

ICS 55.020
CCS A 83



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4857.2-2005

**Packaging -- Basic tests for transport packages -- Part 2:
Temperature and humidity conditioning
(English Translation)**

Issued on: May 25, 2005

Implemented on: November 1, 2005

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of PRC**

Table of Contents

Foreword...	3
1 Scope...	5
2 Test principle...	5
3 Conditions for temperature and humidity conditioning...	5
4 Instruments and equipment...	7
5 Test procedure...	7
6 Test report...	8

1 Scope

This Part of GB/T 4857 specifies the contents of the conditions, equipment, procedures, test report, for the temperature and humidity conditioning of the transport package and unit cargo.

This Part applies to the temperature and humidity conditioning of transport packages and unit cargoes.

2 Test principle

The test sample is subjected to a predetermined temperature and humidity condition, for a predetermined time.

3 Conditions for temperature and humidity conditioning

According to the characteristics of the transport package and the environmental conditions that may be encountered during the circulation process, one of the temperature and humidity conditions in 3.1 and one of the conditioning treatment times in 3.2 are selected, for temperature and humidity conditioning.

3.1 Temperature and humidity conditions

3.1.1

The temperature and humidity conditions are as shown in Table 1.

10 measurements, over a period of at least 1 hour, OR calculated by continuous recording of the instrument.

3.2 Temperature and humidity conditioning time

4 h, 8 h, 16 h, 48 h, 72 h, or 7 d, 14 d, 21 d, 28 d.

4.1 Temperature-humidity box (chamber)

For the temperature-humidity box (chamber), it shall specify the scope of the working space; the specified conditioning and processing conditions shall be maintained, in the working space; the temperature and humidity can be continuously recorded AND kept within the allowable error, which is specified in 3.1.2.

4.2 Drying box (chamber)

If necessary, reduce the moisture content of some test samples below that required for ambient conditions.

4.3 Measuring and recording equipment

The measuring and recording instruments shall have sufficient sensitivity and stability.

The temperature measurement accuracy shall be 0.1 °C. The measurement accuracy of relative humidity is 1%. It can carry out continuous recording. If the interval between each test record does not exceed 5 min, the record is also considered to be continuous.

See Appendix A, for the relative accuracy of measuring temperature and relative humidity. Whilst meeting the above measurement accuracy requirements, the recording instrument shall have sufficient response speed, to accurately record the temperature change of 4 °C per minute and the relative humidity change of 5% per minute.

5 Test procedure

5.1

Place the test sample in the working space of the temperature and humidity chamber.

Place it overhead, so that the air subjected to temperature and humidity conditioning can freely pass through its top, surrounding, and at least 75% of the bottom area.

5.2

Select the temperature and relative humidity, that are similar to the transport and storage conditions of the test sample, as much as possible. Expose it to the specified conditions, for a period of time. The time selection is specified in 3.2. The time of temperature and humidity conditioning is calculated, from 1 hour after reaching the specified conditions.

5.3

When the test sample is composed of materials, which have hysteresis

.....