

CKD/PbP/SP Packaging Made of Wood and Wood Components

Foreword

This DBL documents the qualitative and technical requirements for packaging materials made of wood and wood components specified for the CKD/PbP and GSP After-Sales areas.

This edition supersedes the previous edition of this standard.

Changes

In comparison with edition 2021-09, the following changes have been made:

- Section 4: Inclusion of Decreto Legislativo 116/2020

Contents

1 Scope of Application.....2
 2 Normative References.....3
 3 Terms and Definitions4
 4 General Requirements4
 5 Abbreviated Material Designation for Documentation.....4
 6 Workmanship and Assembly.....5
 7 Drawing/Change Documentation5
 8 Dimensions and Tolerances/Form of Supply5
 9 Technical Data.....6
 9.1 General.....6
 9.2 Product Versions A1 and A26
 9.3 Product Version A37
 9.4 Product Version A47
 9.5 Product Version A57
 9.6 Product Version A67
 10 Tests.....8
 11 Samples.....8
 12 Deliveries.....8
 13 Complaints.....8

1 Scope of Application

This standard shall apply to the "Quality Support for Plants Abroad" and "Global Service & Parts" units. It is not applicable to the production units.

The product versions are listed in Table 1.

Table 1: Current product versions, overview

Product version	Product group	Application example
A1	Softwood with parts made from hardwood and/or wood substitute materials	Pallet timber, boards for the manufacture of customized wood packaging
A2	Softwood with parts made from hardwood and/or wood substitute materials	Wood packaging, parts groups of wood packaging, individual wood parts of/for packaging
A3	Plywood (veneer plywood) Material: Spruce/fir softwood	Wood packaging, parts groups of wood packaging, individual wood parts of/for packaging
A4	Hardboard	Wood packaging, parts groups of wood packaging, individual wood parts of/for packaging
A5	Wood particle boards (flat-pressed particleboard)	Wood packaging, parts groups of wood packaging, individual wood parts of/for packaging
A6	Wood particle boards (OSB panels)	Wood packaging, parts groups of wood packaging, individual wood parts of/for packaging

2 Normative References

In the text, the following documents shall be referenced in such a way that some parts of them or their entire content describe the requirements of the present document. For dated references, only the referenced edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DBL 6714	Negative List - Constituents of Process Materials
DBL 8585	General Requirements - Environmental Protection, Hazardous Substances, Dangerous Goods - Negative Substance List for the Selection of Materials
DIN 15147	Pallets - Timber Flat Pallets - Quality Requirements
DIN 4074-1	Strength Grading of Wood – Part 1: Coniferous Sawn Timber
DIN EN 12246	Quality Classification of Timber Used in Pallets and Packaging
DIN EN 12248	Sawn Timber Used in Industrial Packaging - Permitted Deviations and Preferential Sizes
DIN EN 12249	Sawn Timber Used in Pallets - Permitted Deviations and Guidelines for Dimensions
DIN EN 13183-1	Moisture Content of a Piece of Sawn Timber - Part 1: Determination by Oven Dry Method
DIN EN 13183-2	Moisture Content of a Piece of Sawn Timber - Part 2: Estimation by Electrical Resistance Method
DIN EN 300	Oriented Strand Boards (OSB) – Definitions, Classification and Specifications
DIN EN 309	Particleboards - Definition and Classification
DIN EN 312	Particleboards - Specifications
DIN EN 314-2	Plywood; Bonding Quality; Part 2: Requirements
DIN EN 315	Plywood - Tolerances for Dimensions
DIN EN 324-1	Wood-Based Panels; Determination of Dimensions of Boards; Part 1: Determination of Thickness, Width and Length
DIN EN 324-2	Wood-Based Panels; Determination of Dimensions of Boards; Part 2: Determination of Squareness and Edge Straightness
DIN EN 622-1	Fiberboards - Specifications - Part 1: General Requirements
DIN EN 622-2	Fiberboards - Specifications - Part 2: Requirements for hardboards
DIN EN 635-3	Plywood - Classification by Surface Appearance - Part 3: Softwood
DIN EN 636	Plywood - Specifications
ISPM 15	REGULATION OF WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE
VDA 4902	Transport Labels (Barcode-Enabled)

3 Terms and Definitions

CKD	Completely knocked down
DBL	Daimler-Benz Supply Specification
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
GSP	Global Service & Parts
IPPC	International Plant Protection Convention
ISPM	International Standard of Phytosanitary Measures
PbP	Part by Part
PEFC	Program for the Endorsement of Forest Certification

4 General Requirements

To guarantee product safety and product quality, and to meet certification requirements, all relevant statutory regulations and laws shall be complied with. In addition, the relevant requirements of the Daimler Group apply.

All materials, process engineering, component parts, and systems shall comply with all applicable legal requirements regarding constituents and recyclability.

DBL 8585 and DBL 6714 shall be observed.

In addition, Decreto Legislativo 116/2020 shall be fulfilled.

Corresponding designation of the packaging as shown in Figure 1



Figure 1: Logo

The product groups listed in Table 1 shall be free of material and production defects of any type that would impair their processing and usage properties. The product versions shall demonstrate dimensional stability, resistance to deformation, and resistance to aging even under extreme weather conditions in accordance with their application. For deliveries to countries that have adopted the International Phytosanitary Standard (IPPC Standard) of the FAO, the appropriate evidence shall be provided.

Any further requirements such as siren treatment or a plant protection certificate shall be fulfilled when required.

All products used shall come from FSC-/PEFC-accredited cultivation. For this purpose, the supplier shall provide the necessary proof as required when submitting the tender.

In drawings and tender documents, the quality for workmanship and delivery shall be entered in the field for materials. In the event of questions, the department responsible shall be consulted.

5 Abbreviated Material Designation for Documentation

Not applicable.

6 Workmanship and Assembly

For precise specifications for nailing/stapling, refer to the applicable drawing. If there is no information available or it is insufficient, consult the relevant department. Fasteners deviating from the specifications may be used provided that they have the same properties. Any changes of this kind shall be agreed on with the relevant department. Marking of packaging with the manufacturer logo/lettering is not permitted. Generally, joints and connections shall be made such that they meet normal requirements for the packaging.

7 Drawing/Change Documentation

The supplier shall be capable of creating drawing and change documentation for complex packaging (packaging that consists of multiple components/loose component parts) based on a CAD drawing, which it shall provide to the Daimler Group if necessary. This ensures that all changes to the packaging during the term of the contract are documented correspondingly. This data shall be provided to Daimler AG in DXF format. The creation and documentation expenses are covered by the purchasing contract for the order item concerned.

8 Dimensions and Tolerances/Form of Supply

Form of supply:

- Separated according to grades, item numbers, and order numbers.
- If transportation protection is required or requested by Daimler AG, deliveries shall be strapped with tensioning straps and/or the individual PUs (packaging units) shall be strapped with PE strapping. The use of other means of securing shall be agreed on with the relevant department.
- The load shall be secured at all times in accordance with German road traffic regulations (StVO).
- Where timber pallets are supplied, nested palletizing is permitted in principle.
- Deliveries shall be unloaded with a fork-lift truck and be suitable for subsequent placing down and stacking. The underclearance shall be at least 80 mm.
- Each shipping unit shall be marked in accordance with VDA 4902/4 (item number, delivery note number/batch number/date of manufacture, etc.).
- Any costs arising from the above points shall be included in the quoted prices.

9 Technical Data

9.1 General

Suppliers of packaging material made of solid wood or with solid wood content shall register with the plant protection authority responsible as a treatment company or manufacturer of wood packaging materials in accordance with the IPPC ISPM 15 standard. Suppliers are obliged to send the current confirmation of their IPPC registration to the GLC at "mbox-006-glc-cw1-verpackungsplanung@daimler.com" in German and English, without prior request. Furthermore, suppliers are obliged to comply with EU Regulation 995/2010 (obligations of operators who place timber and timber products on the market).

Moisture content shall be determined in accordance with DIN EN 13183-1 and DIN EN 13183-2.

9.2 Product Versions A1 and A2

9.2.1 Quality requirements

All order items falling under this category shall be treated in accordance with the IPPC ISPM 15 standard and marked accordingly, i.e. each piece of packaging with solid wood content procured ready for use shall be marked with an IPPC stamp on two opposite sides.

The registration number shall be provided on delivery notes, invoices, and thermal recorder reports. The treatment shall be documented in the form of thermal recorder reports and retained for the period specified in the IPPC ISPM 15 standard.

The timber shall correspond to at minimum the quality specifications of DIN 4074-1 grade S10 TS or DIN EN 12246 class P1. Should the requirements deviate, the better quality shall apply. Tree edge shall be free of bark.

For structural parts in crates, grade S13/S13K is required for cross-sections ≤ 50 mm x 25 mm. Tolerances in accordance with DIN EN 12248 and DIN EN 12249 class A.

Deviating from the board dimensions of 80 mm/100 mm x 18 mm specified on the pallet/crate drawings, boards with dimensions of 78 mm/98 mm x 17 mm and a tolerance in accordance with the specifications in DIN EN 12248 and DIN EN 12249 can also be used.

For pallets/crates, DIN 15147 shall apply. As an alternative to beech/spruce, pallet blocks can also consist of particleboard.

If applicable, assembly according to the drawing using the standardized fasteners indicated (nails/staples/screws).

9.2.2 Target moisture for CKD/PbP scopes

Target moisture 20 % max.

9.2.3 Target moisture for SP scopes

Target moisture 20 % max.

If a target moisture is required, the desired residual moisture shall be specified on drawings/in tender documents. The residual moisture shall be clarified with the relevant department in each individual case.

9.3 Product Version A3

Plywood panels in accordance with DIN EN 636 and the following requirements, as well as those described in the article itself, shall be supplied.

Supply condition:	Dry in accordance with DIN EN 315
Dimensions	1,220 mm x 2,440 mm/2,500 mm DIN EN 324-1
Tolerances:	In accordance with DIN EN 315
Grade:	Sheathing: C/C BFU 100/in accordance with DIN EN 635-3
Bonding:	In accordance with DIN EN 314-2 class 2
Surface:	Unsanded
Cut edges:	Square, DIN EN 324-2

Veneer layers:	Board thickness	Minimum number of veneer layers
	Up to 10 mm	5
	Above 10 up to 15 mm	7
	Above 15 up to 22 mm	9

If applicable, assembly according to the drawing using the standardized fasteners indicated (nails/staples/screws).

9.4 Product Version A4

Fiberboards HFH100/MB.H/HB.H, in accordance with the above standards DIN EN 622-1, DIN EN 622-2 and the respective requirements of the article.

9.5 Product Version A5

Wooden particleboards in accordance with the above standards DIN EN 309, DIN EN 312, DIN EN 636 and the respective requirements of the article.

If applicable, assembly according to the drawing using the standardized fasteners indicated (nails/staples/screws).

9.6 Product Version A6

OSB3 liquid bonded in accordance with DIN EN 300.

If applicable, assembly according to the drawing using the standardized fasteners indicated (nails/staples/screws).

10 Tests

Incoming goods inspections and sampling inspections of the inventories. Quality checks using the generally recognized tests relevant to the respective product groups based on the applicable standards.

Additional quality testing procedures by test institutes can be commissioned. In the event the required quality is not met, the resulting costs can be invoiced to the supplier.

11 Samples

Approval of a packaging shall always be based on a physical inspection of packaging samples. The supplier shall send appropriate samples (up to 5 pieces) free of charge to a specified address. Daimler AG reserves the right to refuse approval, indicating the reason for such a refusal, if the packaging does not fulfill the relevant requirements.

Concurrently with the samples, the supplier shall submit the technical specifications of the relevant packaging to Daimler AG within 14 days:

- Drawing of the packaging (in 2D for wood elements and pallets, in 3D for crates)
- Parts list of the materials used indicating their grade.

12 Deliveries

Deliveries shall fulfill the requirements of the supply specification.

Changes of any kind that might affect the stipulated requirements and usage properties are subject to agreement of the relevant departments of the buyer and to the submission of a sample and/or approval in writing.

For the relevant delivery windows/times, relevant sites shall be contacted.

13 Complaints

Complaints concerning damaged, defective, or inadequate deliveries shall be raised through test reports.