

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 471

STANDARD ATMOSPHERES FOR THE CONDITIONING  
AND TESTING OF RUBBER TEST PIECES

1st EDITION

February 1966

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

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

## BRIEF HISTORY

The ISO Recommendation R 471, *Standard Atmospheres for the Conditioning and Testing of Rubber Test Pieces*, was drawn up by Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1953 and led, in 1962, to the adoption of a Draft ISO Recommendation.

In November 1963, this Draft ISO Recommendation (No. 625) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Argentina	France	New Zealand
Australia	Germany	Poland
Austria	Hungary	Spain
Brazil	India	Sweden
Bulgaria	Israel	Switzerland
Canada	Italy	United Kingdom
Chile	Japan	U.S.A.
Colombia	Korea, Rep. of	U.S.S.R.
Czechoslovakia	Netherlands	Yugoslavia

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1966, to accept it as an ISO RECOMMENDATION.

## STANDARD ATMOSPHERES FOR THE CONDITIONING AND TESTING OF RUBBER TEST PIECES

### 1. SCOPE

This ISO Recommendation applies to the normal conditioning and testing of all types of rubber test pieces under approximately ambient atmospheric conditions. Special atmospheres applicable to a particular test or material, or simulating a particular climatic environment, are not included.

The conditioning treatment required for each individual test should be stated in the test and should agree with the general conditions of this ISO Recommendation.

### 2. DEFINITION

Conditioning, for the purposes of this ISO Recommendation, means exposure of rubber to the influence of a prescribed atmosphere for a stipulated period of time. In this sense, the principal aim of conditioning is to improve the reproducibility of test results by bringing the material to a more uniform state before being tested.

### 3. STANDARD ATMOSPHERE

The standard atmosphere should be chosen from the following:

3.1 For use when control of temperature and humidity is necessary:

- |     |       |                                |
|-----|-------|--------------------------------|
| (1) | 20 °C | 65 per cent relative humidity  |
| (2) | 23 °C | 50 per cent relative humidity  |
| (3) | 27 °C | 65 per cent relative humidity. |

3.2 For use when only control of temperature is necessary:

- |     |       |                     |
|-----|-------|---------------------|
| (1) | 20 °C | } Ambient humidity. |
| (2) | 23 °C |                     |
| (3) | 27 °C |                     |

3.3 For use when control of temperature and humidity is not necessary:

Prevailing ambient atmospheric conditions.

### 4. TOLERANCES

#### 4.1 Temperature

For the temperatures specified in clauses 3.1 and 3.2, the normal tolerance should be  $\pm 2$  °C.

If a closer tolerance is required, it should be  $\pm 1$  °C.

#### 4.2 Relative humidity

For the relative humidities specified in clause 3.1, the normal tolerance should be  $\pm 5$  per cent relative humidity.

If a closer tolerance is required, it should be  $\pm 2$  per cent relative humidity.