

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1522

PAINTS AND VARNISHES

PENDULUM DAMPING TEST

1st EDITION

April 1971

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Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 1522, *Paints and varnishes – Pendulum damping test*, was drawn up by Technical Committee ISO/TC 35, *Paints and varnishes*, the Secretariat of which is held by the Netherlands Normalisatie-instituut (NNI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1522, which was circulated to all the ISO Member Bodies for enquiry in November 1969. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	Italy	Sweden
Chile	Netherlands	Switzerland
Denmark	New Zealand	Turkey
France	Poland	U.A.R.
Germany	Portugal	United Kingdom
Greece	South Africa, Rep. of	U.S.S.R.
Israel	Spain	Yugoslavia

No Member Body opposed the approval of the Draft.

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

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INTRODUCTION

This ISO Recommendation is one of a series dealing with the sampling and testing of paints, varnishes and related products. It should be read in conjunction with ISO Recommendation R 1512, *Paints and varnishes – Sampling*, R 1513 *Paints and varnishes – Examination and preparation of samples for testing*, and R 1514, *Paints and varnishes – Standard panels for testing*.

Types of instrument

Two test procedures have been considered in some detail, namely those of König and Persoz, which are defined respectively by DIN 53 157 and NF T 30–016. The instruments embody the same principle – that the amplitude of oscillation of a pendulum touching a surface decreases more rapidly the softer the surface – but differ in respect of dimensions, period and amplitude of oscillation. The interaction between the pendulum and the paint film is complex, depending as it does on both elastic and viscoelastic properties, and it is not possible to establish a general relationship between results obtained by the two tests. One type of pendulum only must therefore be used in a given series of measurements of damping time.

The following considerations may serve as a guide in considering which pendulum may offer an advantage for a particular purpose.

- (1) In general, the damping time of the König pendulum is approximately half that of the Persoz pendulum.
- (2) On surfaces of low coefficient of friction, the Persoz pendulum may skid which would invalidate the results; however, this occurs only rarely in the field of paints and varnishes.
- (3) It should be noted that both instruments reflect the sensitivity of the physical properties of a paint to its environment, and the test should therefore be conducted under controlled conditions of temperature and humidity and in the absence of draughts. The thickness of the paint film and the nature of the substrate may also affect the damping times.

Supplementary information

The method of test described requires to be completed, for any particular application, by the following supplementary information. This information should be derived from the national standard or other document for the product under test or, where appropriate, should be the subject of agreement between the parties to the test.

- (1) Nature and surface preparation of substrate.
- (2) Method of application of test coating to substrate.
- (3) Thickness in micrometres of the dry coating, including method of measurement, and whether it is a single coating or a multicoat system.
- (4) Duration and conditions of drying of the coated panel before testing (or conditions of stoving and ageing if applicable).
- (5) Whether the König or Persoz pendulum is to be used.