant Load Method of Measuring Abrasion Resistance of Vulcanized Natural and Synthetic Rubbers*, was drawn up by the Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

The draft proposal put forward by the Secretariat was considered and amended at the meetings held in London (1948), the Hague (1949), Akron (1950), Oxford (1951) and Paris (1953).

On 28 August 1954, the Draft ISO Recommendation proposed by the Technical Committee ISO/TC 45 was submitted to all ISO Member Bodies and approved, subject to certain editorial amendments, by the following 20 (out of a total of 34) Member Bodies:

Austria	Netherlands
*Canada	*New Zealand
Denmark	Pakistan
Finland	Portugal
India	Spain
*Ireland	Sweden
Israel	Union of South Africa
Italy	United Kingdom
Japan	*U.S.S.R.
*Mexico	Yugoslavia

One Member Body opposed the Draft:

U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in March 1957, to accept it as an ISO RECOMMENDATION.

* These Member Bodies stated that they had no objection to the Draft being approved.

Date of the first edition: April 1957.

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FOREWORD

The world-wide use of the *du Pont* constant load method of measuring abrasion resistance and the absence of a recognized method whose results correlate with wear in service justify the standardization of those features of the *du Pont* method on which agreement has been reached in the last three years.

Some improved methods, now used experimentally, may be internationally agreed upon in a few years' time. Meanwhile, there is much to be gained by standardizing the *du Pont* method as far as possible. Close relation between the test results and service performance is not, however, necessarily implied.

An alternative method of test, using very similar apparatus and procedure, but imposing constant torque on the sample-holder instead of constant load, will be considered for recommendation when further experimental evidence has been received.

1. STANDARD COMPARISON RUBBERS

According to the type of rubber to be tested, one of the following two standard rubber compounds is selected for comparison: either the high quality tyre tread type or the footwear sole and heel type.

A high standard of mixing technique should be employed in the preparation of these compounds, to ensure proper dispersion of the ingredients.

The compounds are:

"A" tyre tread type standard compound

Natural rubber first-grade smoked sheet	100
Zinc oxide	5
Stearic acid	3
E.P.C. black	50
Benzothiazyl disulphide	1
Sulphur.	3
Phenyl-beta-naphthylamine	1

Vulcanization: 40 minutes at 144 °C.