



SUPPLIER MANUAL LOGISTICS

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Foreword

Competition on the national and international markets has increased sharply in recent years. Increased customer expectations in terms of quality and flexibility are increasingly presenting our company and the entire supply chain with demanding challenges.

Classic logistics has become a holistic, customer-oriented management function that increasingly determines the competitiveness of our company as a strategic success factor. Pump Technology Solutions PS GmbH (hereinafter referred to as "EVAMO") is dependent on cooperation with reliable, competent, and customer-oriented suppliers.

Scope of Supplier Manual

This supplier manual regulates the conditions for the delivery of products by SUPPLIER. The provisions contained herein shall apply in addition to the agreements made with SUPPLIER regarding the delivery of products (e.g., ECRS framework agreement, multi-year contract, (price) conclusions, orders; the "Supply Contract"). If deviating provisions have been made in the aforementioned agreements, these shall take precedence over the Supplier Manual.

EVAMO is entitled to apply the provisions of this Supplier Manual in supplier logistics with SUPPLIER or its respective responsible group companies (affiliated companies pursuant to Section 15 of the German Stock Corporation Act) from which they purchase products.

SUPPLIER is responsible for the quality of its products and for compliance with the requirements and regulations contained in this Supplier Manual.

Deviations from or additions to this Supplier Manual can be agreed in writing between SUPPLIER and EVAMO if necessary.

Deviations from this Supplier Manual are regulated on a division- or plant-specific basis.

1. Information Management in Logistics

Constructive cooperation between SUPPLIER and EVAMO requires targeted communication.

Essential for this are:

Timely and unsolicited information in the event of changes affecting supply relationships.

Compliance with and follow-up of agreements made.

Use of state-of-the-art means of communication.

1.1 Communication SUPPLIER – EVAMO

1.1.1 Contact person

SUPPLIER and EVAMO appoint the responsible contact persons. SUPPLIER shall designate the contact person with name, position, e-mail address, phone and mobile phone numbers as well as a phone number for emergencies (the "Emergency Phone").

Communication takes place in German or English. Deviations require the approval of EVAMO.

1.1.2 Accessibility

Outside of the usual local working hours, SUPPLIER can be reached via the emergency phone during the production period of the plant. The emergency contact, who can be reached via the emergency phone, has access to decision-makers who can initiate immediate measures. SUPPLIER provides contact matrix according to Appendix 1 for various functions.

1.2 Information transfer with EDI

The goal is an integrated data system between EVAMO and SUPPLIER without manual interfaces (media discontinuities).

In principle, the prerequisite for a supply relationship with EVAMO is information transfer via Electronic Data Interchange (abbreviation: EDI). SUPPLIER uses EDI to receive and send information from/to EVAMO. If SUPPLIER does not have an existing EDI connection with EVAMO, a schedule for the introduction of EDI will be agreed upon and implemented by SUPPLIER.

The technical requirements and permitted message formats are agreed in the EDI contract.

1.2.1 Business processes with EDI

- Among other things, the following business processes must be carried out with EDI support, insofar as they are used:
- Transmission of scheduling agreement schedules/individual purchase orders (abbreviation: LAB/PO (as defined in Chapter 10)) from EVAMO to SUPPLIER
- Transmission of the order confirmation of individual orders from SUPPLIER to EVAMO
- Transmission of delivery, packaging, and transport data via ASN (Advanced shipping notice)
- Credit note procedure (if permitted by law, country-specific)
- In the case of consignment stock processing: Inventory movement list (unless otherwise specified)
- Empties management (if connected to an empties management system)
- Transmission of the e-invoice (electronic invoice)

1.2.2 Possibilities of EDI connection

Classic EDI

Classic EDI includes a specific IT infrastructure on the supplier and customer side for processing electronic message formats. Classic EDI is designed for direct communication between Enterprise Resource Planning (ERP) systems without media discontinuity, i.e., the information is exchanged between the information processing systems on the SUPPLIER and customer side without further manual entry. When using classic EDI, the consistency of the system (ensuring correct and complete data transfer) must be guaranteed by SUPPLIER for the entire planning, production, and shipping process.

WebEDI

When using Web EDI, the exchange of information between SUPPLIER and EVAMO takes place via the Internet platform provided by EVAMO. The link for this will be provided separately. The costs for the use of the Internet platform are borne by SUPPLIER.

2. Control concepts and order processing

EVAMO informs the SUPPLIER of the requirements via the control concept used by EVAMO. Building on this, SUPPLIER ensures that:

- its pre-suppliers supply the input material accordingly
- its production capacity and that of the upstream suppliers is sufficient for the notified demand forecast and the forecast quantity and forecast period are forwarded to the upstream suppliers without delay, and
- deliveries are delivered to EVAMO on time.

2.1 Control concepts

- Consignment with LAB
- LAB | Purchase Orders (PO)

A separate contract will be concluded for the implementation of the consignment control concept.

Consignment

When consignment is applied, SUPPLIER remains the legal and beneficial owner of the consignment goods until they are removed from the consignment warehouse. The consignment warehouse can be located at EVAMO or at an external service provider (LSP) commissioned by EVAMO. Warehousing is carried out by EVAMO or an LSP commissioned by EVAMO.

Unless otherwise agreed, the transport of the products to EVAMO's consignment warehouse will be ordered.

SUPPLIER must comply with the tax obligations resulting from the operation of the call-off warehouse (e.g., VAT registration in Germany) in accordance with the applicable law and provide EVAMO with the necessary information.

The control of the consignment stock and the exchange of information are carried out using LAB.

Details of this (e.g., relevant part numbers for which consignment is to be applied; maximum storage time and location of the consignment stock) are agreed in the consignment stock contract. Further details can be found in the consignment framework agreement.

LAB | Call-Off or Single Order

LAB are transmitted on a rolling basis. They are updated regularly and contain order and master data (e.g. quantities and dates) with a horizon of several months. Master data relevant to LAB must be transmitted by the SUPPLIER. The most recent LAB is relevant and replaces previous LAB.

Alternatively, individual orders are also transmitted (e.g., orders for samples, auxiliary and operating materials (abbreviation: HIBE), machine spare parts (abbreviation: MAZE)).

Order Processing and Order Tracking

The arrival dates are indicated in the LAB or individual order. In the case of Incoterm FCA, SUPPLIER makes the goods available on the pick-up date, SUPPLIER takes the transport time into account. This is specified by the relevant freight forwarder or EVAMO contact person.

In the case of Incoterm DAP/DDP, the time of arrival at the EVAMO plant is decisive.

SUPPLIER checks the order received for correctness and plausibility (e.g., supplier name, part number, quantity, date) and informs EVAMO immediately in the event of any abnormalities or objects within 48 hours. SUPPLIER continuously carries out internal order tracking. Regarding the production progress, SUPPLIER can provide information at any time. SUPPLIER ensures consistently transparent order tracking with its subcontractors.

2.2 Flexibility and release periods

2.2.1 Manufacturing and Material Approvals

In principle, a period of 4 weeks applies to the production release and a period of 8 weeks to the material release, unless other provisions have been made in other agreements (purchasing framework agreement, multi-year price contract, etc.). The periods refer to the quantity and departure date specified in the current LAB (in the case of Incoterm FCA).

For deliveries with Incoterm DAP/DDP, the above-mentioned release periods refer to the actual departure date at SUPPLIER.

Different periods are to be agreed between SUPPLIER and EVAMO Purchasing.

All changes to production/material approvals must be made in writing.

Demand quantities beyond the production and material release periods are non-binding target figures (preview) according to which SUPPLIER aligns its production capacity.

For goods that are already in transit, the arrival date is usually not changed (frozen zone). Exceptions to this must be clarified between EVAMO's Logistics and SUPPLIER.

2.2.2 Minimum Order Quantities

Minimum order quantities are not permitted, unless EVAMO agrees to a minimum order quantity in exceptional cases. Existing regulations on minimum order quantities or batch sizes remain valid.

2.2.3 Flexibility

The provisions of the Corporate Agreement (purchasing framework agreement) and the supply or multi-year contract apply. If no contract exists, the VDA guideline applies.

2.2.4 Start-up and outlet control

In start-up and phase-out phases, EVAMO expects increased flexibility from SUPPLIER. The start-up and phase-out quantities and dates must be coordinated between EVAMO and SUPPLIER in good time. According to the requirements in the individual case, the control concept is discussed and, if necessary, adapted.

3. Packaging

3.1 Packaging Requirements

3.1.1 Criteria for packaging design

As a matter of principle, the packaging between EVAMO and SUPPLIER must be designed based on economic, qualitative, and ecological criteria. The packaging concept proposed by SUPPLIER must be approved by EVAMO before the first delivery.

If SUPPLIER is responsible for the packaging design, the packaging concept and the packaging quality must be designed by SUPPLIER in such a way that the integrity of the products during transport, handling and storage is ensured.

The packaging must protect employees or other persons from the dangers posed by the products (e.g., dangerous goods). The packaging itself must not be a danger to people (e.g., protruding nails). From an ecological point of view, recyclable and homogeneous materials must be used, which are environmentally friendly and easy to dispose of and are labelled in accordance with the requirements of the waste management industry.

In addition, care must be taken to reduce plastics and disposable packaging to a minimum as far as possible.

3.1.2 Further requirements for packaging, if responsibility is at SUPPLIER:

- Compliance with Euro dimensions (EVAMO provides packaging data sheet to SUPPLIER outside Europe)
- Use of wooden pallets and wooden boxes according to IPPC standard
- Keeping a list of all alternative packaging
- Easy handling during opening and closing as well as repackaging processes
- For stackability for identical load units: dynamic stacking factor (as defined in chapter 10) at least 1 (1+1). The quality of the packaging material must be demonstrated by means of standardised test methods (as defined in Chapter 3.2.1) and the load units must be marked in accordance with VDA Recommendation 4525 (DIN EN ISO 780) (as defined in chapter 3.2.2).
- If not stackable: the load unit is marked with a label "not stackable "
- Optimal filling level of packages and load units to optimize transport costs.
- Gross weight per unit load (as defined in chapter 10) maximum 1,000 kg.
- In justified exceptional cases, a special permit can be issued in consultation with the EVAMO contact person.
- Gross weight per manually handled package (as defined in chapter 10) maximum 15 kg; in the case of specific requirements or due to regional regulations, different agreements may be made.
- For load units with basic dimensions of 1200x800 mm, the preferred external dimensions for packages are as follows: 300x200 mm, 400x300 mm or 600x400 mm. (see chapter 3.1.2).
- Loading units must not have any protruding or protruding labels or ribbons, in the case of cartons, attention must be paid to dimensional stability and correctly folded lids.
- Mixed pallets are generally permissible. They must be clearly marked as a mixed pallet. Booking and sorted storage must be possible without additional effort (e.g., stackable (intermediate) load carriers). The use of mixed pallets must be coordinated with the EVAMO contact person. (see chapter 3.1.5).

International symbols must be affixed for the marking of goods subject to special handling.

Specific requirements apply in addition to North American Free Trade Agreements in accordance with the *NA Supplier Packaging & Labeling Standards*.

3.1.3 Responsibilities in packaging design

The packaging must be defined at an early stage in the development phase – in coordination between the supplied EVAMO plant and SUPPLIER. EVAMO standard or standard packaging (e.g., German Association of the Automotive Industry (abbreviation: VDA)) must be considered here.

Prior to packaging approval by EVAMO, the SUPPLIER must test the packaging sufficiently, if responsible (see Chapter 3.2.1). The test procedure and scope of the test must be clarified by the SUPPLIER with the EVAMO contact person before they are carried out. Finally, the EVAMO contact person and SUPPLIER agree on the product-specific packaging in the form of a packaging specification, which is generally binding for future deliveries.

In justified exceptional cases, alternative packaging (as defined in chapter 10) may be used, but only in coordination with and after approval by EVAMO. For this purpose, SUPPLIER maintains a list of all alternative packaging.

Deviations that have not been approved and quality defects caused by SUPPLIER are recorded as logistics errors (see Chapter 6.1) and can lead to complaints with processing according to the 8D method. Additional costs incurred in this context, including additional expenses within EVAMO, can be charged by EVAMO to SUPPLIER.

3.1.4 Permitted and Prohibited materials

The following overview shows the possible applications of various packaging materials in tabular form. The use of materials must be carried out in accordance with the EVAMO standard on "Prohibition and Declaration of Ingredients".

Composites (as defined in chapter 10) General		
General	✓	-
	0	only with special permission from the EVAMO contact person
	✗	-
Synthetics		
Disposable	✓	PE, PP, PS, ABS, EPS (except EPS chips), EPE, EPP, PET; Labelling according to German Institute for Standardization (abbreviation: DIN) 6120 recommended
	0	PVC only with special permission from the EVAMO contact person
	✗	PUR, EPS chips
Reusable	✓	ABS, PE, PP, PS, PET, EPP, EPE Markin according to DIN 6120
	0	PVC only with special permission from the EVAMO contact person
	✗	-
Films, bags and sacks made of foil	✓	PE with marking according to DIN 6120 recommended, sticker/label and adhesive tape made of the same materials; <i>Intercept-/Volatile Corrosion Inhibitor</i> (abbrev.: VCI) – films as corrosion protection
	0	-
	✗	Stickers and tape made from foreign materials
Paper and cardboard		
	✓	Free of papermaking pollutants and marked with <i>recycling</i> symbol (abbrev.: RESY)

General	0 Non-water-soluble coatings or adhesive, e.g., wax paraffin, bitumen and oil paper or impregnated paper and cardboard, fabric adhesive tapes, must be reduced to a necessary minimum. Use generally only after consultation and approval of the EVAMO contact person
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Figure 1: Permitted and Prohibited materials

3.1.5 Delivery Regulations

SUPPLIER must pack the packages by type (i.e., separately according to batch, revision status, part number, best-before dates, different countries of origin), different levels of change/revision of a product may not be combined in one package.

The individual packages must be assembled by SUPPLIER to form a transport-safe loading unit and secured against slipping during transport.

The pallet must be designed as a 4-way pallet with three runners. In the case of small quantities, deviations must be agreed in advance with the EVAMO contact person.

When delivered on pallets, the top layer should form a level. If no stackable area can be formed due to the number of pieces to be packed, it may be necessary to fill with empty containers, considering the static and dynamic stacking factor.

Open containers (e.g., KLT) of the top layer must be closed with a lid. To prevent damage, pallet lids should be used when plastic belts are used to secure the load unit.

3.1.6 Requirements for Electrostatic Discharge (abbrev.: ESD) Protection

Electrostatic discharge sensitive devices (ESDS) must be protected from charging and rapid discharge according to the classification of their risk of damage. If there is no external protection, the ESDS component must not meet electrostatically chargeable materials.

It must always be ensured that ESDS components are not exposed to any risk of ESD during transport and storage. SUPPLIER must strictly comply with the relevant requirements for ESD-resistant packaging in accordance with DIN EN61340-5-1.

All ESD packaging materials must be marked with the ESD symbol.

The requirements for ESD packaging are determined by the ESDS components to be packaged. The use and scope of the ESD packaging are specified by EVAMO in coordination with the responsible ESD coordinator and SUPPLIER.

3.1.7 Corrosion Prevention and Moisture Control

Materials or products that are susceptible to corrosion must be protected according to the prevailing outdoor conditions during transport and storage (e.g., in high relative humidity or during sea transport). For example, desiccant bags, corrosion protection by means of reactive copper nanoparticles and VCI paper or VCI films (Volatile Corrosion Inhibitor) "Volatile Rust Protection" are suitable for this purpose.

3.1.8 Packaging for hazardous goods

The packaging for hazardous goods must be approved for each location and material number by EVAMO's office responsible for hazardous goods or by an EVAMO commissioned Logistics Service Provider (LSP) before the first shipment of products. This also applies to pre-series and sample deliveries. The corresponding warning symbols must always be clearly visible on the packaging by SUPPLIER. SUPPLIER must always comply with the legal provisions and regulations applicable to dangerous goods in the respective countries.

3.2 Disposable packaging

3.2.1 Proof of packaging quality if SUPPLIER is responsible for packaging design

SUPPLIER verifies the quality of the packaging material (material specification and crush resistance/BCT value (Box Compression Test)) on request by EVAMO based on test protocols to exclude quality risks during transport, handling and storage.

The determination of the stacking crush resistance can be carried out either at the packaging SUPPLIER or at an accredited testing institute. The stacking crush test is to be carried out in accordance with DIN 55440-1 with a pallet at the top and bottom (min. 3 test specimens, pre-conditioning according to DIN ISO 2233 – 24 h at 23 °C, 50% RH (relative humidity), determination of maximum crush resistance).

3.2.2 Marking of load units by SUPPLIER

The loading units must be labelled in accordance with VDA Recommendation 4525 (DIN EN ISO 780). The following pictograms must be clearly legibly affixed to all four sides of the loading unit with a minimum height of 160 mm.

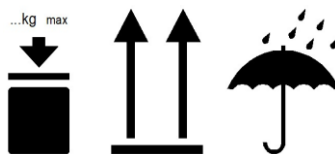


Figure 2: Marking pictograms

3.2.3 Procurement

SUPPLIER procures the coordinated disposable packaging (also includes packaging aids) at its own expense. As a rule, the packaging costs are covered by EVAMO through the product price. The packaging costs must be shown separately in the tender.

3.2.4 Specific requirement depending on the type of transport

Depending on the type of transport, specific requirements differ (regarding the requirements for North America (see chapter 3.1.1)).

Land and air freight

- preferred external dimensions: L1200 x W800 x H1000 mm
- In case of an air freight, the use of sea freight pallets is also permitted

Sea freight

Due to long transport routes and times as well as changing requirements (climate zones, mechanical stress, humidity, etc.), special attention must be paid to suitable packaging for sea freight (see chapter 3.1.8).

The sea packaging must comply with VDA Recommendation 4525.

Preferred external dimensions for optimal use loading volume of the shipping container

- L1140 x W790 x H460/750/1045 mm
- L1200 x W800 x H460/750/1045 mm

To ensure optimal utilization of shipping containers, a loading unit should not have external dimensions longer than 5.7m if the product allows this.

- Use of outer cartons with wet proof/waterproof adhesive.
- Use of desiccant in overseas containers to prevent mould formation, see also e.g., DIN 55474
- Small cartons (<400 x 300 mm) must be combined and protected by a larger outer carton with full filling (stackability).
- The loading volume of the shipping container must be fully utilized. For this purpose, SUPPLIER must ensure dynamic stacking capability (usually 2-3 layers). A factor of safety is to be calculated using the following formula:

$$\text{safety factor} = \text{load capacity} \frac{(\text{determined breaking load in the standard climate})}{\text{required permissible load}}$$

In accordance with VDA Recommendation 4525, SUPPLIER must comply with a safety factor of ≥ 3.5 (breaking load of the load unit determined in a standard climate).

3.3 Reusable packaging

3.3.1 Determination by type of reusable packaging

Euro pallet and Euro lattice box

As a preferred line, empties account management is carried out directly between EVAMO and SUPPLIER. If there is no empties account, the exchange takes place directly upon delivery.

EVAMO's own reusable empties

EVAMO's own reusable empties include standard and special load carriers. This is procured by EVAMO and is the property of EVAMO. The reusable packaging is determined by EVAMO based on internal standards. Suggestions for the design of reusable packaging by SUPPLIER are welcome. SUPPLIER determines alternative packaging in consultation with EVAMO's contact person. SUPPLIER is responsible for product quality.

EVAMO covers the demand for empties for the transport time in both directions (to SUPPLIER and back to EVAMO) as well as the period of goods packaging by SUPPLIER.

Unless otherwise agreed, SUPPLIER shall receive EVAMO's own returnable empties for a product stock of (3) three days, without EVAMO charging the SUPPLIER a usage fee for this. In the event of the use of EVAMO's own reusable empties that exceed the agreed stock, EVAMO may charge the SUPPLIER a usage fee for this. The basis for

calculating the user fee is the inventory data in the empties management system (see chapter 3.3.2). Reusable empties that are in the EVAMO consignment warehouse are exempt from the usage fee.

If SUPPLIER uses less of EVAMO's own empties than described or agreed above, EVAMO will not reimburse this.

Unless otherwise agreed, SUPPLIER may, with the prior consent of the EVAMO contact person, make EVAMO's own reusable empties available to its sub-suppliers for their EVAMO-specific production processes. EVAMO's own reusable empties used in the sub-suppliers' production process are allocated to SUPPLIER's empties accounts and, if necessary, billed to SUPPLIER in accordance with the above regulation. SUPPLIER shall be liable to EVAMO for damage caused by SUPPLIER or its sub-suppliers to EVAMO's own returnable empties. SUPPLIER is responsible for the fault of its subcontractors to the same extent as its own fault.

SUPPLIER was to concentrate the delivery and collection of empties at a regional location.

3.3.2 Empties management

For empties management, SUPPLIER displays the packaging number specified by EVAMO with the corresponding quantity on the delivery note for each delivery.

If exchange pallets are used, they must also be listed on the delivery note.

SUPPLIER and EVAMO or an LSP commissioned by EVAMO maintain empties accounts and reconcile the account balances with the direct exchange partner. **For this purpose, SUPPLIER uses the empties management system specified by EVAMO.**

The account balances are made available to SUPPLIER. Complaints in this regard must be received by the EVAMO contact person within the agreed period of time, upon presentation of the copy of the document (delivery note). Otherwise, the said stock will be deemed to have been confirmed by SUPPLIER. Volume differences must be clarified by SUPPLIER with the support of the EVAMO contact person or the LSP. Remaining quantity differences are to be compensated for with the replacement value in accordance with the causation principle.

Every year, on the deadline specified by EVAMO, SUPPLIER carries out an inventory of all EVAMO's own reusable packaging. In the event of its own fault, SUPPLIER must compensate for any differences in quantity determined during the inventory with the replacement value.

In the event of discrepancies, EVAMO may request a quarterly inventory by SUPPLIER.

3.3.3 Provision and storage of EVAMO's own reusable empties

If no 1:1 (without delay) exchange of full for empties has been agreed between EVAMO and SUPPLIER, SUPPLIER will request EVAMO's own reusable empties in good time (considering the lead times agreed with the exchange partner) via the empties management system used. The reusable empties are delivered within up to seven working days after receipt of the reusable empties order.

SUPPLIER inspects reusable empties upon receipt of goods and immediately reports any defects found (e.g., quantity differences, damage) to the EVAMO contact person, stating the delivery note, photo proof and a brief description of the complaint. The further procedure must be coordinated with the EVAMO contact person on a case-by-case basis.

Reusable empties must be stored by SUPPLIER in such a way that contamination before, during and after the production process is excluded.

3.3.4 Repair and scrapping

EVAMO's own load carriers may only be scrapped or repaired by SUPPLIER after approval by EVAMO.

3.3.5 Cleaning

When it comes to cleaning responsibility, a distinction is made between regions based on the defined standard:

Deliveries EVAMO – SUPPLIER	Cleaning responsibility	Deviations
in Europe	EVAMO	Deviations from this must be regulated between EVAMO and SUPPLIER on a plant-specific basis.
within NAFTA	by appointment	
within Latin America	by appointment	
within Asia Pacific (incl. India, China, Japan, Japan)	by appointment	
within Africa	by appointment	
Cross-region	by appointment	

Figure 3: Cleaning responsibility by region

As part of its responsibility for quality, SUPPLIER only packs its products in packaging that meets the cleanliness requirements for its products as well as the specifications of EVAMO.

In the event of a necessary post-cleaning of empties under EVAMO's cleaning responsibility, a possible assumption of costs by EVAMO must be agreed with EVAMO in advance. Proof of contamination caused by EVAMO must be provided by SUPPLIER.

3.3.6 Labelling of EVAMO reusable packaging by SUPPLIER

No labels, labels or the like may be affixed to EVAMO's own reusable load carriers. The label holders, which are usually attached as standard, must be used to identify the load carriers. The merchandise tag is inserted into the label holder and, if necessary, fixed with easily detachable adhesive dots (in accordance with VDA recommendation 4500/4504) to prevent the merchandise tag from detaching.

3.3.7 Inner packaging (disposable or reusable packaging)

To protect the products and facilitate handling, some packaging requires inner packaging. This can be reusable (e.g., thermoformed moulded parts) or made of disposable materials (e.g., corrugated cardboard inserts). The necessity of inner packaging is derived from economic and qualitative aspects and agreed between SUPPLIER and EVAMO. The provisions for disposable packaging (see chapter 3.2) and reusable packaging (see chapter 3.3) apply accordingly to inner packaging.

4. Shipping Logistics

The goal is the punctual, complete, high-quality, and access-secure delivery of EVAMO by SUPPLIER.

4.1 Transportation

4.1.1 Freight forwarder/Logistics Service Provider (LSP)

If EVAMO pays for the freight (Standard Incoterm FCA Pick-up Location), SUPPLIER will only use the freight forwarders/carriers and parcel services (LSP) prescribed by EVAMO. Exceptions are only permitted in justified cases and after prior written consent by the EVAMO contact person.

Several deliveries to the same EVAMO unloading point within one day must be combined by SUPPLIER into a logistically sensible loading/shipping unit and processed via the prescribed LSP.

DAP deliveries are only permitted after consultation with the EVAMO contact person. The freight forwarder commissioned by SUPPLIER must ensure that border customs clearance is carried out by the EVAMO customs broker.

SUPPLIER is responsible for safe loading and load securing. This is especially true if LSP takes over a fully packed container (swap body).

LSP can only confirm the number of packages with reservations. A subsequent correction can be made if LSP can make a final count in his custody.

4.1.2 Transport booking (at LSP)

SUPPLIER books the transport at the LSP prescribed by EVAMO. Unless otherwise agreed, the booking will be made by SUPPLIER. This is done independently by SUPPLIER, so that the timely delivery of EVAMO is ensured. Exceptions are only permitted after prior written consent by the EVAMO contact person.

The order must contain the following information:

- Sender and receiver data,
- Shipment-relevant data: type and number of packages/containers, gross weight, external dimensions, stacking factor,
- Order-relevant data: order/call-off number, delivery note number,
- Article-relevant data: part number, quantity,
- MRN Number (Master (formerly Movement) Reference Number),
- Invoice number,
- HS code (Harmonized System/customs tariff number) in case of customs clearance.

For air and sea freight, this information must always be maintained at item level.

Pick-up by the LSP takes place within a fixed time window or at the time individually agreed between SUPPLIER and LSP.

SUPPLIER informs EVAMO and LSP about possible new/modified pick-up and unloading points at least 6 weeks in advance.

All communication regarding transport is carried out directly with EVAMO and LSP, in the event of a delay, SUPPLIER also informs EVAMO and LSP directly.

All relevant shipping documents (delivery note/packing list, commercial invoice, customs documents (export accompanying document (ABD), Master Reference Number (MRN), Shipper's Declaration for Dangerous Goods, etc.)) must be made available to the LSP on the day of collection at the latest.

4.1.3 Parcel service providers and parcel shipping

Packages with a maximum weight of 31.5 kg and a size within the maximum belt dimensions (as defined in chapter 10) will be handled by the prescribed parcel services. The regulations on the choice of packaging must be observed (see chapter 3.1.4). SUPPLIER observes deviating regional guidelines for parcels and parcel shipping.

4.2 Advanced Shipping Notice (ASN)

For each shipment (Incoterm DAP/DDP) or pick-up (Incoterm FCA), SUPPLIER sends an ASN to EVAMO via EDI or other electronic interfaces (e.g., InTrack ASN).

The ASN must be sent from SUPPLIER to EVAMO on the exact day of the planned collection/shipment of the goods.

For new EDI connections, the OFTP2 (Odette file transfer protocol) or AS2 (Applicability Statement 2) transmission protocol must be used, as well as the GLOBAL EDIFACT message formats, which are based on the ODETTE recommendations. The detailed information on which fields within the ASN are defined in detail as mandatory or optional fields and are to be transmitted by SUPPLIER accordingly follows from the document "*Message Implementation Guideline: GLOBAL DESADV D.07A*" and the associated appendix, which is made available to SUPPLIER by EVAMO in case of new EDI connections.

Existing connections that do not comply with the ODETTE GLOBAL EDIFACT message format must be converted by the agreed date at the latest.

4.3 Delivery note and transport documents

4.3.1 Delivery note

SUPPLIER generates the delivery note according to the DIN 4991 format and attaches a delivery note to the goods. This must contain at least the following information:

- Name SUPPLIER and sender address
- SUPPLIER number stored at the respective EVAMO plant,
- Recipient address (recipient plant, unloading point according to e.g., LAB),
- EVAMO part number (Abk.: pn),
- Total amount of pn,
- Number and type of packaging with EVAMO packaging number for reusable packaging,
- Number of exchange pallets used per order (see also chapter 3.3.3),
- Delivery note number also printed as a barcode on the delivery note, format in code 39 according to International Organization for Standardization (abbrev.: ISO)/International Electrotechnical Commission (abbrev.: IEC) 16388,
- EVAMO order number or scheduling agreement number incl. item,

- Parcel number,
- Batch number and, if applicable, best-before date (abbrev.: BBD),
- Revision status of the BOM or if revision status is not used: Change number of the BOM,
- Mixed containers: (See chapter 4.1.2 and Chapter 3.1.1.),
- Clear description of goods for the preparation of the summary customs declaration, if delivery across customs borders (third countries),
- Indication of the material quality of the packaging materials, e.g., wooden pallet, plastic pallet, if delivery across customs borders (third countries)

Business unit or plant-specific stipulations must be applied.

4.3.2 Transport documents

To record the shipments, SUPPLIER usually provides the LSP with the following information in addition to the delivery note: transport documents and customs documents.

Transport documents

Standard transport/forwarding order, e.g., VDA 4922, bill of lading.

The TO number and all shipment-related invoice delivery note/order numbers must be provided.

Customs documents

SUPPLIER shall provide the LSP with all documents necessary for customs clearance, i.e., all documents necessary for export in the country of departure, if applicable for transit and import in the recipient country, in an admissible form (electronic or in paper form – copies or originals, signed or unsigned) and at the right time.

Required customs clearance documents are in particular:

- Export Declaration
- Commercial Invoice (or, in case of consignment deliveries or free samples, a pro forma invoice). The commercial invoice must match the values on the transport documents.
- Packing list
- Packing Declaration
- Customs tariff number
- Certificate of Non-Preferential Origin or Proof of Preferential Origin (as provided for in the applicable free trade agreements). SUPPLIER sends original proof of preference (e.g., EUR.1) by post to the LSP customs broker designated by EVAMO
- If goods are provided to SUPPLIERS free of charge, this value and origin of the goods must be shown separately on the invoice

The use of a standard invoice format provided by LSP (e.g., UPS, FedEx, etc.) is prohibited. The regional arrangements and the resulting details must be coordinated with the EVAMO plant supplied.

4.4 Labelling of products

4.4.1 GTL Label

Representatives from Europe (ODETTE), Japan (JAMA/JAPIA) and North America (AIAG) have developed a common "Global Transport Label" standard that can be used worldwide for supplier and customer relationships. In December

2015, the new VDA standard 4994 "Application recommendation for the Global Transport Label – GTL" was published on this standard.

All SUPPLIERS must use this standard for product labelling. The labelling of all containers with the GTL is essential for EVAMO goods receipt optimisation.

All details on the requirements and specifications can be found in the applicable annex "GTL Guideline".

The changeover to the GTL as well as the replacement of the previous VDA/Odette product tags (or others) must be agreed separately with the EVAMO plant supplied.

4.4.2 General requirements

The smallest packing units/packages in each case must be marked by SUPPLIER with a single label (sub-goods tag). The sub-goods tags must be provided with a barcode marking.

All barcodes, unless otherwise agreed, must be displayed in code 39 according to ISO/IEC 16388.

In the event of a KANBAN transaction between EVAMO and SUPPLIER, SUPPLIER must attach KANBAN cards to the defined packaging unit in a clearly visible manner in accordance with the agreement with the EVAMO plant supplied. The KANBAN cards are provided by EVAMO physically or electronically.

Any labels/tags/markings on reusable packaging must be easy to remove without leaving any residue, and there must be no additional effort during cleaning.

If the loading unit is secured with a protective film, the marking/master label must also be attached outside the film.

4.5 Special features of the transport of critical goods

SUPPLIER notifies transport-critical shipments separately, provided that the transport is organized by EVAMO.

In case of **hazardous goods**, SUPPLIER is responsible for ensuring that all necessary hazardous goods documents are provided to the LSP in advance in full and correctly.

Critical material property

Products that cannot be packaged due to their nature, as well as extremely bulky products, must be notified to the LSP before transport, as well as the required temperature control for heat- or frost-sensitive materials or products.

4.6 Marking for sample parts

Sample parts are to be sent exclusively to the delivery address specified in the order. Furthermore, sample parts must be clearly marked as such on the outer packaging. How these are to be marked must be agreed with the EVAMO contact person in advance. Sample deliveries must never be delivered together with a series delivery (pallet, lattice box, etc.), but must be delivered in separate packing units.

4.7 Security in the movement of goods

SUPPLIER takes the appropriate measures for supply chain security in accordance with its business model in accordance with the WCO SAFE Framework of Standards and, if necessary, provides appropriate evidence through

approvals or declarations (e.g., safety declarations, declarations within the framework of C-TPAT or similar programs).

SUPPLIER makes the products available safely for loading as air freight in accordance with the relevant legal requirements and regulations (e.g., EU Aviation Security Regulation 300/2008), i.e., in such a way that they can be transported as air freight without additional effort for EVAMO (X-rays, sniffers or other controls) and without any time delay. In Europe, this is done, for example, by being approved by a known consignor or by making the products safe by a regulated agent.) If SUPPLIER is unable to comply with this requirement, EVAMO must be informed.

For shipments of goods to the USA, the Customs-Trade Partnership Against Terrorism (abbrev.: C-TPAT) regulations "C-TPAT Minimum Security Criteria and Guideline" of the U.S. Customs and Border Production, can be found on the Internet at www.cbp.gov.

On request, C-TPAT relevant information must be made available to the EVAMO contact person.

5. Special transports and delivery disruptions

5.1 Special transports

Special transports are organised by SUPPLIER or EVAMO in accordance with the polluter-pays principle. Special transports are carried out if, due to process disruptions, it is necessary to deviate from the specified standard transport form and processing to shorten transport times.

SUPPLIER informs the responsible EVAMO contact person about the transport details.

The costs for special transports are borne by the person who caused the process disruption in accordance with the polluter-pays principle.

Prior written consent by EVAMO is required for costs to be covered by EVAMO.

Every special transport caused by SUPPLIER is recorded by EVAMO and is included in the annual SUPPLIER assessment, provided that an evaluation of the corresponding SUPPLIER is planned for the corresponding year.

5.2 Supply disruption, risk, and crisis management

If disruptions occur at SUPPLIER with an impact on deliveries to EVAMO (delivery date or quantity, quality), SUPPLIER must immediately initiate the necessary measures to remedy them, considering the EVAMO quality requirements.

If it becomes apparent that agreements or commitments cannot be kept despite the measures initiated, SUPPLIER must inform the EVAMO contact person of this without being asked to do so and without delay. SUPPLIER must coordinate the further procedure, e.g., about a new delivery date or a new delivery quantity, with EVAMO.

At the request of EVAMO, SUPPLIER will provide information on at least the following points:

- Cause of the malfunction,
- Maximum production capacities, PLAN/ACTUAL output quantities, personnel capacity, and the current shift model (hours, number of shifts and working days per week). Tracking sheets specified by EVAMO must be filled and transmitted truthfully and on a rolling basis with current figures and data,
- Tested alternative production options,
- Possibilities for shortening transport times through special transports,

- Backlog Reduction Plan.

Claims by EVAMO arising from or in connection with special transports caused by the supplier, process deviations, non-compliance with delivery dates or quantities as well as other disruptions can be asserted.

SUPPLIER must demonstrate a defined process for early warning and escalation management in the event of process deviations and, in the case of task forces, provide contact persons with decision-making authority.

6. Logistics quality

6.1 Logistics Complaints

The trigger for a logistics complaint is a disruption of the processes at EVAMO caused by SUPPLIER. SUPPLIER is liable for the costs and/or damages arising from logistics errors.

Logistics complaints are recorded and evaluated by EVAMO regarding the costs incurred in this context.

Possible logistical complaints are described in a catalogue of errors. This includes the additional expenses incurred by EVAMO.

The costs are multiplied by the average plant-specific hourly rates based on minute factors and invoiced to SUPPLIER.

In the event of non-compliance with the requirements set out in this SUPPLIER MANUAL as well as any site-specific additions, EVAMO is entitled to refuse to accept deliveries.

In the event of a logistics complaint, SUPPLIER will be informed and requested to analyse the error pattern or the logistics error and to initiate measures. The logistics complaint from EVAMO will be processed by SUPPLIER according to EVAMO's request with immediate measures, 3D or 8D system. The documentation can be requested from EVAMO.

EVAMO reserves the right to assess the supply chain maturity level itself or through an EVAMO-commissioned third party on site at SUPPLIER, to carry out process audits at SUPPLIER or to demand logistical self-assessment including action plans (e.g., according to Global Materials Management Operations Guidelines/Logistic Evaluations (abbrev.: MMOG/LE as defined in chapter 10)).

6.2 Dynamic Supplier Classification (DSC – Supplier Logistics Capability (SLC))

The aim of the dynamic supplier evaluation is a holistic, systematic assessment of SUPPLIER according to uniform criteria. The results of the *Dynamic Supplier Classification* (DSC) are considered when awarding new contracts.

The SLC is the logistical valuation part of the DSC, valuation-relevant factors are adapted to the logistical strategy.

6.3 On-Time-Delivery (OTD+)

The OTD key figure is given as a percentage and is part of the SLC, which is included in the overall supplier evaluation (DSC).

The valuation of a delivery is carried out at the time of the goods receipt posting depending on the scheduling agreement (by date and quantity).

More detailed explanations of the assessment can be found in the OTD action sheet.

7. Further development in logistics

In the spirit of continuous development, SUPPLIER is committed to proactive participation in future innovations and will examine this considering technical feasibility and economic efficiency and implement it after joint coordination with EVAMO.

8. Applicable documents

- EDI contract
- Evamo Guideline GTL
- Evamo IMDS Data Entry Guide
- Evamo Prohibition and Declaration of Ingredients
- Error Catalog Logistics V1.0
- Consignment agreements (framework agreement, individual agreement, SBI contract)
- Evamo Carrier Selection

9. List of abbreviations

ABS	Acrylonitrile Butadiene Styrene
AIAG	Automotive Industry Action Group
ASN	Advanced Shipping Notification
AS2	Applicability Statement 2
CMI	Customer Managed Inventory
C-TPAT	Customs-Trade Partnership Against Terrorism
DIN	Deutsches Institut für Normung e. V.
DSC	Dynamic Supplier Classification
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange For Administration, Commerce and Transport
EMS	Empties Management System
EPC	Electronic Product Code
EPCIS	Electronic Product Code Information Service
EPE	Expanded Polyethylene
EPP	Expanded Polypropylene
EPS	Expandable Polystyrene
ESD	Electrostatic Discharge
ESDS	Electrostatic Discharge Sensitive Device
EUR.1	Movement certificate form
EZRS	Products and raw materials
GTL	Global Transport Label
GS1	Global Standard One
HC-Code	Harmonized Commodity Description and Coding System
HIBE	Auxiliary and operating materials
HU	Handling Unit
ID	Identifier
IEC	International Electrotechnical Commission
IPPC	International Plant Protection Convention
ISO	International Organization for Standardization
ISPM	International Standards for Phytosanitary Measures
JIT-Call	E-Kanban
KLT	Small load carriers
LAB	Lieferplanabruf (engl.: Call off)
LSP	Logistics Service Provider (dt.: EDL)
MAT	Material
MAZE	Machine spare parts
MMOG/LE	Materials Management Operations Guidelines/Logistics Evaluation
MRN	Master Reference Number
OFTP2	Odette File Transfer Protocol 2
OTD	On time delivery
PE	Polyethylene
PET	Polyethylene terephthalate

PN	Part Number
PO	Purchase Order
PP	Polypropylene
PS	Polystyrene
PUR	Polyurethane
PVC	Polyvinyl chloride
RESY	Recycling symbol
RFID	Radio Frequency Identification
ROP	Reorder Point
SBI	Self-Billing Invoice
SSCC	Serial Shipping Container Code
STL	Ship to line
TO	Transport Order
TRGS 615	Technical Rule for Hazardous Substances (615: Restriction of Use of Corrosion Inhibitors)
VCI	Volatile Corrosion Inhibitor
VDA	Association of the Automotive Industry
VMI	Vendor Managed Inventory

Figure 4: List of abbreviations

10. Definitions of terms

Alternative packaging	An alternative to the packaging agreed for series delivery (usually consisting of disposable materials). Alternative packaging must be listed in the packing instructions
EVAMO contact person	The contact person for SUPPLIER appointed by EVAMO (usually the material dispatcher of the EVAMO plant supplied)
Gross requirements	Gross requirements are the required EVAMO production requirements. Inventories at the EVAMO plant or products that are on their way to production after being removed from the warehouse do not count as gross requirements
Global MMOG/LE	The <i>Global MMOG/LE</i> is a unified evaluation tool that contains approximately 200 logistical evaluation criteria and measures an organization's processes against industry <i>best practice</i> . (Internet: www.odette.org/services/mmog)
GS1 Standard (SSCC Code)	To have a unique ID worldwide. (The SSCC (<i>Serial Shipping Container Code</i>) is used to identify logistical units uniquely (shipments, parcels, handling units (HU))
Girth	Measurement variable (circumference [over the two smaller sides] + longest side)
Incoterms	The coding of an Incoterm is composed as follows: XXX (e.g., FCA) and the place to be specified (e.g., FCA Zuffenhausen). The current Incoterms apply (e.g., currently Incoterms 2010)
Crisis	Situation triggered by a temporary event that affects or adversely affects EVAMO's regular business activities, usually with possible adverse effects. Impact on EVAMO customers
LAB	Delivery plan call-off: EVAMO creates scheduling agreement schedules with quantities and delivery dates and transmits them to SUPPLIER using LAB. The LAB includes (in addition to the non-binding preview) the order for the delivery of the goods to be ordered by SUPPLIER on the delivery date specified in the LAB products and will be adapted on a rolling basis to the current demand situation at EVAMO
Handling Unit (HU)	Usually, a pallet fully loaded with several packages
SUPPLIER	The contracting party to the applicable supply contract on the supplier side
Package	Multiple products grouped together in one carton or KLT
Written/Written Form	Unless otherwise agreed, the telecommunicative transmission of the declaration in a written document or in another way suitable for permanent reproduction in written characters (e.g., by e-mail or another electronic telecommunications system)
Stacking factor (<i>more dynamic</i>)	static: The static stacking factor defines the number of identical load carriers that may be stacked over a stationary (e.g., in a warehouse) load carrier of the same design. dynamic: The dynamic stacking factor defines the number of identical load carriers that can be transported via a moving (e.g., in the case of transport in trucks, containers, etc.) load carriers of the same design. The stack factor is defined as follows: 0 (SAP) = non-stackable = TMS 1 → must be marked with warnings 1 (SAP) = stack of 2 (1+1) = TMS 2 2 (SAP) = stack of 3 (1+1+1) = TMS 3 99 (SAP) = flexibly stackable = TMS 999

Unique-ID	Unique number to identify and track packages
Composites	Material made of two or more bonded materials (example: aluminium composite bags, climate protection bags)
Preview quantity	Non-binding target figures outside the production approval, according to which SUPPLIER production capacities. It is only intended to provide the SUPPLIER with information about EVAMO's future needs and to enable long-term capacity planning
Working day	Working days in the country of SUPPLIER

Figure 5: Definitions of terms

The graphic consists of several thick, rounded lines. On the far left is a vertical light blue bar. To its right is a red shape resembling a stylized 'L' or a corner bracket. Below that is another light blue shape, also resembling a stylized 'L' or corner bracket. At the bottom left, there are two more light blue shapes, one resembling a stylized 'A' and another resembling a stylized 'L' or corner bracket.

SUPPLIER MANUAL
LOGISTICS
Appendixes

11. Appendixes

11.1 Appendix 1: Contact Matrix Template

Level	name	e-mail	phone	function
1				
2				
3				

11.2 Appendix 2: Delivery Matrix: Standard requirements for delivery to EVAMO

Procurement Control Concept	Ownership of inventory	Incoterm	TAX	Customs	Payment	Data Exchange	Production- and material release	Minimum order qty	Order type	Mode of Transportation	Packaging		Supplier clarifies additional regulations and requirements with customer plant
											Type	Ownership	
VMI / Consignment	consignment stock is owned by the Supplier until goods are withdrawn		According to local tax-, customs rules and legislation following options to be used (ranking): 1. Legal entity (supplier) 2. Free / Foreign Trade Zone (EVAMO, LSP) 3. Bonded warehouse (EVAMO, LSP) 4. Fiscal Agent (supplier) Regional specific consignment contract must be used to define further details		if legally possible: self-billing invoice SBI (GAV) if SBI (GAV) is legally not possible: EVAMO provides withdrawal list ("Bewegungsliste")	Classic EDI or Web-EDI: - Transfer of VMI specific information - Advanced Shipping notification (ASN) (incl. - among others - packaging data) → Refer to the "Message Implementation Guideline: GLOBAL DESADV D.07A" → for further details see EDI-contract, consignment and VMI-contracts			VMI				
Call off (LAB) / purchase orders	Transfer of ownership depends on Incoterm: FCA "place": ownership EVAMO from goods dispatch at supplier → goods in transit until goods received at EVAMO "place" DAP/DDP "place": ownership Supplier until goods received at EVAMO "place"	Standard: FCA "place" Exceptions: For the Electronics material group code, but not for Electro mechanics, in contrast, DDP – "Delivered Duty Paid" / DAP – "Delivered At Place of the specified destination" is used as standard. DAP must be used as standard for hazardous goods and special transport , e.g., abnormal loads, temperature monitoring required.	According to tax rules and legislations	According to customs rules and legislations	(1) payment by invoice (2) If legally possible: self-billing invoice SBI (GAV)	Classic EDI or Web-EDI: - Transfer demand process (scheduling agreement release or purchase order) - Advanced Shipping notification (ASN) (incl. - among others - packaging data) via Classic EDI or Web-EDI → Refer to the "Message Implementation Guideline: GLOBAL DESADV D.07A" → for further details see EDI-contract	values to be defined individually , depending e.g. per material field default values: 4 weeks for production release, 8 weeks for material release or defined separately	Minimum order quantity (MOQ) is prohibited, unless exceptions are approved by responsible EVAMO purchasing. The smallest economic order quantity is defined by purchasing and logistics in cooperation with supplier.	SAP call off (LAB) - incl. rolling forecast via SAP order in particular cases Purchase orders can be used - for e.g.: samples orders, operating supplies or machine accessories / replacement parts	FCA: forwarder according to frame contract DAP/DDP: supplier transport	preferred: otherwise agreed, returnables are covered by EVAMO up to a defined level of 3 days stock at supplier's warehouse (excluding transit stock). Account management and monthly balancing for returnables is mandatory for supplier - EVAMO plant relation. One way: packaging is procured and paid by supplier.	Returnables unless otherwise agreed, returnables are covered by EVAMO up to a defined level of 3 days stock at supplier's warehouse (excluding transit stock). Account management and monthly balancing for returnables is mandatory for supplier - EVAMO plant relation. One way: packaging is procured and paid by supplier.	for example: - time frame for pick-up - time window - mixed load - packaging process - "returnable packaging" - labelling (of samples) - kind of unloading (rear/side) - ...

Annexes:

Annex 1: Selection of carriers for suppliers, as of June 13, 2025

Annex 2: LOGISTICS FAILURE CATALOGUE, as of June 13, 2025

Annex 3: EVAMO Guideline GTL (Global Transport Label), basis: VDA 4994

LOGISTICS FAILURE CATALOGUE

13.06.2025



Deviation caused by supplier	Additional effort [min] at EVAMO
Shipping documents wrong/missing	75
ASN (Advanced shipping notice) wrong/missing	39
Label wrong/missing (e.g. VDA, transport label, MAT)	54
Delivery - time too early	34
Delivery - time too late	49
Overdelivery	34
Underdelivery	64
Transport damage (according to Incoterm-responsibility)	180
Incorrect product delivered	120
Contamination	124
Transport order (TO) time too late/missing	85
Transport order (TO) content wrong	152
Cancelation/delay of transport or pick-up	134

Effective from 06/25 as date of identified deviation.

The additional effort shall be increased or decreased if EVAMO proves more or Supplier proves less effort.

The liability of Supplier shall remain unaffected.



EVAMO Guideline GTL
(Global Transport Label)

Basis: VDA 4994

Version 2.0

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1. Introduction

This guideline describes EVAMO's requirements for the Global Transport Label (GTL) in accordance with VDA Recommendation 4994. It goes into the technical specifications required for the implementation of the GTL and specifies the contents of the fields as well as the barcodes of the labels in the different dimensions.

The GTL is physically attached to the packages and is coordinated with the information in the electronically transmitted ASNs (DESADV Global EDIFACT D.07A). It includes texts for manual processing and barcodes for machine capture via scanner and camera technologies.

The use of the GTL serves to clearly identify packages (shipping units and individual packages) for EVAMO to enable process optimization in incoming goods (no relabelling and machine processing), continuous tracking of goods along the entire transport chain (traceability) and processing at the production facilities.

The EVAMO Global Transport Label basically complies with VDA Recommendation 4994. In the following chapters, EVAMO-specific regulations are necessary:

- Chapter 1 Introduction
- Chapter 3.2 Data Blocks on the Labels
- Chapter 3.2.1 Combined GTL/MAT Label
- Chapter 3.3 Technical requirements
- Chapter 3.4 Label types
- Chapter 3.6 Label application
- Chapter 3.7 Handling Unit Structure with Transition to ASN
- Chapter 4 Explanation of Data Blocks
- Chapter 5 Identification of packages and load units
- Chapter 6 Explanations of the barcode and 2D code
- Chapter 7 Neutral label on third packaging
- Chapter 8 Appendix

For quicker orientation, you will find either the note (EVAMO) or (VDA 4994) in the respective chapter headings:

(EVAMO) EVAMO specific deviation from VDA 4994

(VDA 4994) The description continues to comply with VDA Recommendation 4994 V2.0 2023-07

The start date for the use of the new labels must be agreed between the supplier and EVAMO in good time. The GTL must be sufficiently tested before approval by EVAMO, in consultation with the EVAMO contact person. After approval, the use of the new labels is mandatory for the supplier.

2. Functions of the label (VDA 4994)

The label is used to identify product and transport packaging in the company's internal material flow and on the transport route between the shipper of the goods (usually the supplier's plant), the freight forwarder and the

recipient of the goods (usually the customer's plant). It enables globally unique package identification, contains information on the contents and supports the rational handling of processes through machine-readable data on 1D and 2D barcode symbols.

Depending on the packaging level, the label usually fulfils different control functions:

- **Transport packaging/loading unit:** A loading unit is the term used to describe containers or packages that are usually loaded or unloaded individually during transport by industrial trucks. Examples are containers made of pallets, small load carriers and packaging aids (lids, etc.) or large load carriers. They form the **outer packaging:** The label serves to clearly identify the package, including information on logistics and material. The focus of the use is shipping, the entire, sometimes multi-stage transport chain from the supplier to the customer, the receipt of goods at the customer and - if the loading unit is not separated, or it is a simplified loading unit - the internal handling up to the storage of the loading unit at the customer.
- **Product packaging/inner packaging:** The label is used to clearly identify the package and identify the material with additional logistics information. The focus of the use of the label is the internal handling of an individual package at the supplier and at the customer's point of consumption.

In **simplified** (single-stage) **loading units**, both aspects are combined. In single-stage packaging, the outer packaging/loading unit is also the inner packaging.

The label on the innermost packaging is often referred to as the KLT label.

3. Size, layout, and application of the labels

3.1 Dimensions (VDA 4994)

The size of the label may vary depending on the size of the packaging and, if applicable, depending on the region in the world in which it is used.

The following list is considered a comprehensive list:

- a. A5 210 mm x 148 mm
- b. Based on A5, the Half-Letter 215.9 mm x 139.7 mm format can also be used in North America
- c. A6 148 mm x 105 mm or 152.4 mm (6 inches) x 101.6 mm (4 inches)
- d. KLT1: Small load carrier label (KLT) 210 mm x 74 mm
- e. KLT2: Label for flat packages 210 mm x 42 mm

A6 and B10 are assumed to be de facto the same size and are only described once in the further course.

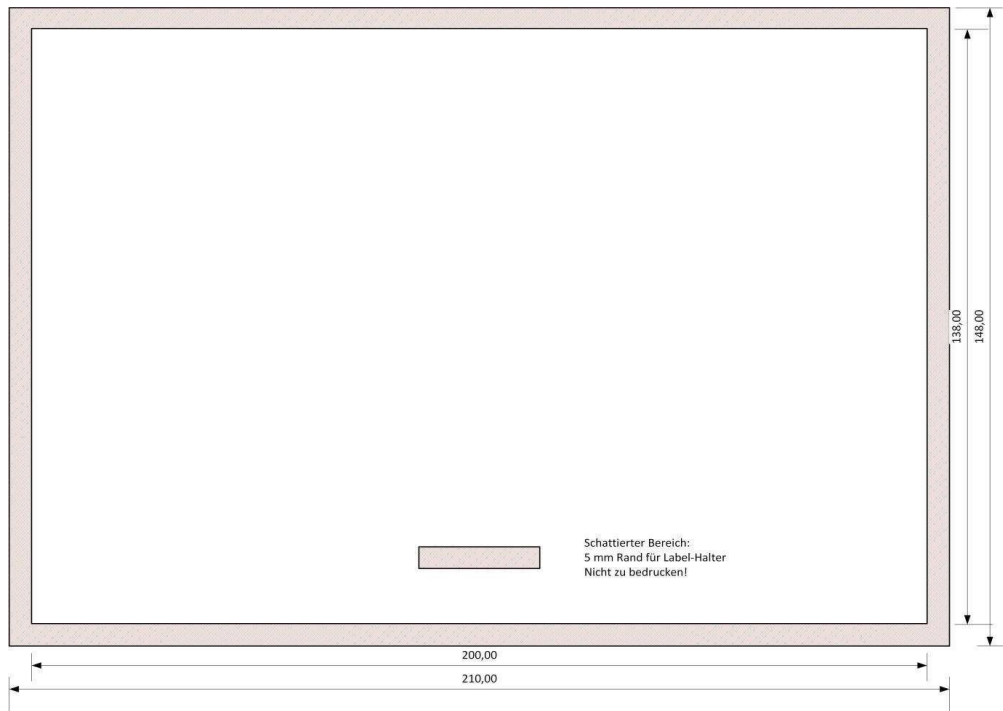


Figure 1: Label size A5

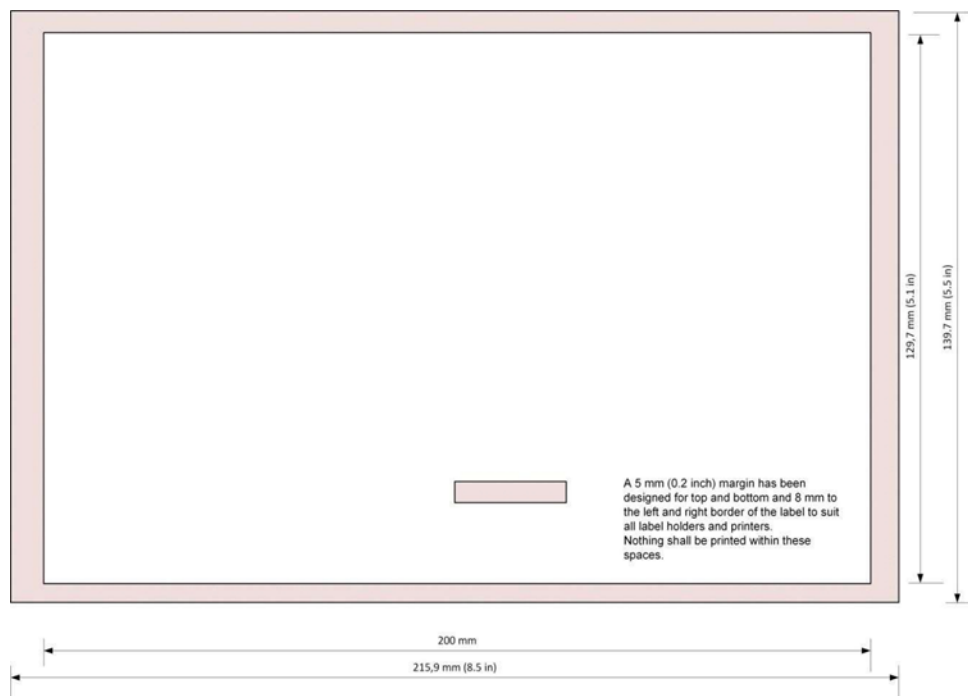


Figure 2: Half-Letter label size

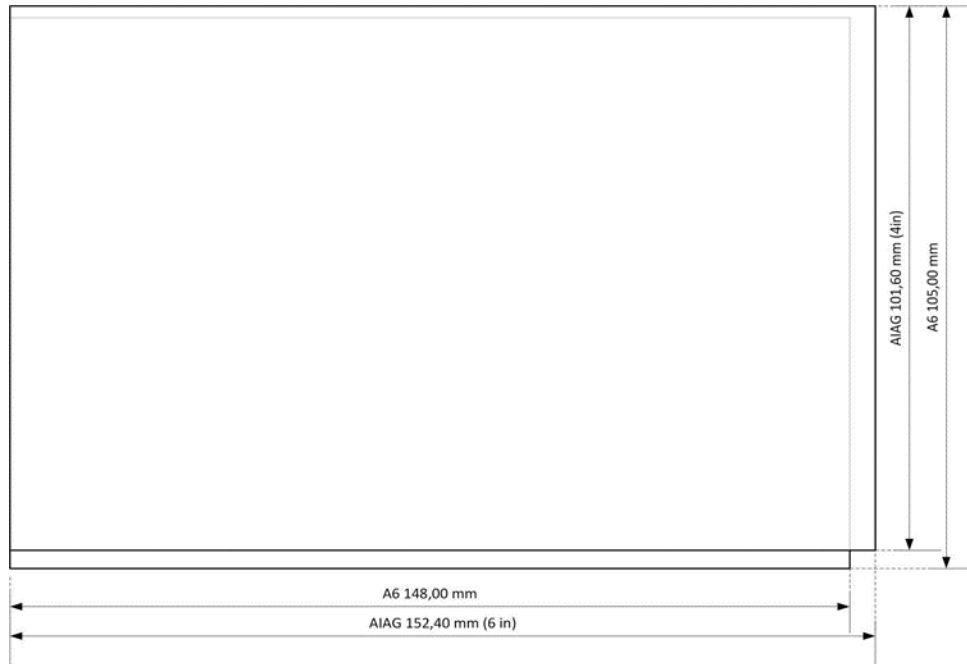


Figure 3: Label size A6/AIAG

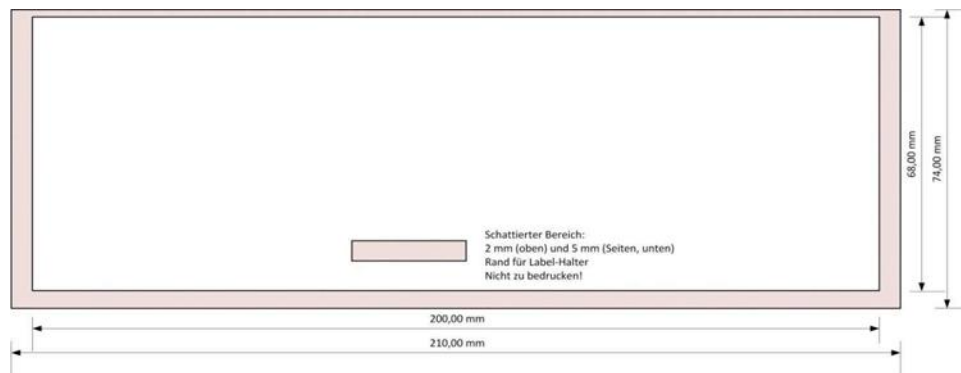


Figure 4: KLT1 label size



Figure 5: KLT2 label size

For even smaller labels, reference is made to VDA 4992 - MAT label.

Größenvergleich der verschiedenen Label:

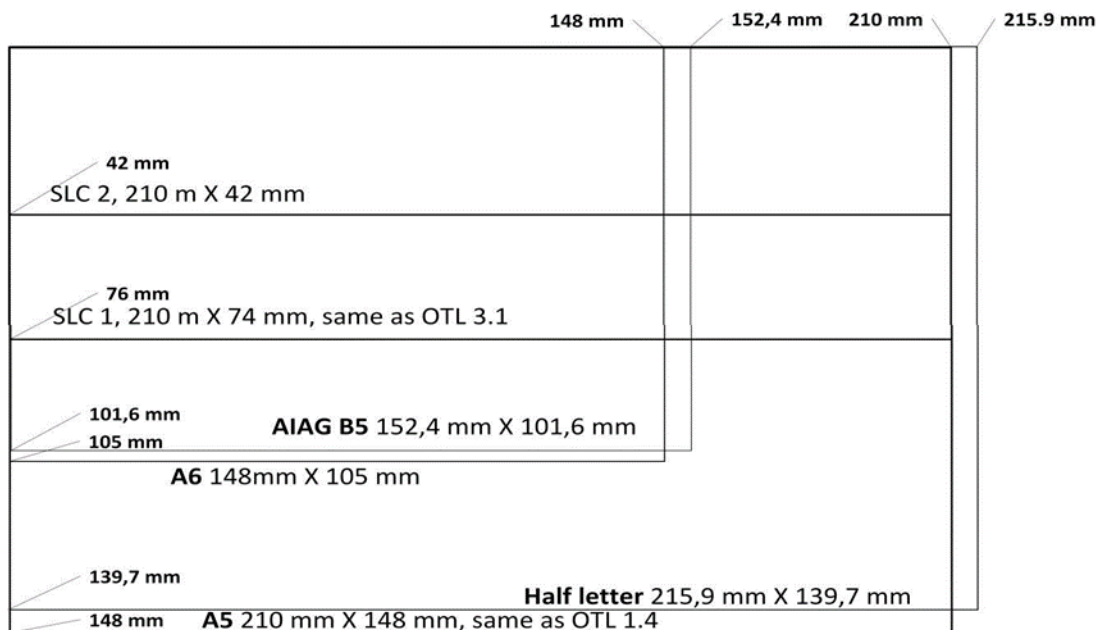


Figure 6: Size comparison of the different labels

3.2 Data blocks on the labels (EVAMO)

The contents of the labels are divided into logical blocks and printed out according to the layout template. The following blocks are defined:

- A1 - Shippers
- A2 - Consignee
- A3 - Label type and 2D barcode symbol
- B1 - Customer Reference 1
- B2 - Routing information of the customer
- B3 - Logistics Reference
- C - Customer's part number
- D1 - Parcel - ID
- D2 - Customer Case Study 2
- E1 - Data at the discretion of the supplier
- E2 - Customer Reference 3

For more details, see chapter 4.



Figure 7: Dimensions and layout of the data blocks in A5 format

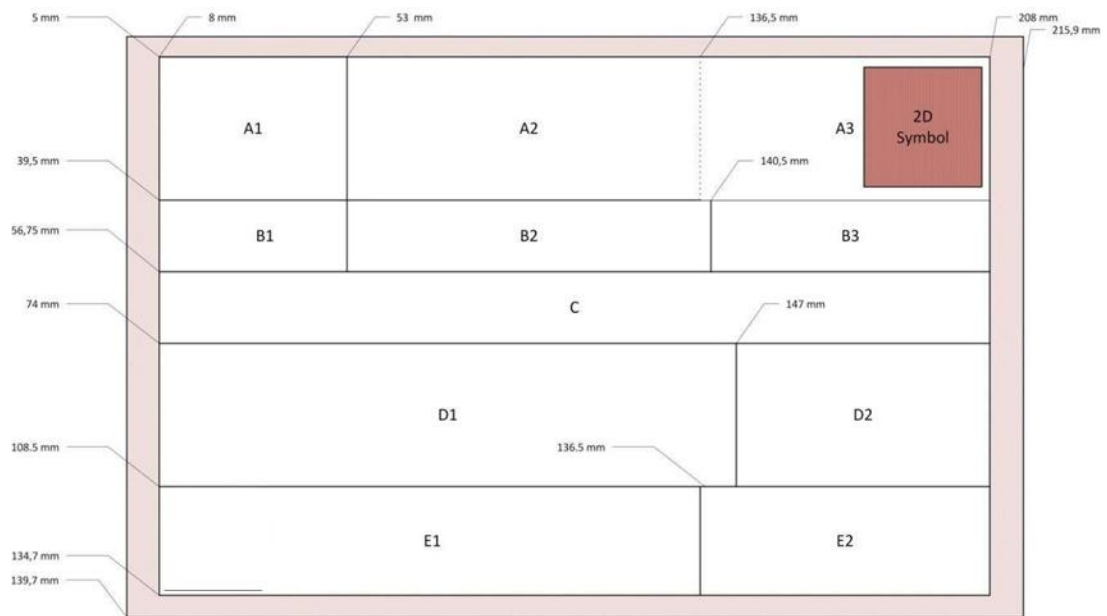


Figure 8: Dimensions and layout of the data blocks in half-letter format

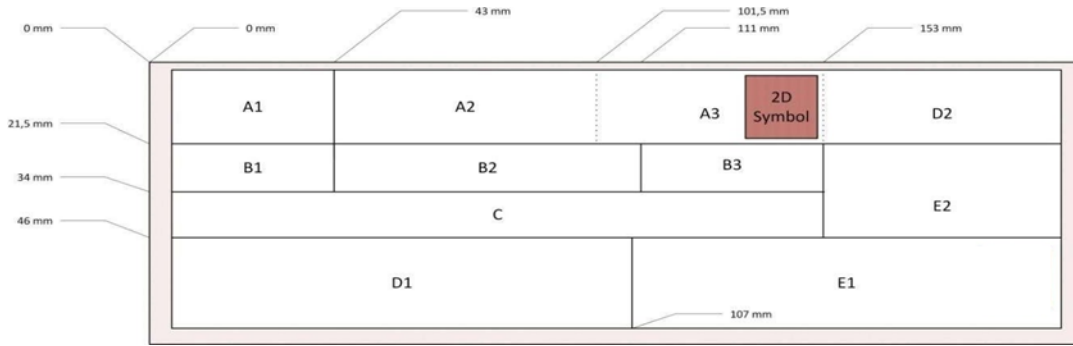


Figure 9: Dimensions and layout of the data blocks in KLT1 format

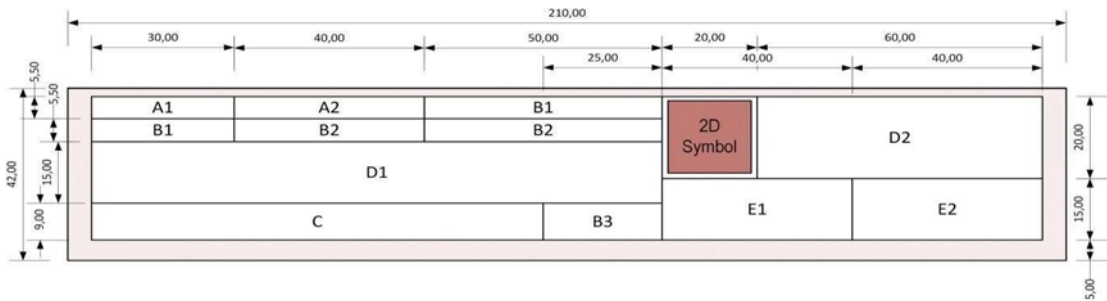


Figure 10: Dimensions and layout of the data blocks in KLT2 format (tray format)

Hinweis: Das eingeschränkte Format der Tray-Label lässt nur limitierte Informationen zu.

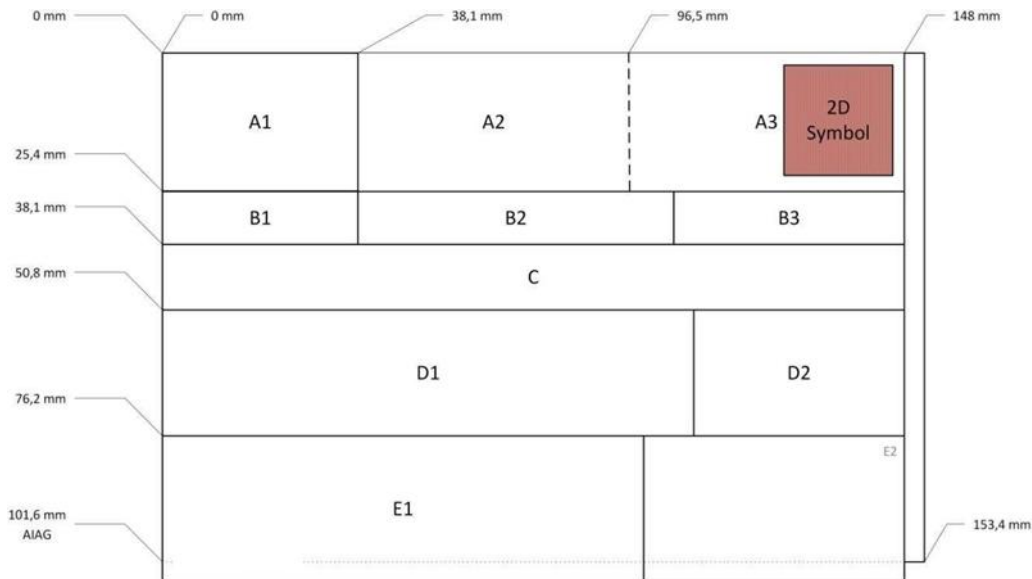


Figure 11: Dimensions and layout of data blocks in A6/AIAG format

3.2.1 Combined GTL/MAT Label (EVAMO)

This label is used if the MAT label cannot be applied directly to the product (e.g., if the outer packaging of the products in the KLT is too small) and must be applied outside the KLT.

In these cases, a fusion of the GTL with the MAT label is necessary. It is not permitted to attach two separate labels.

3.3 Technical requirements (EVAMO)

To ensure the readability of the barcodes on the GTL, laser quality is recommended for printing.

The following paper quality must be used:

Label	Requirements
Insertion receipt	min. 160 g/m ²
Sticker	min. 80 g/m ²
Combined receipt	approx. 130-170 g/m ²
- Substrate	approx. 50 - 90 g/m ²
- Supporting material	approx. 80 g/m ²
Paper	white, machine-smooth, moisture-resistant
Glue	firmly adherent, moisture-resistant, easy to remove

Table 1: Technical requirements (label)

Note: Please use a paper quality with a minimum weight of 160g/sqm

At factory request, additional protection of insertion labels with adhesive dots or a higher paper weight may be necessary.

Stickers must be designed in such a way that they can be easily removed from reusable containers without leaving any residue.

If labels are used on containers without pockets, adhesive joints must be used (e.g., adhesive dots).

For deliveries within, from or to North America, half-letter (215.9x139.7 mm) or 6x4 inch labels may be used as an alternative, subject to approval by the factory.

When attaching the labels, it must be ensured that any old (and therefore invalid) labels that may still exist are removed.

3.4 Label types (EVAMO)

The label in DIN A5 format is used horizontally on load units. Labels on load units are also referred to as the main labels. It can be optionally designed as a plug-in receipt (if appropriate mounts are available) or as a sticker.

Depending on the design, the following specifications must be observed:

Labels on load units can be pronounced as:

- **Master label:** The load unit is homogeneous, contains parts of the same part number, which are packed in inner packaging materials (e.g., KLT). These inner packaging materials are marked by their own labels (single labels).
- **Mixed label:** The load unit is not homogeneous, contains parts with different part numbers that are packed in inner packaging materials. The inner packaging materials are marked by their own labels (single label).
- **Single label:** The load unit contains parts of the same item number that are not packed in other inner packaging.

Master Label (image is for illustration only; Label application see chapter 3.6)

Used for single-type packages (homogeneous load units) that contain sub-packages with their own single label.



Figure 12: Application example Master Label on single-type pallet (1200x800)

Mixed label (image is for illustration only; Label application see chapter 3.6)

Used for non-single-origin packages that contain sub-packages with their own single label.



Figure 13: Application example mixed label on non-single-origin pallet (1200x800)

Single Label (image is for illustration purposes only; Label application see chapter 3.6)

Used for single-type packages (e.g., packages, lattice boxes, small load carriers, etc.) that do not contain any subpacks themselves.

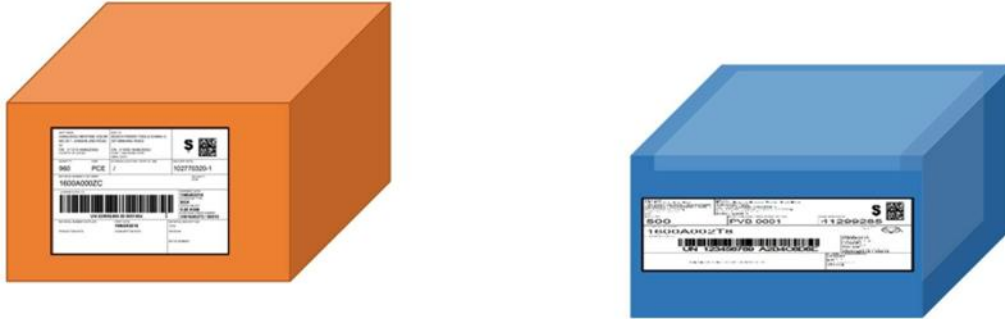


Figure 14: Application example single label A5 and A5 half

3.5 Label on small load carriers (VDA 4994)

In conjunction with the VDA small load carrier (VDA 4500), the DIN A5 label can also be used on the KLT, if the size of the card holder allows it to be attached without folding.

If this is not the case, the KLT label (210mm x 74mm) must be used.

As a matter of principle, no adhesive receipts may be used or affixed to KLT. The inserted labels must be removed by the sender before the empty containers are shipped.

If disposable or reusable containers are used, which do not even allow the use of the classic KLT label due to their height, a label of the size 210x42 mm (KLT2) can be used.

3.6 Label application (EVAMO)

The GTL must be attached to all packages carrying parts (loading unit, container, or shipping carton).

The correct application of the GTL is an important part of the packaging and a prerequisite for automated processing in the supply chain, e.g., for camera detection in incoming goods.

Empty containers and auxiliary packaging materials, such as lids and packaging materials, are not labelled.

The Master Label or Mixed Label must be applied to the pallet on the long side as well as on the narrow side at the top center. The single labels must not be covered as much as possible. In addition, the master or mixed labels must not be concealed by means of securing the load (e.g., foil strapping).

The single label must be attached to the KLT visible from the outside on the long side that can be read from the outside. If the KLT is on the inside, the single label must also be attached to one of the two long sides, even if they are not visible from the outside.

The following image illustrates the application of the master and single labels to the pallet:



Figure 15: Arrangement of labels on pallet (illustration)

3.7 Handling Unit Structure with Revision to ASN (EVAMO)

The assignment of the single labels to the master/mixed label of a handling unit is based on a unique number. This unique ID can be either a license plate based on the DUNS number (according to ISO/IEC 15459) or an SSCC18 (from GS1; Structure of the GLN according to type 2). **A unique ID from other number ranges is not permitted!**

To physically assign the Unique ID to a load carrier, the packing data in the EDI message DESADV Global EDIFACT D.07A must match the content of the label (for clarification, see Figure 16: Assignment of Single Label to the higher-level Master/Mixed Label and Figure 17: Example of a structure of an ASN (EDI Message DESADV Global EDIFACT D.07A)).



Figure 16: Assignment of Single Label to the higher-level Master/Mixed Label

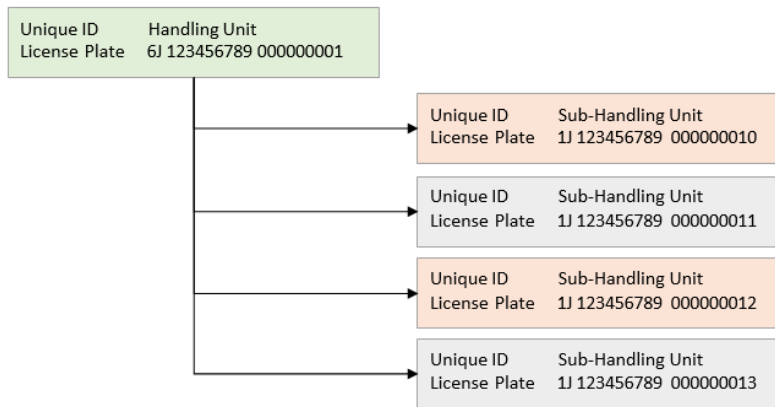


Figure 17: Example of a structure of an ASN (EDI message DESADV Global EDIFACT D.07A)

4. Explanation of data blocks

VERSENDER LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID 887766554 URSPRUNGSLAND DE		EMPFANGER EVAMO Pump Technology Solutions PS GmbH LANGE ENDEN 1 DE-13437 BERLIN WERK/ABLADESTELLE/INTERNE DESTINATION 011 / ABLAD123 / LAGER		M			
LIEFERSCHENNUMMER 12345678 LIEFERANTENNUMMER 1122334		KUNDENSPEZIFISCHES ROUTING ROUTE 66 LINE 15		ETA 2019-09-15/13:30 MENGE (PCE) 1000 NETTO KG 780 BRUTTO KG 850			
SACHNUMMER		BEFESTIGUNG XYZ ALUMINIUM <h1 style="margin: 0;">GFS-123-554-765</h1>					
PACKSTÜCK-ID (S) <h2 style="margin: 0;">UN 987654321 000123457</h2> 				PACKMITTEL TYP 0009PAL CHARGENUMMER CH1234 ANZAHL INNERE PACKMITTEL 40		VERFALLDATUM E 2022-01-14	
LIEFERANTENSPEZIFISCHE DATEN Lieferantendaten Zeile 1 Lieferantendaten Zeile 2 Lieferantendaten Zeile 3 				KUNDENDATEN ZEILE 1 CUSTOMER DATA LINE 2 KUNDENDATEN ZEILE 3 CUSTOMER DATA LINE 4 KUNDENDATEN ZEILE 5 			

Figure 18: Master Label for homogeneous loading unit

VERSENDER LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID 887766554		EMPFANGER EVAMO Pump Technology Solutions PS GmbH LANGE ENDEN 1 DE-13437 BERLIN WERK/ABLADESTELLE/INTERNE DESTINATION 011 / ABLAD123 / LAGER		MIX 	
URSPRUNGSLAND DE		ROUTE 66 LINE 15		ETA 2019-09-15/13:30 MENGE () NETTO KG BRUTTO KG 780 850	
LIEFERSCHEINNUMMER 12345678 LIEFERANTENNUMMER 1122334		SACHNUMMER			
PACKSTÜCK-ID (5J) UN 987654321 000123457 				PACKMITTELTYP VERFALLDATUM GLT4711 E 2022-01-14 CHARGENNUMMER	
LIEFERANTENSPEZIFISCHE DATEN Lieferantendaten Zeile 1 Lieferantendaten Zeile 2 Lieferantendaten Zeile 3 			KUNDENDATEN ZEILE 1 CUSTOMER DATA LINE 2 KUNDENDATEN ZEILE 3 CUSTOMER DATA LINE 4 KUNDENDATEN ZEILE 5 		

Figure 19: Mixed label for mixed load units

VERSENDER LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID 887766554		EMPFANGER EVAMO Pump Technology Solutions PS GmbH LANGE ENDEN 1 DE-13437 BERLIN WERK/ABLADESTELLE/INTERNE DESTINATION 011 / ABLAD123 / LAGER		S 	
URSPRUNGSLAND DE		KUNDENSPEZIFISCHES ROUTING		ETA 2019-11-01/13:30 MENGE (PCE) NETTO KG BRUTTO KG 1000 780 850	
LIEFERSCHEINNUMMER LIEFERANTENNUMMER 1122334		SACHNUMMER GFS-123-554-765 BEFESTIGUNG XYZ ALUMINIUM			
PACKSTÜCK-ID (1J) UN 987654321 000123457 				PACKMITTELTYP VERFALLDATUM 0009PAL E 2022-01-14 CHARGENNUMMER CH1234 TEILEGENERATIONS-HARDWARE-SOFTWARESTAND //	
LIEFERANTENSPEZIFISCHE DATEN LIEFERANTENDATEN ZEILE 1 SUPPLIER DATA LINE 2 LIEFERANTENDATEN ZEILE 1			KUNDENDATEN ZEILE 1 CUSTOMER DATA LINE 2 KUNDENDATEN ZEILE 3 CUSTOMER DATA LINE 4 KUNDENDATEN ZEILE 5 		

Figure 20: Single label for simplified loading units or inner packaging



Figure 21: Single label in KLT1 format for an inner packaging material

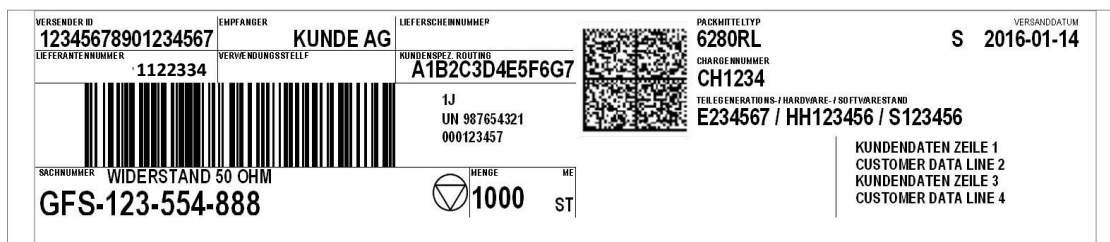


Figure 22: Single label in KLT2 (tray) format

5. Identification of packages and load units (EVAMO)

The identification of the individual packages and loading units plays a central role in controlling the various process steps in incoming goods. Therefore, a globally unique identification of each package and each loading unit is necessary. This must be guaranteed by the supplier for at least 5 years to ensure the traceability of a material.

As an alternative to the License Plate (package ID = data block D1), EVAMO accepts the SSCC18 number as a globally unique identification number of a package or load unit. The number ranges License Plate and SSCC18 (Serial Shipping Container Code) are therefore permitted. The SSCC18 is based on the GS1 standard with the structure of the GLN (Global Location Number) according to Type 2 using the number of the shipping unit (NVE).

Before switching to the EVAMO-GTL with SSCC18 number, a print sample must be sent by the supplier to the receiving EVAMO factory to ensure that the contents are checked, and the barcodes are legible. In the event of a positive review, the release for the EVAMO label is carried out by the receiving work. Once approved, the GTL is to be used for all deliveries to the relevant plant.

Exceptions to this regulation require a separate agreement.

6. Explanations of the barcode and 2D code (EVAMO)

6.1 Barcode (EVAMO)

The barcode for the package ID (License Plate/SSCC18) is code 128 ISO/IEC 15417).

In the readable version, the data identifier (1J, 5J, 6J) is omitted. Otherwise, the readable version corresponds to the data content of the barcode. The spaces are only printed for visual emphasis in the text but are not included in code 128.

The width of the barcode of the package ID has a minimum width of 130 mm for the A5 label, and a minimum width of 100 mm must be observed for all other formats. The minimum height is 20 mm for the A5 label and 15 mm for all other formats. The rest zone (regardless of format) must be at least 6 mm to the left edge and at least 5 mm to the right edge. The minimum distance to the text (regardless of format) at the top and bottom is 1 mm.

6.2 2D Data Matrix Symbol (EVAMO)

6.2.1 Symbol Size

The design of the Data Matrix Code (DMC) complies with the Data Matrix ECC 200 (ISO/IEC 16022). For KLT1 labels, the height and width including quiet zone is a maximum of 20 mm each, and for DIN A5 labels a maximum of 34 mm each. The height and width of the modules is at least 0.3 mm.

6.2.2 Positioning

The position of the Data Matrix code (excluding the rest zone) is at least 0.7 mm above the bottom edge of block A3. The left side of the DMC starts at 170 mm for the DIN A5 label and 133 mm for the KLT2 label. The exact dimensions depend on the printer.

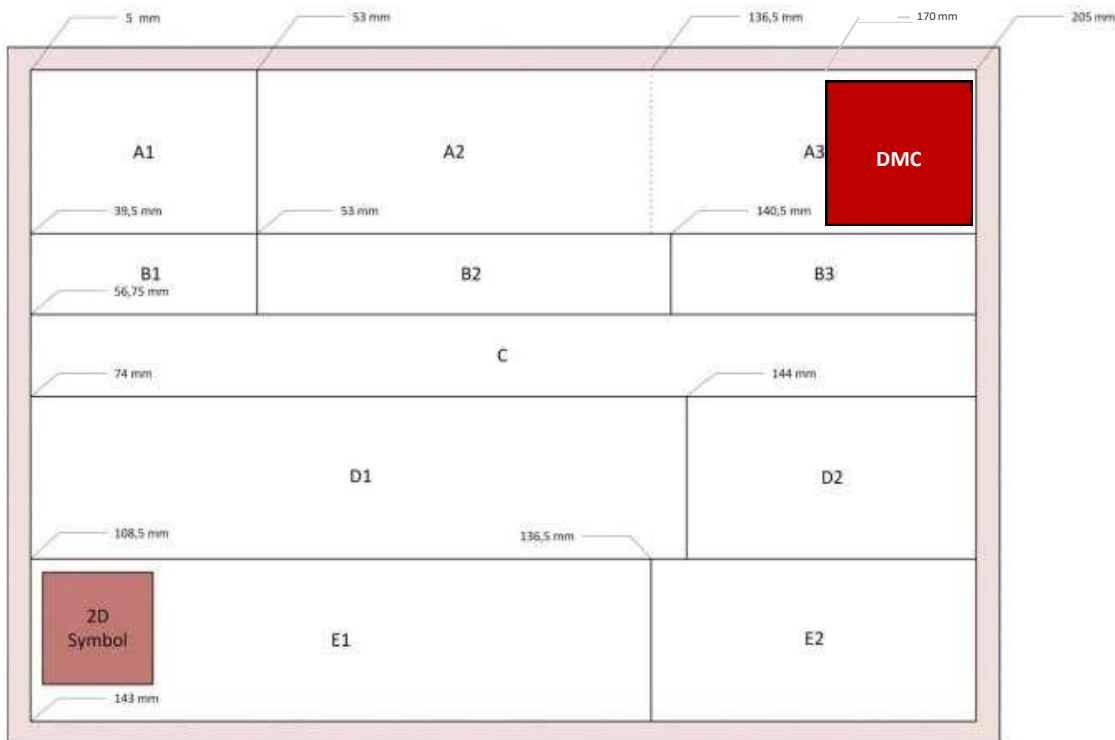


Figure 23: Positioning DMC on A5 label

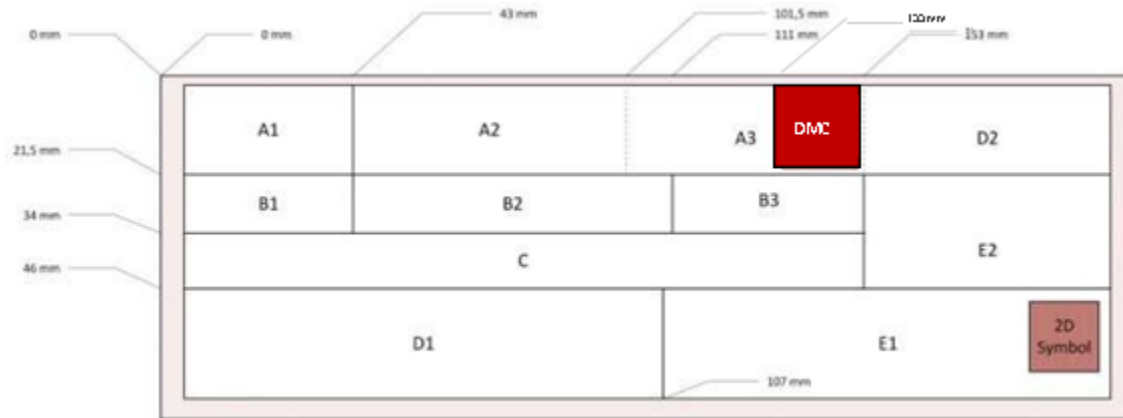


Figure 24: Positioning DMC on KLT1 label

6.2.3 Inhalte

The Data Matrix code follows the same syntax as suggested in VDA Recommendation 4994, only the content is EVAMO-specific.

The format indicator "06" is used to construct the DMC (according to ISO/IEC 15434). This consists of the string [)]><RS>06<GS> at the beginning of the code, followed by the user data according to ISO/IEC 15418 specifications and the strings <RS> und <EOT> at the end.

ASCII	Hex	Dezimal	Bezeichnung
[)]>	5B, 29, 3E	91, 41, 62	Compliance Indicator
R S	1E	30	Format Trailer Character
06	30, 36	48, 54	Format indicator for "ASCII DIs"
G S	1D	29	Data Field Separator
E O T	04	4	Message Trailer

Table 2: Control Characters

The individual data elements in the payload area are inserted into the syntax with the leading data identifier and separated from each other by the separator "GS". For optional fields that are not filled, the data identifiers must always be specified. In this case, the content remains empty. Data fields not listed in this guideline in accordance with VDA 4994 may only be added after consultation with the Receiving Coordinator division.

Data elements in fixed order	Data Identifier	Master ²	Mixed ²	Single ²	Must/Can ¹	Note
Specification identifier	12P	X	X	X	M	Constant „12PGTL3“
Version of the specification	9K	X	X	X	M	z.B. „9K11“ for Version 1.1
License Plate or SSCC18	1J, 5J oder 6J	X (6J)	X (5J)	X (1J)	M	
BBD	14D	X		X	K ⁴	Format: CCYYMMDD(z.B. 14D20221231)
Production date	16D	X		X	K ⁴	Format: CCYYMMDD(z.B. 16D20201231)
Part number EVAMO	P	X		X	M	no hyphens, no spaces, only uppercase letters, digits, and dots
Revision status/index EVAMO	2P	X		X	K	only for material with a mandatory revision level (if clear, otherwise empty)
Supplier batch	1T	X		X	K	Mandatory for batch management (if clear, otherwise empty) alphanumeric, capital letters
Quantity	Q	X		X	M	Q9999 (e.g., Q2.5) Period instead of comma as separator between pre- and post-decimal places
Unit of quantity	3Q	X		X	M	e.g., 3QKG
Order No. by EVAMO	K	X	X		M	for mixed pallets with the same order number e.g., K55284673
EVAMO order position	4K	X	X		M	for mixed pallets with the same order number e.g. 4K00010 for Pos.1
Delivery note number supplier	2S	X	X		M	
Kanban-ID EVAMO	15K	X		X	K	only for Kanban process (if clear, otherwise empty)
Supplier number at EVAMO	V	X	X	X	M	falls beim Single Label nicht umsetzbar Nutzung von 13V erforderlich
Lieferantennummer (DUNS)	13V	X	X	X	K ⁴	relevant for MAT labels at the third packaging level
Gross weight in KG	7Q	X	X	X	M	e.g., 7Q9999
Supplier's tracking number	2K	X	X		K	e.g., transport document reference (TO number)
Additional Part Information	23P	X		X	M ³	Content is coordinated with suppliers on a material-specific basis
RoHS Directive	30P	X		X	M ³	Status of the Directive (e.g. "2019/65/EU") Otherwise, either "na" (not applicable) or "nc" (not compliant with the RoHS Directive)
Manufacturer (DUNS)	12V	X		X	M ³	only if the manufacturer

						deviates from the supplier
Article number manufacturer	1P	X		X	M3	only if the manufacturer deviates from the supplier
Marking if GTL is the smallest packaging unit	33T	X	X	X	M3	"Y" if this is the label of the smallest packaging unit, otherwise "N"

Table 3: Data Elements of the DMC

Examples of a valid Data Matrix code of the master label according to Table 2: Control Characters and Table 3: Data Elements of the DMC:

Master Label:

[>R_s06^{G_s}12PGTL3^{G_s}9K10^{G_s}5JUN551236867029738561^{G_s}14D^{G_s}16D^{G_s}PF00VH20140^{G_s}2P^{G_s}1T^{G_s}Q69
12^{G_s}3QP^{G_s}K55284673^{G_s}4K00010^{G_s}2S12345678^{G_s}15K^{G_s}V144837^{G_s}13V^{G_s}7Q211^{G_s}2K^{G_s}23P^{G_s}30P^{G_s}
12V^{G_s}1P^{G_s}33T^{R_s}EO_T

Mixed Label:

[>R_s06^{G_s}12PGTL3^{G_s}9K10^{G_s}5JUN551236867029738987^{G_s}14D^{G_s}GG_sP^{G_s}2P^{G_s}1T^{G_s}Q^{G_s}3^{G_s}K552846
s16D Q

Single Label:

[>R_s06^{G_s}12PGTL3^{G_s}9K10^{G_s}1JUN551236867029738321^{G_s}14D^{G_s}GG_sPF00VH20140^{G_s}2P^{G_s}1T^{G_s}Q28
s16D
83QP^{G_s}K55284673^{G_s}4K00010^{G_s}2S^{G_s}15K^{G_s}V144837^{G_s}13V^{G_s}7Q8^{G_s}
2K^{G_s}23P^{G_s}30P^{G_s}12V^{G_s}1P^{G_s}33T^{R_s}EO_T

6.2.4 Segmentation of data information in 2D code

The data elements in the barcode provided with the data identifiers are segmented hierarchically into a tree structure (looping structure) in the data matrix code. The data identifier (F) is used for this purpose.

Segmentation assigns the data fields to the nested hierarchical levels, such as article and serial numbers to part-carrying containers and these to higher-level load carriers. The individual structure levels are provided with corresponding level codes (cf. EDI syntax ANS X12, data element 735).

The following levels can be used:

Level	Level name	Level code	Description
Higher-level units MASTER-MIXEDLOAD	Tare	T	The tare level is used to identify pallets. If there are no identifiable palettes, this layer can be omitted.
Part-carrying containers	Pack	P	The packaging layer is used to identify the boxes in which the item will be shipped, such as serial numbers of labels. In most cases, there will be some type of packaging.
Item	Item	I	Data to identify the inventory holding unit (SKU).

Table 4: Level codes

After completion, the entire data string is embedded in the ISO/IEC 15434 syntax. A data matrix code of a master or mixed label can be executed as a set code with the information of the subordinate single units, or without this information only for that layer.

Set codes contain the data segments of the child single labels, surrounded by the data segment of the parent unit. Three levels are used for segmentation, the "TARE" level of the higher-level master and mixed units, the "PACK" level for part-carrying containers, and the "ITEM" level for items (see Table 4: Level codes).

6.3 Notes on the RFID tag when using smart labels (EVAMO)

In principle, VDA Recommendation 4994 with reference to VDA 5500 applies.

As an additional requirement, the UHF tags must also be readable on metallic containers and ESD containers.

7. Neutral label at third packaging level (EVAMO)

7.1 Introduction

This chapter describes the requirements for a customer-neutral label for containers (inner packaging) on the third packaging level, the neutral label.

In contrast to the VDA 4992 MAT label and EVAMO MAT label, the Neutral Label is reduced to elementary basic data and does not contain any customer-specific data. As a result, the space required for the Data Matrix Code (DMC) is much smaller and it can therefore be used on all containers on which there is not enough space for a MAT label. It also allows suppliers to label materials that are not specially manufactured or packaged for EVAMO, e.g., screws or nuts, as standard mechanical parts. However, the EVAMO MAT label must still be used for electronic components.

The neutral label is specially designed for the Enhanced GTL1. The Enhanced GTL (Level 1 and 2) is physically attached to the packages and correlates with the information of the electronically transmitted ASNs (DESADV Global EDIFACT D.07A). Below Level 2, the Neutral Label is used, for which no data must be transmitted electronically. By pairing it with the Enhanced GTL Single of the outer packaging, it allows the traceability of the parts contained therein. To do this, the supplier must ensure a minimum uniqueness of the package ID of 5 years.

Example:

- Transport containers (KLT) are stacked on a pallet (Level 1 with Enhanced GTL Master)
- The transport containers (Level 2 with Enhanced GTL Single) contain blisters/spools with connector strips
- the blisters/spools (Level 3) are marked with the neutral label



Figure 25: Pallet with crates (left) and crate with blister (right)

Before switching to the neutral label for inner packaging, a print sample must be sent by the supplier to the receiving EVAMO factory to ensure a check of the contents and the readability of the 2D code. In the event of a positive review, the release for the EVAMO label is carried out by the receiving work. After approval, the label must be used for all deliveries with the same inner packaging. Exceptions to this regulation require a separate agreement.

7.2 Size, layout, and application of the neutral label

The label has two sizes:

- 17 mm x 70 mm for a label with text and DMC
- 17 mm x 17 mm for a label only with DMC

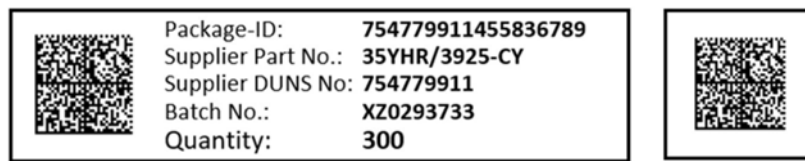


Figure 26: Layout Neutral Label

The application of the neutral label to the innermost packaging is determined together with the requesting works. Depending on the type of packaging, the appropriate format must be used. Basically, the larger label with text information is preferable. Stickers must be designed in such a way that they can be easily removed from reusable containers without leaving any residue.

To ensure robust readability at the manufacturing facilities, the print quality of the DMC must reach ISO 15414 degree "C" or better.

7.3 Explanations of the 2D Code

The size of the DMC is approx. 10.8 mm x 10.8 mm (36 x 36 modules), including the rest zone a maximum of 13 mm x 13 mm with a height and width of the modules of at least 0.3 mm.

The DMC follows the syntax suggested in VDA Recommendation 4994. However, it only contains supplier-specific information.

The format indicator "06" is used to construct the DMC (according to ISO/IEC 15434). This consists of the string []><RS>06<GS> at the beginning of the code, followed by the user data according to the specifications of ISO/IEC 15418 and the strings <RS> and <EOT> at the end (see Table 2: Control characters).

The individual data elements in the user data area are inserted into the syntax with the leading data identifier and separated from each other by the separator "GS". Adding further fields is not permitted.

Data elements in fixed order	Data Identifier	DMC	Text (17x70)	Note
Identifier of the Specification	12P	X	-	Constant „12PNL01“
Version of the specification	9K	X	-	e.g., „9K10“ for Version 1.0
Unique-ID	3S	X	X	9-digit DUNS number of the <i>manufacturer's plant</i> + <i>package ID as in VDA 4994</i> defined
Article number manufacturer	1P	X	X	to fill if manufacturer = supplier

Manufacturer (DUNS)	12V	X	X	to fill if manufacturer = supplier
BBD	14D	X	-	Format YYYYMMDD
Supplier batch	1T	X	X	alphanumeric, uppercase
Quantity	Q	X	X	Q9999 (maximum 6 digits) Period instead of comma as separator (e.g., Q2.5) Unit of measure as in higher-level GLT single defined (3Q)

Table 5: Data Elements of the Neutral Label

Note: To pair the data from Neutral Label with the data from the Enhanced GTL Single of the outer packaging,

- the manufacturer number (DUNS) of the Neutral Label matches the manufacturer number (DUNS) of the Enhanced GTL-Single of the outer packaging.
- the manufacturer's article number must be identical on both labels.

Example of a valid Data Matrix code of the label according to Table 2: Control Characters and Table 5: Data Elements:

[>^R_S06^G_S12PNL01^G_S9K10^G_S3S551236867029738561^G_S1PF00VH20140^G_S12V551236867^G_S14D20201
231^G_S1TXZ0293733^G_SQ300^R_SEOT

8. Appendix

8.1 Front sizes Global Transport Label (VDA 4994)

Data item	Short description	A5	KLT 210x 74	Small 210x 42	A6
Consignor (Name 1)	Name of the shipper	10	10		10
Consignor of goods (postcode)	Postal code of the sender	10	10		10
Consignor of goods (location)	Location of the shipper	10	10		10
Consignor of goods (country)	Country of the shipper	10	10		10
Supplier number of the consignor of the goods	Supplier number (with index, if applicable) of the consignor of goods	10	10		10
Country of origin	Two-digit ISO 3166-1 Alpha-2 code of the country of origin where the item was manufactured	10	10		10
Consignee (Name 1)	Name of the recipient	12	12	12	12
Consignee (postcode)	Recipient's postcode	12	12		12
Consignee (location)	Location of the recipient	12	12		12
Consignee (country)	Country of the recipient	12	12		12
Recipient work	Working number	30	18		18
Unloading point	Place where the transport is unloaded	30	18		18
Storage location	Place where the parts are stored after unloading from the transport	30	18	12	18
Label Type	Label Type Identifier 1J = Single → Marking "S" 5J = Mixed → marking "MIX" 6J = Master → designation "M"	48	48		48
Supplier number	Supplier number of the shipping plant (ship from), assigned by the customer	18	12	12	10
Delivery note number	Delivery note number issued by supplier	18	12	12	10
Custom routing	Identifier for internal forwarding/route at the customer's factory	36 22 ¹	24 18	12	24 22

Installation location / point of consumption		36 22	24 18		24 22
ETA	Target Goods Receipt Date (expected time of arrival)	14	12		14
Quantity	Filling dimensions of the loading unit (master label) or the inner container (single label)	30	24	18	24
Unit of quantity	Abbreviation of the unit of measure	6	6	6	6
Gross weight in kg	Gross weight of the load unit/package	20	12		14
Net weight in kg	Net weight of the load unit/parcel	20	12		14
Customer's article number	Part number according to the recipient's nomenclature	36	24	18	28
Customer's article name	Customer's part description	10	10	10	10
Safety symbol	Symbol for marking safety-relevant parts				
License Plate	Globally unique ID of the parcel/package unit	24	12	8	20
Packaging type	Container type according to the nomenclature of the recipient	16	12	12	12
Date of shipping	Date/time when the containers are scheduled to be shipped	16	12		12
Best before date/expiry date	Best-before date	16	12	12	12
Production date	Date of production	16	12	12	12
Charge	Batch number	16	12	12	12
Hardwarelevel	Marking of the hardware level of the parts	16	12		12
Softwarelevel	Identification of the software status of the parts	16	12		12
Status of change/generation status /NAEL	Marking of the change status of the parts (aka generation status, NAEL no. or similar)	16	12	12	12
Number of inner packages	Number of inner packages of a load unit	24	24		24
Supplier-specific information	Information provided by the supplier regarding its own use	tbd	tbd	tbd	tbd
Customer-specific information	further, customer-specific information for its own use	14	12		14

¹ single-line/two-line

Table 6: Global Transport Label font size