International Standard 3676

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Packaging — Unit load sizes — Dimensions

Emballages — Grandeurs des unités de charge — Dimensions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

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.

International Standard ISO 3676 was developed by Technical Committee ISO/TC 122, *Packaging*, and was circulated to the member bodies in September 1982.

It has been approved by the member bodies of the following countries :

Australia	India	Spain
Austria	Italy	Sweden
Belgium	Jamaica	Switzerland
Canada	Japan	Turkey
Czechoslovakia	Malaysia	United Kingdom
Egypt, Arab Rep. of	New Zealand	USA
France	Nigeria	USSR
Germany, F. R.	Poland	Yugoslavia
Hungary	South Africa, Rep. of	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Brazil
Korea, Rep. of

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Packaging — Unit load sizes — Dimensions

0 Introduction

It has to be recognized that a single overall system based on a common module is unlikely to cover all packaged goods in the world, because of substantial differences in the sizes, shapes, and densities of the products, great variety in handling devices, regional government legislation, etc.

However, the application of such a system should be striven for, as a long-term policy goal, assuming that this does not lead to the exclusion of commodity dimensions and goods, which are compatible with the modular system.

A standardized unit-load dimension must prevent inadvertent oversizing, and thus jamming against internal walls, or undersizing, and thus wasting cargo vehicle space and/or rendering the load susceptible to transit damage.

Determining acceptable deviations in dimensions of unit loads is a complex matter, since the dimensions of the transport package, and thus the load itself, tend to change during the filling, handling, warehousing, and transport. (See figure 1.)

One factor affecting the measurement of the unit load is "load bulge" (filling, compression, and settling bulge). Factors influencing the "load bulge" are : transport package materials, nature of contents, length of time in storage, moisture and temperature conditions, and transit conditions.

Another cause of unit load enlargement is "stacking irregularity" (unitizing inefficiency, out-of-plumb stacking, and out-of-square stacking) which occurs frequently and particularly in manual formation of the transport package layers in a unit load.

Such factors, which tend to change the plan dimensions of the unit load, cannot always be avoided but they must be controlled by providing a dimensional deviation for the standardized unit loads.

When choosing transport package materials and when adding subsequent layers of transport packages to complete the unit load, it should be ensured that the resulting overall length and width dimensions do not exceed the referenced plan dimensions of the unit load, at any stage of the distribution chain.

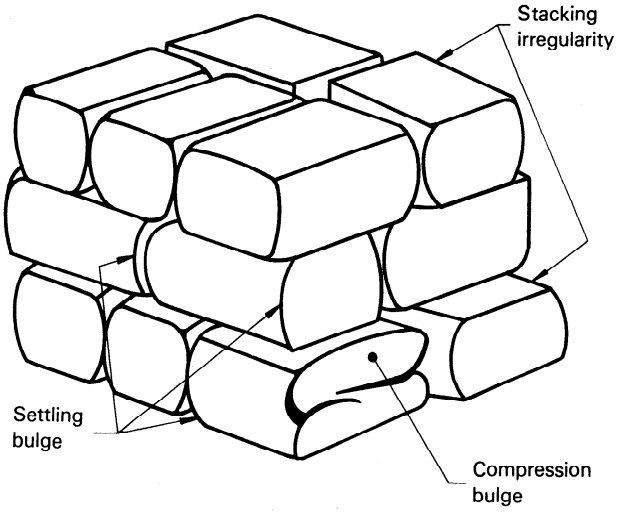

Figure 1 — Dimensional deviations for unit loads

1 Scope and field of application

This International Standard is based on the concept of a modular system and specifies the plan dimensions for unit loads suitable for distribution of goods, which comprises all activities for the movement of products from their origin to their destination.

2 References

ISO/R 198, *Double-deck flat pallets for through transit of goods.*

ISO 1894, *General purpose series 1 freight containers — Minimum internal dimensions.*

ISO 3394, *Dimensions of rigid rectangular packages — Transport packages.*

3 Definitions

For the purpose of this International Standard, the following definitions apply.