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**SIS STANDARDISERINGSGRUPP**

## **SVENSK STANDARD SS-ISO 2873**

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### **Förpackningar — Fyllda transportförpackningar — Lågtrycksprovning**

Denna standard utgörs av den engelska versionen av den internationella standarden ISO 2873-1985, Packaging — Complete, filled transport packages — Low pressure test.

I standarden beskrivs en metod att utsätta förpackningar för lågt tryck liknande förhållandena i ett flygplan.

I standarden hänvisas till:

ISO 2233 som oförändrad överförs till svensk standard SS-ISO 2233, Förpackning — Fyllda transportförpackningar — Konditionering före provning.

### **Packaging — Complete, filled transport packages — Low pressure test**

This Swedish standard consists of the English version of the international standard ISO 2873-1985, Packaging — Complete, filled transport packages — Low pressure test.

This standard specifies a method to test the packages at low air pressure encountered in air-craft.

In the standard reference is made to:

ISO 2233 which is fully adopted as Swedish standard SS-ISO 2233, Packaging — Complete, filled transport packages — Conditioning for testing.

# Packaging – Complete, filled transport packages – Low pressure test

## 1 Scope and field of application

This International Standard specifies a method for subjecting complete, filled transport packages to conditions of low air pressure encountered in aircraft.

This method is applicable to complete, filled transport packages which are transported by unpressurized aircraft flying at 3 500 m or less and pressurized aircraft flying at any higher altitude.

## 2 Reference

ISO 2233, *Packaging – Complete, filled transport packages – Conditioning for testing*.

## 3 Principle

Placing of the test package in a pressure chamber, and reduction of the pressure to that corresponding to 3 500 m altitude. Holding of this pressure for a predetermined period after which it is permitted to return to ambient pressure. During this period, if required, the temperature may also be controlled to that corresponding to the same altitude.

The above pressure also approximates to the condition in pressurized aircraft flying at any higher altitude.

## 4 Apparatus

**Pressure vessel**, of sufficient size to accommodate the test package, and with pressure and temperature controls to meet the requirements of the procedure in clause 7.

## 5 Package preparation

The test package shall normally be filled with its intended contents. However, simulated or dummy contents may be used, on condition that the dimensions and physical properties of such contents shall be as close as possible to those of the intended contents.

Ensure that the test package is closed normally, as if ready for distribution. If simulated or dummy contents are used, ensure that the normal method of closure is still employed.

## 6 Conditioning

The packages shall be conditioned in accordance with one of the conditions described in ISO 2233.

## 7 Procedure

**7.1** Place the test package in the pressure vessel (see clause 4) and reduce the pressure at a rate not exceeding 150 mbar/min, until it reaches 650 mbar<sup>1)</sup> ( $\pm 5\%$ ). Maintain this pressure for the predetermined period.

1) 1 mbar = 0,1 kPa

**7.2** Restore the pressure by allowing dry air at laboratory temperature to enter at such a rate that the increase in pressure does not exceed 150 mbar/min.

#### NOTES

1 If it is desired to study the effects of temperature as well as pressure, the atmosphere in the vessel should be maintained at  $-8 \pm 1$  °C during the predetermined period.

2 If it is necessary to cover unpressurized aircraft flying above 3 500 m, the altitude and pressures in the following table should be taken into account :

Table

Altitude m	Pressure	
	mbar	kPa
6 000	470	47,0
8 000	360	36,0
10 000	265	26,5
12 000	190	19,0
15 000	120	12,0
18 000	75	7,5
20 000	55	5,5

## 8 Test report

The test report shall include the following particulars :

- a) reference to this International Standard;
- b) number of replicate packages tested;
- c) full description of the package, including dimensions, structural and material specifications of the package and its fittings, cushioning, blocking, closure or reinforcing arrangements;
- d) description of contents — if simulated or dummy contents were used, full details shall be given;
- e) gross mass of package and mass of contents, in kilograms;
- f) relative humidity, temperature and time of conditioning; and whether these values comply with the requirements of ISO 2233;
- g) the temperature and pressure inside the pressure vessels, and the times for which they were maintained;
- h) any deviations from the test method described in this International Standard;
- j) a record of the result, with any observations which may assist in correct interpretation;
- k) date of the test;
- m) signature of tester.