

Spare Parts Packaging: Plastic Films and Sheeting

Foreword

This company standard is intended to ensure the proper delivery of packaging and raw materials for the different plants or parts thereof.

This edition supersedes the previous edition of this standard.

Changes

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

- Section 7: Addition of Decreto Legislativo 116/2020

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1 Scope of application

This DBL applies to all spare parts packaging material deliveries of plastic films and sheeting to all plants of the Daimler group.

The product versions are shown in Table 1.

Table 1: Current product versions, overview

Product version	Material	Application example
B4 001 30 ... – B4 008 30 ...	Films and sheeting for packaging purposes (PE-LD; PE-HD and PE-LLD grades)	Flat sheets, tubular films, bags
B4 001 31 ... – B4 008 31 ...	Films and sheeting for packaging purposes (PE-LD; PE-HD and PE-LLD grades)	Flat sheets, tubular films, bags with VCI (corrosion protection)
B4 ... 32 ...	Air blister sheeting	Flat sheets, tubular films, bags, padding
B4 ... 26 ... or B4 ... 27 ...	Stretch films	Wrapping

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.

ASTM D 1003	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics
ASTM D 1709A	Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method
DBL 6714	Negative List - Constituents of Process Materials
DBL 6994	Volatile Corrosion Inhibition (VCI) Products
DBL 8585	General Requirements - Environmental Protection, Hazardous Substances, Dangerous Goods - Negative Substance List for the Selection of Materials
DIN 53122-1	Testing of Plastics and Elastomer Films, Paper, Board and Other Sheet Materials - Determination of Water Vapor Transmission - Part 1: Gravimetric Method
DIN 55529	Packaging - Determining the Sealed-Seam Strength of Sealings Made of Flexible Packaging Material
DIN 55530	Films for Packaging - Barrier Materials Made of Low Density Polyethylene (PE-LD) Films and Recyclates
DIN 6120	Marking of Packaging and Packaging Materials - Plastics Packaging and Packaging Materials
DIN EN ISO 1183-2	Plastics – Methods for Determining the Density of Non-Cellular Plastics – Part 2: Density Gradient Column Method
DIN EN ISO 527-3	Plastics – Determination of Tensile Properties – Part 3: Test Conditions for Films and Sheets
DIN ISO 4593	Testing of Plastic Films – Determination of the Thickness by Mechanical Scanning
TRGS 615	ALO Document: Technical Rule for Hazardous Substances - Restrictions on the Use of Anticorrosion Agents Whose Use can Lead to the Formation of N-Nitrosamines
VDA 4902	Transport Labels (Barcode-Enabled)

3 Terms and definitions

CEN	Comité Européen de Normalisation
GKV	Gesamtverband Kunststoffverarbeitende Industrie e.V. (German Association of the Plastics Processing Industry)
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
SP	Spare part
SVHC	Substances of very high concern
VCI	Volatile corrosion inhibitor
VDA	German Association of the Automotive Industry

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, DBL 6714, and DBL 6994 shall be observed.

The use of resource-preserving materials shall be encouraged, and a corresponding offer shall be submitted. The secondary raw material content in the material can be up to 100 %, provided the technical product requirements are fulfilled. The partner is obliged to document the use of secondary raw materials in the offer. Material colorations shall be prevented.

Packaging materials and packaging shall be produced based on the principle of material and volume saving. In addition, the materials used shall be reusable and widely accepted for recycling. Composites shall be avoided as much as possible so that straightforward separation can be ensured after use.

In addition, the CO₂ values of the products, where available, shall be accordingly included in the RFP. These shall be demonstrated by means of a corresponding certificate.

5 Abbreviated material designation for documentation

The relevant information is indicated in the drawing title field "Designation". E.g. model, dimensions, quality.

6 General properties of materials, raw materials and delivery condition

The packaging shall be free of production defects of any type which would impair the processing and utilization properties or the appearance. This applies, in particular, to defects such as mechanical properties, visual characteristics, etc. Packaged components shall be recognizable through the film. The delivered products shall have a very good opening behavior, a good ability to slide and good welding characteristics.

Special properties are anchored in the order text.

Polyethylene or a polyethylene compound shall be used as a base material. The specifications in accordance with the TRGS 615 and DBL 6714 apply here. VCI films shall be identified as such.

7 Material identification

Materials shall be designated appropriately according to DIN 6120 and the [97/129/EC](#) decision. The plastic material marking is required. Sample design shown in Figure 1. Decreto Legislativo 116/2020 clearly defines the requirements regarding the designation of the material.



Figure 1: Sample design for HDPE

VCI films/bags shall additionally be marked with the information "VCI anti-corrosion film" / "VCI Korrosionsschutzfolie" and the warning: "Not suitable for foodstuffs" / "nicht für Lebensmittel geeignet" in English and German. The traceability of the individual batches shall be ensured based on a marking.

Plastic bags shall be marked with the relevant B4 number, batch number and supplier number. The designation enables traceability in the event of a complaint and shall be guaranteed by the manufacturer/processor.

Lettering size corresponding to the size in the "Resy" symbol.

8 Dimensions and tolerances / Form of supply

A dimensioned drawing/sketch shall be prepared. Fluctuations due to the production technology used shall be indicated.

Mean film thickness tolerance = film weight/weight per unit area $\pm 4,5 \%$ (deviating from GKV)

Rolls:

Film width tolerance according to lay-flat width	≤ 500 mm	$\pm 5 \%$ (deviating from GKV)
	$\geq 501-1500$ mm	$\pm 3\%$ (deviating from GKV)
	$\geq 1501-3500$ mm	$\pm 2\%$ (deviating from GKV)

Film length tolerance	Rolls ≤ 1000 m	0 to $+2,0 \%$ (deviating from GKV)
	Rolls ≥ 1000 m	0 to $+1,0 \%$ (deviating from GKV)

Prefabricated products (e.g. bags):

Dimensional accuracy tolerance	Length	$\pm 3 \%$ (GKV)
	Width	$\pm 2,5 \%$ (GKV)
	Edge overlap $\geq +0,5 \%$, no less than 3 mm	

9 Tests

The test and assessment clauses of GKV, Frankfurt/Main, have a guiding function.

The following test methods shall be observed:

ASTM D 1003 shall ensure that the packaged commodities remain visible. A corresponding quality is ensured by ASTM D 1709A. The identification of the packaging material with regard to disposal is achieved using DIN 6120. The water vapor transmission is determined using DIN 53122-1. The thickness of the packaging material is determined using DIN ISO 4593. The barrier layer properties of plastic films are ascertained using DIN 55530. Mechanical tensile properties of films are determined using DIN EN ISO 527-3. The thickness of non-foamed plastics is determined using DIN EN ISO 1183-2. The sealed-seam strength is determined by means of DIN 55529 and shall correspond at least to the values of the material used.

In particular, the following shall be performed:

- Roll weight by weighing
Permissible tolerance between roll weight and target weight: $\pm 5\%$ (deviating from GKV)
- Processing test
- Quality protected delivery condition, correct palleting

Width/length measurements shall be performed in relaxed film condition.

Additional testing by appropriate independent testing institutes accredited by DIN.

In the case of VCI, a technical approval by an independent test institute or the Materials Technology specialist department and laboratories (Process Materials team) is required, see DBL 6994.

10 Samples

10.1 Supply and testing of initial samples before commencement of deliveries

The supplier shall not be authorized to deliver products to Daimler Group until after the Daimler Group has approved the product in writing. In addition, the supplier shall provide up to 20 samples free of charge and forward them freight prepaid to a specified address. The delivery condition of the packaging materials shall correspond to the subsequent delivery.

Sample deliveries shall always be handled separately from production material deliveries. Sample parts shall be addressed separately in suitable transport containers / one-way packages to a receiving area indicated by the logistics department of the ordering plant.

The individual initial samples shall be marked with the B4 no. so that the correspondence to the test documentation is clear. Initial samples shall be delivered with a separate delivery note which is clearly marked "Initial sample".

In addition, the transport containers/one-way packages shall be identified with a VDA transport label.

10.2 Creation of the sample inspection report by the supplier

10.2.1 Language used in reports

The documents shall be submitted complete in German or in English.

10.2.2 Measurement report

The measured actual values and the relevant target values as well as the tolerances and standards on which these are based shall be entered in the measurement report.

Contents:

- Material composition and thickness of the packaging material
- Weight of the individual packaging material
- Drawing of the packaging
- Design of the packaging material
- Print plan
- Test and quality requirements (e.g. elongation at tear, puncture resistance, etc.)
- Material code according to the Daimler Group packaging regulations
- Results, other occurrences and observations
- Date and place of setup

10.2.3 Material report

Material reports shall be submitted by the supplier for all parts for which certain materials or the application of certain DBLs have been agreed upon between the supplier and the Daimler Group or for which a material specification of the supplier applies. Note that evidence of freedom from harmful substances according to CEN standards of the delivered product shall be documented and produced on request. A six monthly verification, in accordance with TRGS 615 and DBL 8585, shall be submitted for all plastic products by an independent test institute unprompted.

10.2.4 Information obligation in accordance with Article 59 of the REACH regulation (Reg 1907/2006/EC)

Ensuring the quality of the articles sold by the material manufacturer to the Daimler Group involves, among other things, compliance with the applicable specifications of the REACH regulation, particularly the obligation to provide information on substances of very high concern (SVHC).

"SVHC" means substances which are either on the list in accordance with Art. 59 Section 1 or in Annex XIV of the REACH regulation.

The Daimler Group does not expect to find any SVHC substance from the list of candidates in concentrations above the permissible limit of 0,1 percent by weight in the article.

We shall be informed if the weight proportion of a SVHC substance exceeds the limit of 0,1 % in the article or the packaging material and related to the gross weight.

This information shall include as a minimum the name of the SVHC substance concerned and, if necessary, indications for safe use. In this case, we request that we are informed of the

- B4 number,
- CAS number and
- substance concentration

in the article or the packaging.

Particular indications on the safe handling of the article shall only be sent to the mailbox "svhc-sicherheitshinweise@daimler.com".

If one of the articles or packagings contains a SVHC substance or if the proportion of the listed SVHC substances is lower than 0,1 percent by weight, a statement is sufficient, according to which the stated quota of 0,1 % is not exceeded.

Please ensure that the lists according to Art. 59 Section 1 and Annex XIV of the REACH regulation are continuously updated. When a new SVHC substance is listed, the relevant information in accordance with the REACH regulation shall be communicated to us without prompting is the limit of 0,1 percent by weight is exceeded in one of the articles or packagings distributed by you.

The confirmation or listing shall be sent to the aforementioned e-mail address as soon as possible.

10.3 Statement of the Daimler Group

After the sample inspection has been completed, the supplier shall receive a product approval. Production shall not commence until such an approval has been granted. The approval only relates to the product version. The tender data / drawings shall remain binding, particularly with regard to the mechanical properties. Approval of the packaging shall not release the supplier from its obligation to provide deliveries which are free of damage.

11 Identification of the delivery form

11.1 Transport labels

"Transport labels (barcode scannable) according to VDA 4902/4" and "General Packaging Regulations" and at "supplier-portal.daimler.com".

11.2 Identification of delivery

- In principle, the outer packaging shall be coordinated with the receiving plant.
- Unless otherwise agreed, plastic bags shall be supplied bundled in an outer cardboard box in LC 2072.
- The outer cardboard box shall be provided with the required delivery details, e.g. 100 pcs. bundled or on a roll/20 bundles or rolls in outer cardboard box
- The B4 number shall be clearly highlighted and shall be primarily identified together with the number of units and dimensions. The supplier's own markings shall be secondary to this marking.
- Dimensional properties shall be indicated in the sequence: length x width (deviating from GKV), where the width is the opening side.
- VCI films/bags shall additionally be marked with the information "VCI anti-corrosion film" / "VCI Korrosionsschutzfolie" and the warning: "Not suitable for foodstuffs" / "nicht für Lebensmittel geeignet" in English and German.
- Previous freight markings shall be removed.
- Markings shall be attached in the holders provided or be detachable easily and without residue. For the prevention of accidents, among other reasons, attachments using wire suspensions are not permitted.

Example:

Film B4 ... 30 ...

Number of units per load carrier:

Dimensions:

Quality:

Receiving area:

In bundles of:

Order number:

Job number:

Date of delivery:

Manufacturer (supplier) / date of production / made in

Delivery to: Mercedes-Benz AG, ...

Other (your reference)

On delivery note:

- B4 number and quantity (total/per pallet)
- If the numbers of units on pallets are unequal, break down pallets on the delivery note.
- Indicate whether partial or full delivery

11.3 VDA transport labels

"Transport labels (barcode scannable) in accordance with VDA 4902/4".

VDA transport labels are not mandatory for packaging suppliers provided that a clear marking is applied in line with the example above. The Daimler Group reserves the right, however, to require a VDA transport label in the event of inadequate marking. The VDA transport label is shown in Figure 2.



(1) Warenempfänger / Receiver my-Fenix-Software Phoenix-Straße 4711 12345 Musterdorf		(2) Abladestelle - Lagerort - Verwendungsschl. / Gate Postfach 123456 Tel. 999999	
(3) Lieferschein-Nr. / Advice Note No. (N) 2581752 		(4) Lieferantenanschrift / Supplier Address my-VDA-Label, Musterplatz, 12345 Musterdorf	
		(5) Gewicht netto / Net Weight 370 kg	(6) Gewicht brutto / Gross Weight 400 kg
		(7) Anz. Pack. / No. Boxes 1	
(8) Sach-Nr. Kunde / Part No. (P) 765-HGD89-123 			
(9) Füllmenge / Quantity (Q) 140 		(10) Bezeichnung, Lieferung, Leistung / Description Gebälse	
		(11.1) Sach-Nr. Lief. / Supplier Part No. (305) 0-123B10-0 	
(12) Lieferanten-Nr. / Supplier No. (V) 4638141 		(11.2) Packmittel-Nr. Kunde / Package Reference No. (B) 6099012 	
(15) Packstück-Nr. / Serial No. (S) 258175201 		(13) Datum / Date D 171121	(14) Änderungsstand Konstruktion / E. Change A43-275 XL
		(16) Chargen-Nr. / Batch No. (H)  C123	

Figure 2: VDA transport label (example)

12 Delivery

The contractually agreed terms of delivery shall be fulfilled. The delivery of the goods, in particular with regard to the receiving area, shall be clarified with the responsible plant. In the event of any violation of this stipulation, the Daimler Group reserves the right to invoice the supplier for any extra costs and expenses.

13 Shelf life

The goods shall be delivered dry and secured. Goods on pallets / load carriers shall not have any overhang. Damage-free handling by industrial trucks shall be ensured.

Annex A (normative)

Requirements for the characteristics of PE films

The property requirements for the PE films are shown in Table 2.

Table 2: Property requirements for PE films

Measured quantity	Unit	Test specification	Film
Film thickness	µm	DIN ISO 4593	should be specified
Tensile strength (lengthwise/crosswise)	MPa	DIN EN ISO 527-3	≥ (26/24)
Elongation at break (lengthwise/crosswise)	%	DIN EN ISO 527-3	≥ (430/580)
Puncture resistance	g	ASTM D 1709A	≥ 300
Water-vapor transmission (23 °C, 85 % r. h.)	g/m ² d	DIN 53122-1	≤ 1