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International Standard



6591/2

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**Packaging — Sacks — Description and method of  
measurement —  
Part 2 : Empty sacks made from thermoplastic flexible  
film**

*Emballages — Sacs — Description et méthode de mesurage — Partie 2 : Sacs vides faits d'un film thermoplastique flexible*

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Descriptors : packing, bags, dimensions, thermoplastic resins, plastic sheets.

## Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6591/2 was prepared by Technical Committee ISO/TC 122, *Packaging*.

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# Packaging — Sacks — Description and method of measurement —

## Part 2 : Empty sacks made from thermoplastic flexible film

### 1 Scope and field of application

This part of ISO 6591 specifies a method for measuring and expressing the dimensions of empty sacks of thermoplastic flexible film. It is primarily intended for application to plastic sacks as specified in ISO 6590/2.

NOTE — ISO 6591/1 is intended for application to empty paper sacks.

### 2 References

ISO 6590/2, *Packaging — Sacks — Vocabulary and types — Part 2 : Sacks made from thermoplastic flexible film.*

ISO 7023, *Packaging — Sacks — Method of sampling empty sacks for testing.*

### 3 Definitions

For the purposes of this part of ISO 6591, the following definitions apply.

#### NOTES

- 1 Some of these definitions are repeated from ISO 6591/1 for convenience.
- 2 Unless otherwise specified, references are to external dimensions.
- 3 The symbols used are those shown in clause 4.

**3.1 length of sack,  $a$  :** Distance between the transverse edges of the flat sack, measured at the centre, perpendicular to the bottom.

**3.2 width of sack,  $b$  :** Distance between the longitudinal edges of the flat sack, measured at the centre, parallel to the bottom.

**3.3 width of gusset,  $e$  :** Distance between the external creases of the unfolded gusset.

**3.4 width of bottom,  $c$  :** Distance between the two bottom edge-folds, measured at the centre, parallel to the sack length.

**3.5 width of valve,  $v$  :** Internal dimension of the valve between the folds of the valve or the valve sleeve or, in the case of a heat sealed sack, between the valve fold and the adjacent seal.

**3.6 length of valve,  $f$  for**

**3.6.1 heat sealed sacks :** Distance between the outermost edge of the sack and the innermost edge of the valve/sleeve, measured parallel to the bottom.

**3.6.2 pasted sacks :** Distance between the outermost edge of the sack and the innermost edge of the valve sleeve minus half of bottom width, measured at the centre, parallel to the bottom.

**3.7 length of valve sleeve,  $i$  :** Longitudinal dimension of internal or external sleeve, parallel to the bottom.

**3.8 heat seal distance,  $n$  :** Distance of the heat seal from the sack edge, measured perpendicular to the seal. The measurement includes the width of the seal. The internal length of the sack is thus  $a_{\text{int}} = a - n$ .

### 4 Description and dimensional designation

The sacks shall be described by the successive indication of their type (open-mouth heat sealed flat sack, valved pasted sack, etc.) and their dimensions as specified in 4.1 and 4.2.

#### 4.1 Open-mouth sacks

##### 4.1.1 Open-mouth heat sealed flat sack

Sack width,  $b$ /sack length,  $a$  (see figure 1).

NOTE — The sack may be provided with diagonal corner seals.

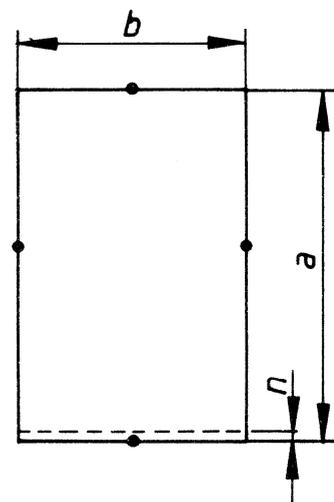


Figure 1 — Open-mouth heat sealed flat sack

4.1.2 Open-mouth heat sealed gusseted sack

Sack width,  $b$ /width of gusset,  $e$ /sack length,  $a$  (see figure 2).

NOTES

- 1 Gusset diagram also applies to figures 4 and 6.
- 2 The sack may be provided with diagonal corner seals.

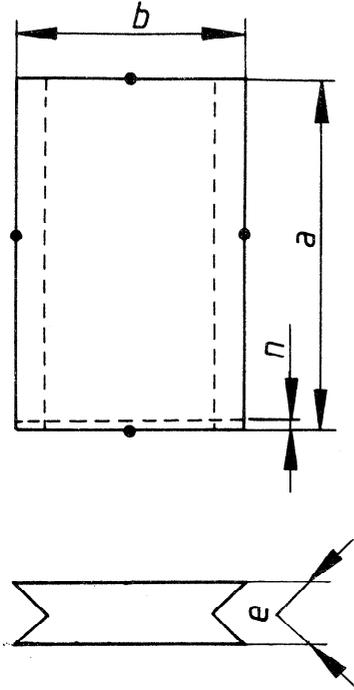


Figure 2 — Open-mouth heat sealed gusseted sack

4.1.3 Open-mouth pasted flat hexagonal bottom sack

Sack width,  $b$ /sack length,  $a$ /width of bottom,  $c$  (see figure 3).

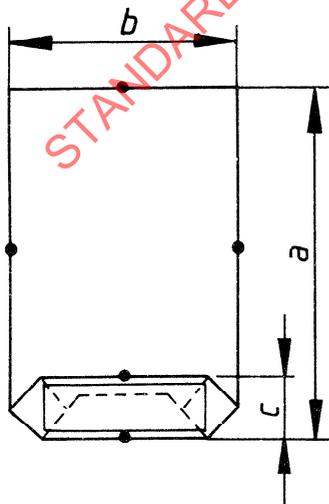


Figure 3 — Open-mouth pasted flat hexagonal bottom sack

4.1.4 Open-mouth pasted gusseted rectangular bottom sack

Sack width,  $b$ /width of gusset,  $e$ /sack length,  $a$ /width of bottom,  $c$  (see figure 4).

NOTE — Dimension  $e$  is shown in figure 2.

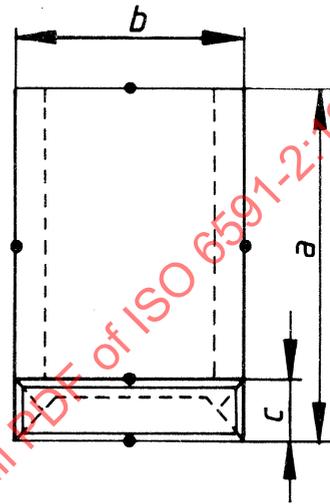


Figure 4 — Open-mouth pasted gusseted rectangular bottom sack

4.2 Valved sacks

4.2.1 Valved heat sealed flat sack

Sack width,  $b$ /sack length,  $a$ /width of valve,  $v$  (see figure 5).

NOTE — This sack type can be provided with valves of the types shown in figure 6.

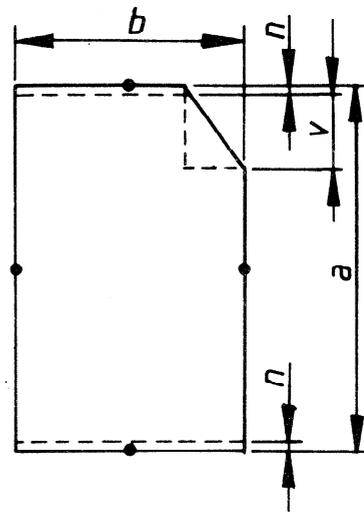


Figure 5 — Valved heat sealed flat sack

4.2.2 Valved heat sealed gusseted sack

Sack width,  $b$ /width of gusset,  $e$ /sack length,  $a$ /width of valve,  $v$ /length of valve,  $f$ /length of valve sleeve,  $i$  (see figure 6).

NOTE — Dimension  $e$  is shown in figure 2.

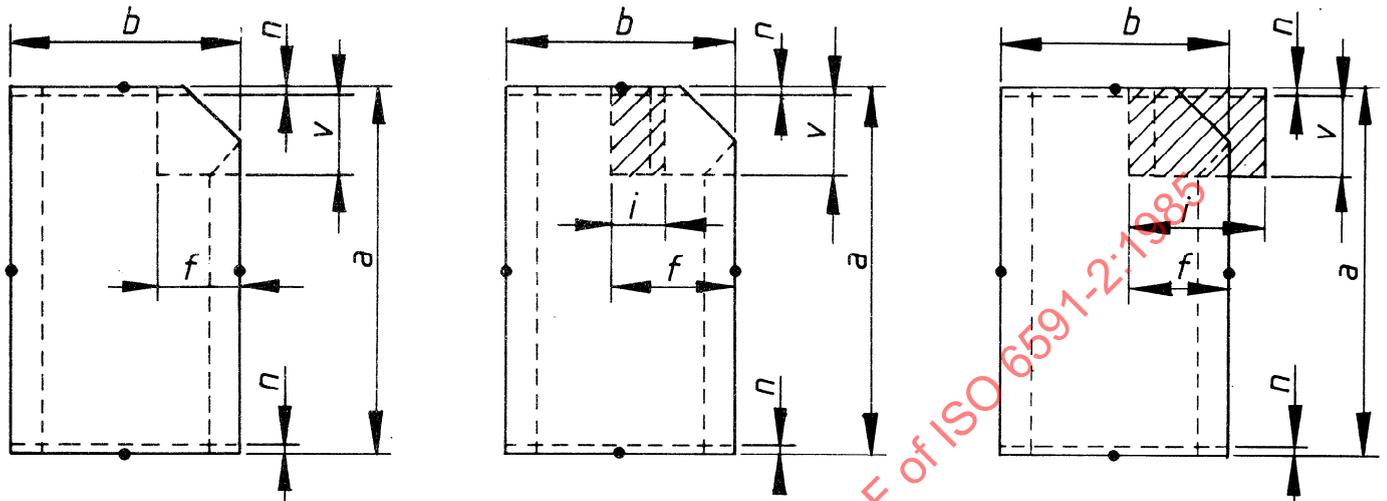


Figure 6 — Valved heat sealed gusseted sack

4.2.3 Valved pasted flat hexagonal ends sack

Sack width,  $b$ /sack length,  $a$ /width of bottom,  $c$ /width of valve,  $v$ /length of valve,  $f$ /length of valve sleeve,  $i$  (see figure 7).

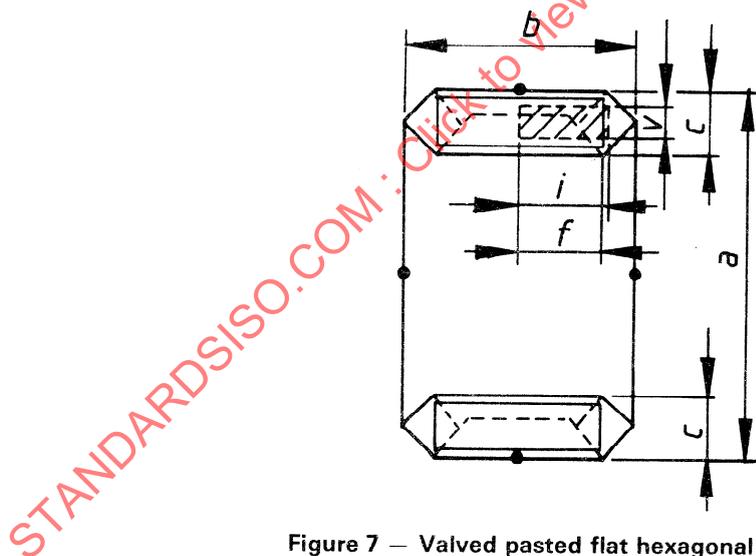


Figure 7 — Valved pasted flat hexagonal ends sack

Table — Summary of description and dimensional designations of plastic sacks

| Clause | Description  | Dimensional designation |
|--------|--|-------------------------|
| 4.1.1  | Open-mouth heat sealed flat sack                   | $b/a$                   |
| 4.1.2  | Open-mouth heat sealed gusseted sack               | $b/e/a$                 |
| 4.1.3  | Open-mouth pasted flat hexagonal bottom sack       | $b/a/c$                 |
| 4.1.4  | Open-mouth pasted gusseted rectangular bottom sack | $b/e/a/c$               |
| 4.2.1  | Valved heat sealed flat sack                       | $b/a/v$                 |
| 4.2.2  | Valved heat sealed gusseted sack                   | $b/e/a/v/(f/i)$         |
| 4.2.3  | Valved pasted flat hexagonal ends sack             | $b/a/c/v/(f/i)$         |

### 4.3 Valve position

For pasted and heat sealed valved sacks, with the front-side print upright, when viewed from above, the valve position shall be described as top or bottom, left or right (see figure 8).

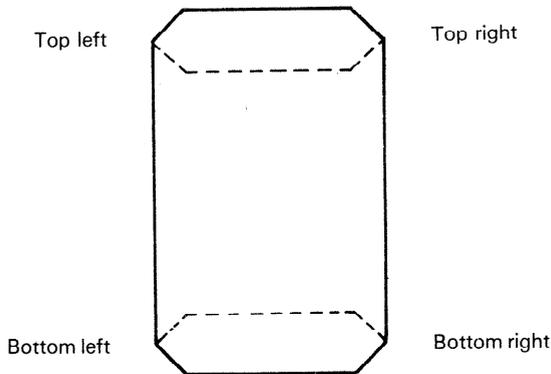


Figure 8 — Valve position

#### NOTES

- 1 Pasted valved sacks may be manufactured with the pasted ends turned towards or away from the side containing the front-side print. They may also have reversed bottoms (one turned towards and one away from the face side).
- 2 Not all types of valve are available in every position.
- 3 For pasted valved sacks without either a longitudinal seam or any printing, the side towards which the valved bottom is turned should be considered as the front side of the sack. When the sack is viewed from the front side (as defined above), the valve position can be described as right or left.

## 5 Method of measurement

### 5.1 Equipment

**Ruler or instrument**, graduated in millimetres, and capable of measuring dimensions of sack to an accuracy of 1 mm.

### 5.2 Sampling

Sampling shall be carried out in accordance with ISO 7023 by taking at least 10 sample sacks.

### 5.3 Procedure

Place the sack on flat horizontal surface, and smooth out any wrinkles. Measure the dimension at the measuring points indicated in clause 4 for the type of sack concerned. Measure at least 10 sacks to an accuracy of not less than 1 mm.

### 5.4 Calculation and expression of results

Calculate the dimensions as the mean of the determinations, and express them in millimetres to the nearest millimetre.

## 6 Test report

The test report shall include the following information :

- a) all information necessary for complete identification of the sample;
- b) reference to this International Standard and part;
- c) the results, expressed to the nearest millimetre;
- d) any unusual features observed in the course of the test;
- e) any operations not specified in this International Standard, or any circumstances or influences regarded as optional, which might have affected the results.