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English version

**Packaging - Small Load Carrier Systems - Part 3: Bond
Stackable System (BSS)**

Emballage - Systèmes de transport de petites charges -
Partie 3: Système à gerbage croisé (SGC)

Verpackung - Kleinladungsträgersysteme - Teil 3:
Verbundstapelsystem (VSS)

This European Standard was approved by CEN on 30 June 2000.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2001, and conflicting national standards shall be withdrawn at the latest by January 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This draft standard is part of a series of standards for Small Load Carrier Systems (SLC Systems).

The other parts is entitled as follows:

- Part 1: Common requirements and test methods
- Part 2: Column stackable system (CSS)

Introduction

The Small Load Carrier (SLC) system specified in this Part of EN 13199 was conceived for handling, storage and transport of goods and designed to meet the needs of automotives manufacturers and their suppliers.

As this system may be used for similar purposes in other fields of application, this Part of EN 13199 only contains the main requirements necessary to define a non-restrictive common base.

The multi-functional design of its elements allow the Small Load Carrier system produced in accordance with this standard to meet the requirements of different manual, mechanical and automatic handling, transport and storage systems throughout the transportation chain. It is likely that this system of SLCs and accessories will frequently be used in a pool.

The special characteristic of the system specified in this Part of EN 13199 is the self-securing mechanism of the unit load in the bonded stack. For this reason the system is called the bond stackable system (BSS). The key feature of the bond stackable system is the structure of the SLC base which permits the self-securing of loads on a pallet.

The BS system consists of the following elements:

- a) SLCs;
- b) tray;
- c) lids;
- d) covers;
- e) security plate;
- f) system pallets.

The use of the BS system with palletized loads is discussed in Annex C.

1 Scope

This Part of the EN 13199 specifies the main characteristics and the testing of durable, re-usable parallelepipedic boxes and their accessories which form a bond stackable system designed to contain bulk or precisely located component loads up to a maximum useful load of 50 kg.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13199-1:2000

Packaging – Small Load Carrier Systems – Part 1: Common requirements and test methods

EN 20105-A02

Textiles – Tests for colour fastness – Part A02: Grey scale for assessing change in colour (ISO 105-A02 : 1993)

EN ISO 75-1

Plastics – Determination of temperature of deflection under load – Part 1: General test method (ISO 75-1 : 1993)

EN ISO 75-2

Plastics – Determination of temperature of deflection under load – Part 2: Plastics and ebonite (ISO 75-2 : 1993)

EN ISO 527-1

Plastics – Determination of tensile properties – Part 1: General principles (ISO 527-1 : 1993 including Corr. 1 : 1994)

EN ISO 527-2

Plastics – Determination of tensile properties – Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2 : 1993 including Corr. 1 : 1994)

ISO 178

Plastics – Determination of flexural properties

ISO 179

Plastics – Determination of Charpy impact strength

ISO 180

Plastics – Determination of Izod impact strength

ISO 306

Plastics – Thermoplastic materials – Determination of Vicat Softening Temperature (VST)

ISO 1133

Plastics – Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics

ISO 1183:1987

Plastics – Methods for determining the density and relative density of non-cellular plastics

ISO 2039-1

Plastics – Determination of hardness – Part 1: Ball indentation method

ISO 4892-1

Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance

ISO 4892-2

Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc sources

ISO 4892-3

Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps

ISO 4892-4

Plastics – Methods of exposure to laboratory light sources – Part 4: Open-flame carbon-arc lamps

ISO/DIS 8611-1:1997

Pallets for Materials Handling – Test methods

ISO/DIS 8611-2:1997

Pallets for Materials Handling – Performance requirements

ISO/DIS 8611-3:1997

Pallets for Materials Handling – Design rating and maximum working load

3 Terms and definitions

For the purposes of this standard, the following terms and definitions and those given in EN 13199-1:2000 apply:

3.1

BSS small load carrier

small Load Carrier (SLC) which has specific functional features which ensure inter-compatibility and self securing.

3.2

self-securing

design feature which allows the base of an SLC to interlock with a system pallet to ensure the stability of a stack of SLCs without the use of additional securing measures such as strapping, stretch or shrink wrapping.

3.3

special small load carrier

BSS small load carrier designed for special purpose application in a transportation chain, incorporating additional functional elements (e.g. inserts, holes, electro-conductive materials, etc.).

3.4

system pallet

modular sized pallet with specific functional features which interlock with the bond stackable SLCs to ensure self-securing.

4 Characteristics

The heights of the SLCs are determined in such a way that when used in combination with a 150 mm high pallet and a cover they form a nominal unit load height of 1000 mm (see Annex C).

The bond stackable system is characterized by the following features:

- a) maximum load: 50 kg,
(for SLC 32.. : 30 kg);
- b) "load space" and "function space for handling" are clearly separated.
- c) smooth, flat internal SLC surfaces without undercuts permit rapid, reliable manual removal of the contents and mechanical/automatic filling and emptying.
- d) functional features - see clause 6

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