

Transformed

**ISO**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 139

STANDARD ATMOSPHERES  
FOR CONDITIONING AND TESTING TEXTILES

2nd EDITION

June 1967

This second edition supersedes the first edition.

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## BRIEF HISTORY

The ISO Recommendation R 139, *Standard Atmospheres for Conditioning and for Determining the Physical and Mechanical Properties of Textiles*, was drawn up by Technical Committee ISO/TC 38, *Textiles*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1948 and led, in 1956, to the adoption of a Draft ISO Recommendation.

In July 1957, this Draft ISO Recommendation (No.113) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

|                |             |                |
|----------------|-------------|----------------|
| Australia      | Germany     | New Zealand    |
| Austria        | Greece      | Norway         |
| Belgium        | Hungary     | Pakistan       |
| Bulgaria       | India       | Poland         |
| Burma          | Ireland     | Romania        |
| Chile          | Israel      | Spain          |
| Czechoslovakia | Italy       | Sweden         |
| Denmark        | Japan       | Switzerland    |
| Finland        | Mexico      | United Kingdom |
| France         | Netherlands | U.S.S.R.       |

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 January 1960, to accept it as an ISO RECOMMENDATION.

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### BRIEF HISTORY RELATING TO THE 2nd EDITION

A draft proposal for the revision of ISO Recommendation R 139-1960 was drawn up, in 1961, by the Technical Committee, taking into account comments concerning section 2, dealing with pre-conditioning; it was approved, in 1963, as a Draft Revision.

In April 1965, this, Draft Revision (No.815), *Standard Atmospheres for Conditioning and Testing Textiles*, was submitted to all the ISO Member Bodies for enquiry. Thirty-one of the Member Bodies approved it; one Member Body opposed it: Ireland.

The Draft revision was therefore submitted by correspondence to the ISO Council, who decided, in June 1967, to accept it.

This second edition supersedes the first edition of ISO Recommendation R 139-1960.

## STANDARD ATMOSPHERES FOR CONDITIONING AND TESTING TEXTILES

### 1. SCOPE

This ISO Recommendation states the characteristics and use of standard atmospheres for conditioning and for determining the physical and mechanical properties of textiles.

### 2. BASIC DEFINITIONS

**2.1 Relative humidity.** The ratio of the actual pressure of the water vapour in the atmosphere to the saturation vapour pressure at the same temperature. The ratio is usually expressed as a percentage.

**2.2 Standard temperate atmosphere.** An atmosphere which has a relative humidity of 65% and a temperature of 20 °C.

**2.2.1 Standard temperate atmosphere for testing.** An atmosphere which has a relative humidity of  $65 \pm 2\%$  and a temperature of  $20 \pm 2$  °C.

**2.3 Standard tropical atmosphere.** An atmosphere which has a relative humidity of 65% and a temperature of 27 °C.

**2.3.1 Standard tropical atmosphere for testing.** An atmosphere which has a relative humidity of  $65 \pm 2\%$  and a temperature of  $27 \pm 2$  °C.

*Note.* — The adjectives "temperate" and "tropical" as used in this ISO Recommendation have been chosen for the limited use of the textile industry.

### 3. PRE-CONDITIONING

Before conditioning a textile, pre-conditioning may be required. If so, the textile should be brought approximately to equilibrium in an atmosphere having a relative humidity of between 10 and 25% and a temperature not exceeding 50 °C.

These conditions may be obtained by heating air at 65% and 20 °C (the standard temperate atmosphere), or by heating air at 65% and 27 °C (the standard tropical atmosphere), to a temperature up to 50 °C.