



## Designation: E 171 – 94 (Reapproved 1998)

AMERICAN SOCIETY FOR TESTING AND MATERIALS  
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# Standard Specification for Standard Atmospheres for Conditioning and Testing Flexible Barrier Materials<sup>1</sup>

This standard is issued under the fixed designation E 171; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification defines the standard temperature and humidity for conditioning and testing of materials at nominally ambient conditions.

1.2 There are many other temperature and humidity conditions which may be appropriately used to test end use conditions such as freezer, refrigerated or abusive storage. These need to be individually established.

1.3 Temperature and humidity alone are not sufficient to completely define a storage condition. Many other factors may be relevant (such as time, light and atmospheric pressure) which are not defined in this specification.

1.4 Only those materials which fall into the general area of flexible packaging materials are included. Many other materials which were included in earlier versions of this specification may also need a definition.

## 2. Referenced Documents

### 2.1 TAPPI Standard:

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F-2 on Flexible Barrier Materials and is the direct responsibility of Subcommittee F02.30 on Test Methods.

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T 402 Standard conditioning and testing atmospheres for paper, board, pulp handsheets, and related products<sup>2</sup>

## 3. Standard Atmospheres

3.1 Condition and test materials containing paper as follows:

Temperature:	23 ± 1°C (73.4 ± 1.8°F)
Humidity:	50 ± 2 % RH

3.2 Condition and test plastic materials as follows:

Temperature:	23 ± 2°C (73.4 ± 3.6°F)
Humidity:	50 ± 5 % RH

3.3 Conditioning and testing of other materials is not within the scope of this specification.

3.4 The instruments and techniques used to measure these standard conditions of temperature and humidity must be validated. The validation process is beyond the scope of this specification.

3.5 Preconditioning may be important with some items, particularly those containing paper. In these cases, preconditioning is recommended in accordance with TAPPI T402 at 10 to 35 % relative humidity and 22 to 40°C.

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