

# International Standard



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## Paints and varnishes and their raw materials – Temperatures and humidities for conditioning and testing

*Peintures et vernis et leurs matières premières – Températures et humidités pour le conditionnement et l'essai*

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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 developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3270 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in November 1982.

It has been approved by the member bodies of the following countries :

Australia	India	Poland
Belgium	Iran	Romania
Brazil	Iraq	South Africa, Rep. of
Bulgaria	Israel	Sri Lanka
China	Italy	Sweden
Czechoslovakia	Jamaica	Switzerland
France	Kenya	Thailand
Germany, F. R.	Netherlands	United Kingdom
Hungary	Norway	USSR

The member body of the following country expressed disapproval of the document on technical grounds :

Canada

This third edition cancels and replaces the second edition (i.e. ISO 3270-1980).

# Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing

## 0 Introduction

The physical and mechanical properties of paints, varnishes and their raw materials are generally dependent on the test environmental conditions, the most important variables being temperature and humidity.

The degree to which each of these variables needs to be controlled is determined by the significance of the effect of the variable on the property being measured. Thus for measurement of viscosity, refractive index and density, it is essential to specify and control the temperature of the test portion to much closer limits than those required for the conditioning and testing atmosphere (see the note to 4.2).

It is recognized that many data on, for example, viscosity, flow times and density have been determined, historically, at temperatures different from that specified in this International Standard. In order to preserve the validity of such data and since much laboratory apparatus (for example burettes, pipettes, pyknometers) is not calibrated at 23 °C, specific deviation from this International Standard may be necessary.

It is strongly recommended that in these cases physical data should also be determined at the conditions specified in this International Standard in order to facilitate a progressive move towards general adoption of the standard conditions at some future date.

## 1 Scope and field of application

This International Standard specifies conditions of temperature and relative humidity for general use in the conditioning and testing of paints and varnishes and their raw materials. It is applicable to paints and varnishes in liquid or powder form, to wet or dry films, and their raw materials.

## 2 Reference

ISO 558, *Conditioning and testing — Standard atmospheres — Definitions*.

## 3 Definitions (derived from ISO 558)

**3.1 conditioning atmosphere** : The atmosphere in which a sample or test piece is kept before being subjected to test. It is characterized by specified values for either one or both parameters : temperature and relative humidity, which are kept within the prescribed tolerances for a given period of time. The selected values and period of time depend on the nature of the sample or test piece to be tested.

### NOTES

1 The term "conditioning" refers to the operation as a whole designed to bring a sample or test piece, before testing, into a specified condition in relation to temperature and humidity, by keeping it for a given period of time in the conditioning atmosphere.

2 The conditioning can be done either in the laboratory or in a special enclosure termed "the conditioning chamber" or in the test chamber.

**3.2 test atmosphere** : The atmosphere to which a sample or test piece is exposed throughout the test. It is characterized by specified values for either one or both parameters : temperature and relative humidity, which are kept within the prescribed tolerances.

NOTE — The test may be carried out either in the laboratory or in a special chamber termed "the test chamber", or in the conditioning chamber, the choice depending on the nature of the sample or test piece and on the test itself. For example, close control of the test atmosphere may not be necessary if the change of properties of the sample or test piece is insignificant in the test period.