



BSI Standards Publication

# Packaging — Complete, filled transport packages and unit loads — Dimensions of rigid rectangular packages

**National foreword**

This British Standard is the UK implementation of ISO 3394:2012. It supersedes BS 6837:1987 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PKW/0, Packaging.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2012. Published by BSI Standards Limited 2012

ISBN 978 0 580 66512 7

ICS 55.020

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2012.

**Amendments issued since publication**

Date	Text affected
------	---------------

---

INTERNATIONAL  
STANDARD

**ISO**  
**3394**

Third edition  
2012-11-01

---

---

**Packaging — Complete, filled transport  
packages and unit loads — Dimensions  
of rigid rectangular packages**

*Emballages — Emballages d'expédition complets et pleins et charges  
unitaires — Dimensions des emballages rectangulaires rigides*



Reference number  
ISO 3394:2012(E)



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword .....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>1</b>
<b>4 Principle .....</b>	<b>1</b>
<b>5 Plan dimensions .....</b>	<b>1</b>
<b>6 Height .....</b>	<b>8</b>
<b>7 Tolerances .....</b>	<b>8</b>
<b>Annex A (informative) Examples of combination multiples and submultiples, arranged to interlock .....</b>	<b>9</b>
<b>Bibliography .....</b>	<b>10</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3394 was prepared by Technical Committee ISO/TC 122, *Packaging*

This third edition cancels and replaces the second edition (ISO 3394:1984), which has been technically revised.

# Packaging — Complete, filled transport packages and unit loads — Dimensions of rigid rectangular packages

## 1 Scope

This International Standard sets forth a series of dimensions for rigid rectangular transport packages, based on the standard plan dimension (module) of 600 mm × 400 mm, 600 mm × 500 mm and 550 mm × 366 mm, as outlined in ISO 3676, which defines the plan dimensions of four series (1 219 mm × 1 016 mm, 1 200 mm × 1 000 mm, 1 200 mm × 800 mm, 1 100 mm × 1 100 mm).

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21067, *Packaging — Vocabulary*

ISO 6780:2003, *Flat pallets for intercontinental materials handling — Principal dimensions and tolerances*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21067 and the following apply.

### 3.1

#### plan dimensions

dimensions of the rectangle defined on a horizontal surface by the four vertical planes intersecting at right angles which enclose a transport package freestanding on that surface

NOTE See Figure 1.

### 3.2

#### load bulge

swelling of the freight which is caused by filling, both static and dynamic compression, deterioration and rough stacking, and is affected by transport packaging materials, characteristics of contents, method of filling/stuffing, duration of storage, humidity and temperature conditions, and condition of transportation, etc.

## 4 Principle

The effective outside dimensions (length and width) of transport packages shall be obtained by multiplying or dividing the standard plan dimension by an integer.

## 5 Plan dimensions

Examples of plan dimensions calculated following the principles of Clause 4 are set forth in Table 1 and in Figures 2 and 3. Pallet dimensions shall conform to 4.1.1 and 4.1.2 of ISO 6780:2003.

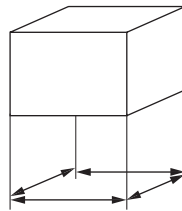


Figure 1 — Plan dimensions

Table 1 — Dimension of transport packages

Dimensions in millimetres

Module				
600 × 400		600 × 500		550 × 366
<b>Recommended pallet sizes for each module</b>				
1 200 × 800	1 219 × 1 016	1 219 × 1 016	1100 × 1100	1 100 × 1 100
	1 200 × 1 000	1 200 × 1 000		
<b>Multiples</b>				
1 200 × 800	1 200 × 1 000	1 200 × 1 000	1 100 × 1 100	1 100 × 1 100
1 200 × 400		1 200 × 500		1 100 × 550
800 × 600		1 000 × 600		1 100 × 366
<b>Submultiples</b>				
600×400		600×500		550×366
300×400		300×500		275×366
200×400		200×500		183×366
150×400		150×500		137×366
120×400		600×250		110×366
600×200		300×250		550×183
300×200		200×250		275×183
200×200		150×250		183×183
150×200		600×166		137×183
120×200		300×166		110×183
600×133		200×166		550×122
300×133		150×166		275×122
200×133		600×125		183×122
150×133		300×125		137×122
120×133		200×125		110×122
600×100		150×125		#
300×100		#		#
200×100		#		#

NOTE 1 The multiples and submultiples are examples calculated from the module 600 mm × 400 mm, 600 mm × 500 mm and 550 mm × 366 mm.

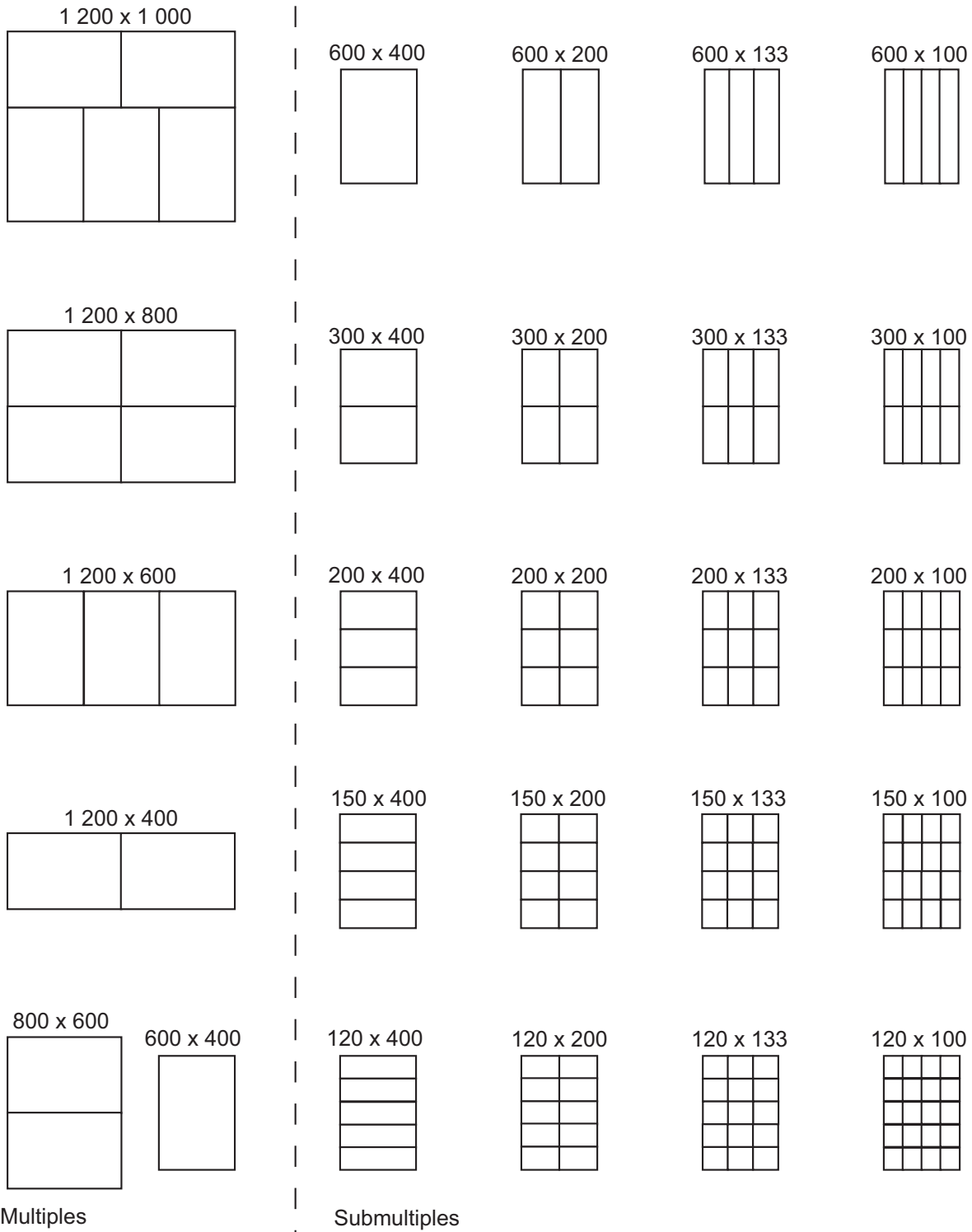
NOTE 2 Sizes below 110 mm x 122 mm are not recommended, as they are too small and of little practical use.

NOTE 3 Transport unit configurations shown in this table, Figure 2, Figure 3 and Figure 4 are illustrative only. Other transport unit configurations which are approved as rigid rectangular packages are available.



**Table 1** (continued)

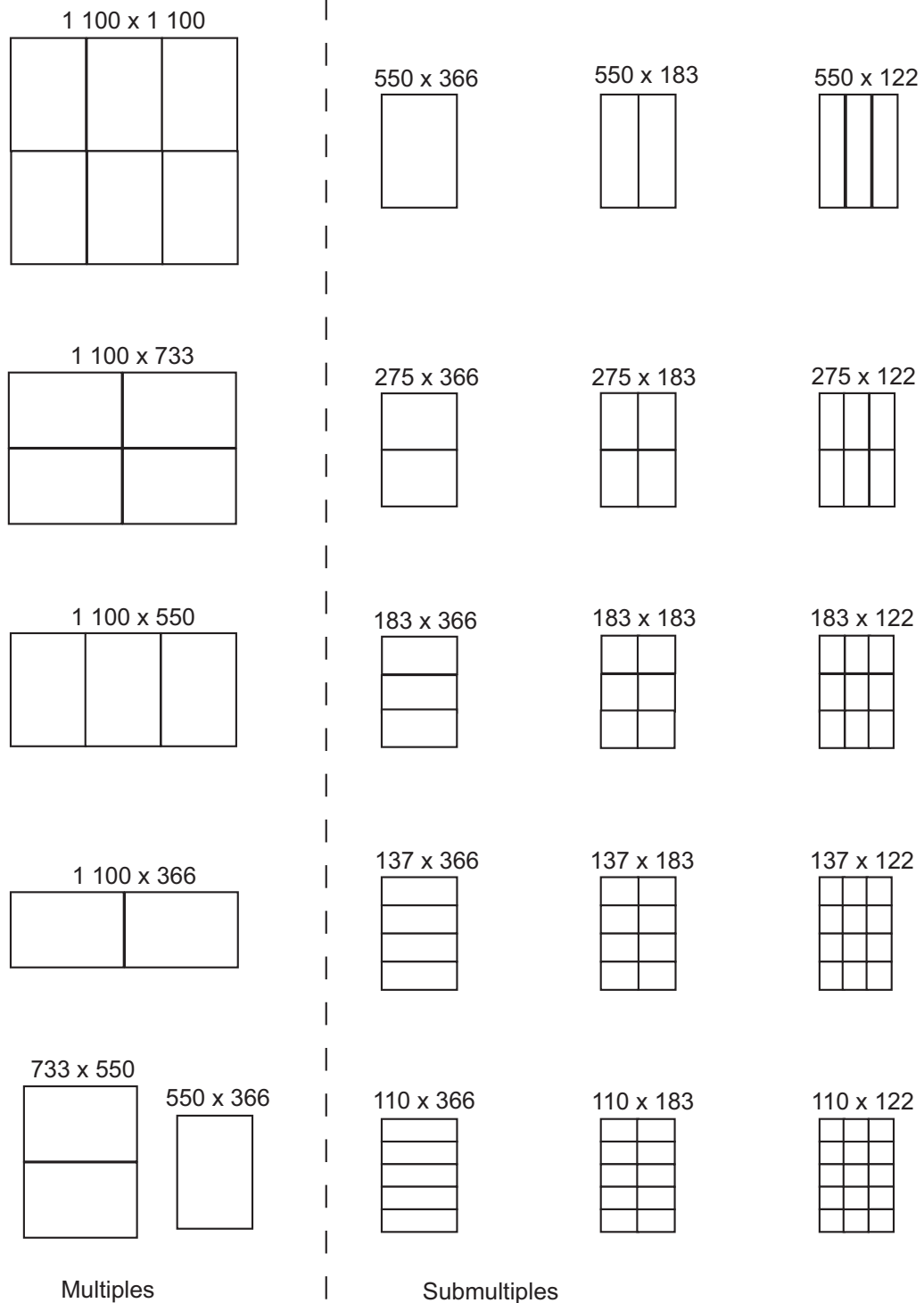
<b>Module</b>		
150×100	#	#
120×100	#	#
<p>NOTE 1 The multiples and submultiples are examples calculated from the module 600 mm × 400 mm, 600 mm × 500 mm and 550 mm × 366 mm.</p> <p>NOTE 2 Sizes below 110 mm x 122 mm are not recommended, as they are too small and of little practical use.</p> <p>NOTE 3 Transport unit configurations shown in this table, Figure 2, Figure 3 and Figure 4 are illustrative only. Other transport unit configurations which are approved as rigid rectangular packages are available.</p>		



NOTE 1 Pallets with the dimensions of 1 219 × 1 016 mm will support the same pallet patterns.

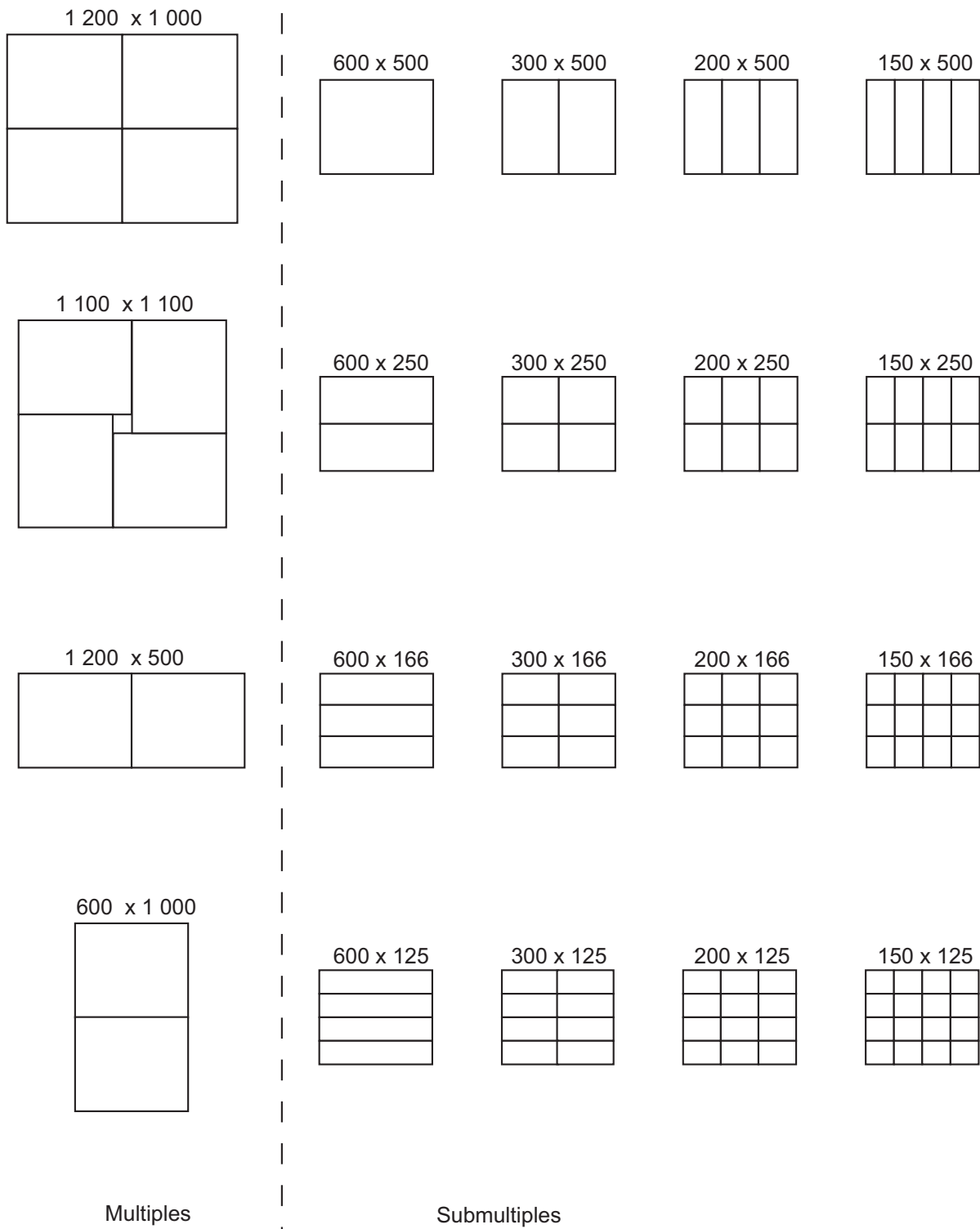
NOTE 2 Dimensions in millimetres.

**Figure 2 — Example of combination multiples and submultiples for 1 200 mm × 1 000 mm**



NOTE Dimensions in millimetres.

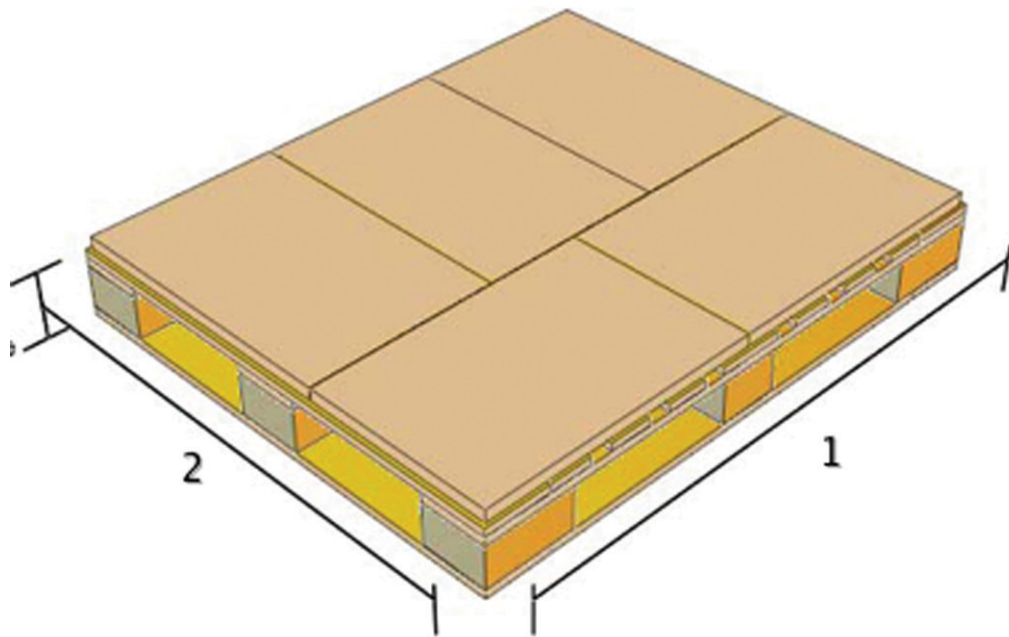
Figure 3 — Example of combination multiples and submultiples for 1 100 mm × 1 100 mm



NOTE 1 Pallets with the dimensions of 1 219 mm × 1 016 mm will support the same pallet patterns.

NOTE 2 Dimensions in millimetres.

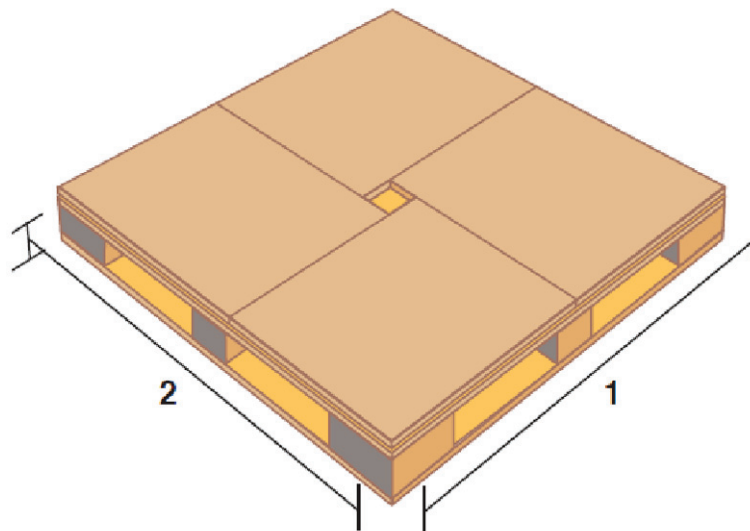
**Figure 4 — Example of 600 mm × 500 mm multiples and submultiples for a 1 200mm × 1 000 mm pallet and 1 100 mm × 1 100 mm pallet**



**Key**

- 1 1 200 mm or 1 219 mm
- 2 1 000 mm or 1 016 mm

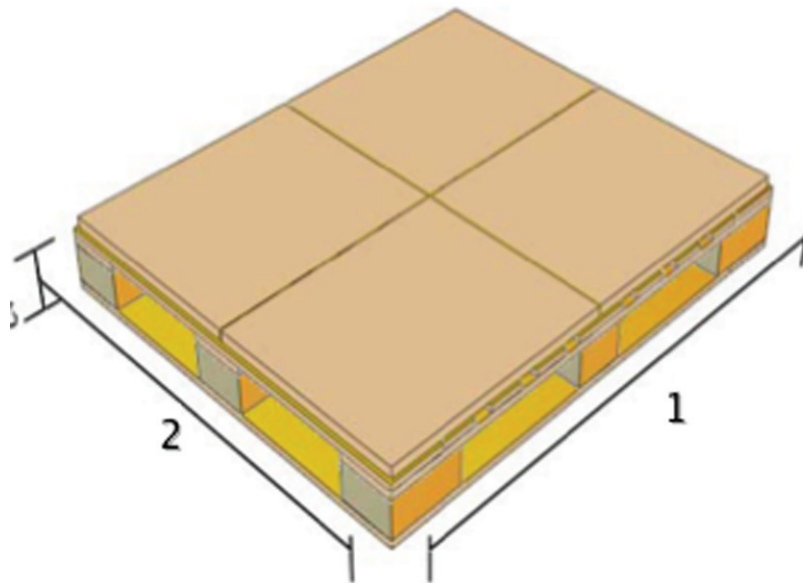
**Figure 5 — Example of 600 mm × 400 mm multiple for a 1 200 mm × 1 000 mm or 1 219 mm × 1 016 mm pallet**



**Key**

- 1 1 100 mm
- 2 1 100 mm

**Figure 6 — Example of 600 mm × 500 mm multiple for a 1 100 mm × 1 100 mm pallet**



**Key**

- 1 1 200 mm or 1 219 mm
- 2 1 000 mm or 1 016 mm

**Figure 7 — Example of 600 mm × 500 mm multiple for a 1 200 mm × 1 000 mm or 1 219 mm × 1 016 mm pallet**

## 6 Height

The height of the transport packages shall be left to the discretion of the user.

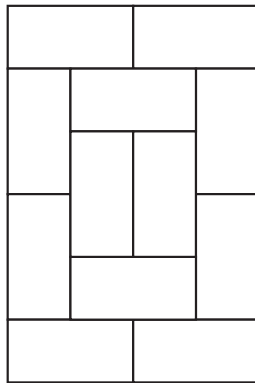
## 7 Tolerances

The plan dimensions and all the derived dimensions are maximum dimensions for filled transport packages.

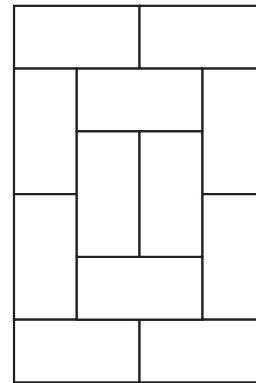
## Annex A (informative)

### Examples of combination multiples and submultiples, arranged to interlock

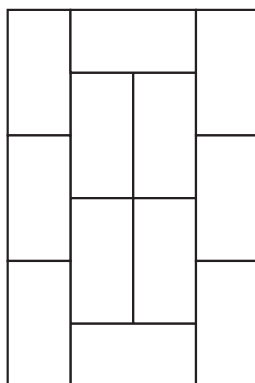
1 200 x 800, Multiple  
400 x 200, Submultiple  
FIRST LAYER



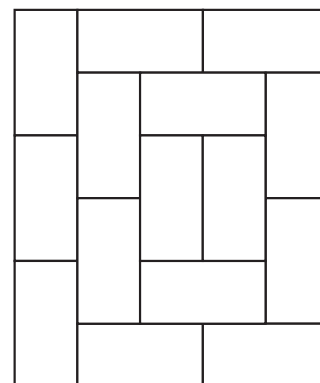
1 200 x 800, Multiple  
400 x 200, Submultiple  
FIRST LAYER



1 200 x 800, Multiple  
400 x 200, Submultiple  
SECOND LAYER



1 200 x 1 000, Multiple  
400 x 200, Submultiple  
FIRST LAYER



NOTE Dimensions in millimetres.

Figure A.1 — Examples of combination multiples and submultiples arranged to interlock

## Bibliography

- [1] ISO 3676, *Packaging — Complete, filled transport packages and unit loads — Unit load dimensions*









# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)



...making excellence a habit.™