



Global Transport Label

Odette Profile (previously published as European Profile)

Ref LL08

Version 2.3

Published December 2024



1. CONTENTS

1. Contents	1
Changes from V2.2 to V2.3	2
2. Introduction	3
3. Function of transport labels	5
4. Consignments and transport	6
5. Size, layout and application of labels	7
4.1 Dimensions	7
4.2 Data fields on labels	12
4.3 Technical requirements	15
4.4 Labels for transport handling units (THU)	16
4.5 Labels for small load carriers (SLC)	16
6. Description of data fields	17
7. Identification of packaging units and transport units	37
8. Barcode, 2D code and optional RFID tag	40
7.1 1D Barcode	40
7.2 2D Data Matrix symbol	40
7.2.1 Symbol size	40
7.2.2 Character sets	41
7.2.3 Message structure according to ISO 15434	41
7.2.4 Message structure according to AFNOR NF Z 63-400 / DIN 16598	43
7.2.5 User data for coding in Data Matrix	44
7.3 RFID tags used in conjunction with smart labels	53
7.3.1 Function of passive RFID transponders	53
7.3.2 Air interface and frequency range	53
7.3.3 Structure and size of memory banks	53
7.3.4 Example of code according to ISO 17367	54
8 Label for shipments of empty packaging	63
9 Appendices	64
A. Translation of data area titles	64
B. Data identifiers for the licence plate	64
C. Mapping of Data Fields with EDI messages	66

CHANGES FROM V2.2 TO V2.3

Changed description and abbreviations from Transport Loading Unit (TLU) and Product Packaging Unit (PPU) to Transport Handling Unit (THU) and Packaging Unit (PU) throughout the document.

Amended specification of data in section E2

2. INTRODUCTION

This recommendation regarding the use of the Global Transport Label by European automotive companies is part of a series of Odette publications concerning communication throughout the automotive supply chain.

Automotive suppliers deliver parts to automotive customers around the world. This has often meant following very different container labelling requirements, depending on the requirements of their customers. Studies show that variations in this basic business process, multiplied by thousands of shipments transported every day, can lead to millions of euros in added supply-chain costs every year.

Members of automotive industry associations from Europe (Odette), Japan (JAMA/JAPIA) and North America (AIAG), have worked together to address this common problem.

Using current label templates as models – including ISO 15434, ANSI MH10.8.1, Odette Transport Label 1 (OTL 1) and AIAG B-10 Standard – the Global Transport Label (GTL) Committee developed a model for a transport label design that included new features such as the ISO “Licence plate,” Code 128 and the 2D symbology Data Matrix Code ECC200.

The purpose of the GTL template is to facilitate the movement of goods and the exchange of data amongst all members within the supply chain (suppliers, carriers, customers and others). The amount of data (bar code as well as human readable text) needed on a label is a function of the needs of the trading partners involved within the limits of this document. When a bar code label is used in conjunction with computerised data bases and Electronic Data Interchange (EDI), the amount of data needed on a label may be reduced significantly.

The information printed on the GTL originates from the same data pool as the information included in the EDI despatch advice (Global DESADV) and printed on shipping documents. The relationships between the various advices, notifications, and documents are shown in Figure 1.

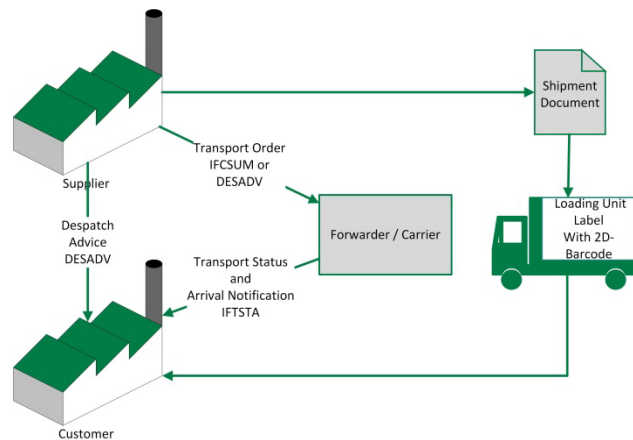


Figure 1

Label, card and tag marking methods are covered in this standard under the general term of “Label.” This document outlines the requirements for printing labels for transport handling units (and packaging units) to ensure the readability of bar code symbols and to provide for consistency in label formats.

This standard does not supersede or replace any applicable safety or regulatory marking or labelling requirements. This standard is to be applied in addition to any other mandated labelling requirements.

Labels, as used in this standard, refer to pressure sensitive, card stock, and tags. The terms “container” and “package” are used interchangeably.

Note: This document does not address sequence, modular, sub-assembly or primary metal labels.

It is the responsibility of the supplier to attach bar code marked labels that meet the specifications outlined in this standard. Strict adherence to these specifications for shipping parts identification labels will reduce implementation costs and increase benefits throughout the industry.

Label dimensions should be in accordance with the dimensions shown.

All exhibits are for illustrative purposes only and may not be to scale or bar code print quality standards.

3. FUNCTION OF TRANSPORT LABELS

Transport labels are used to identify transport handling units (THU) along their route from the despatcher of the goods (normally the factory of the supplier) via the transport company to the final recipient of the goods (normally the factory of the customer). They are also used within the internal material flow of both the supplier and the customer to identify packaging units (PU). Labels with a Licence Plate according to ISO 15459 allow for the unique identification of THU and PU around the globe. In addition to the clear-text information, labels also contain machine-readable data in the form of 1D (and possibly 2D) barcodes for automated handling.

Depending on the purpose of the unit, the label has different control functions:

- **Transport Handling Unit (THU):** Examples: pallets, loaded with PUs and auxiliary packaging material (lids, etc.), metal containers or large load carriers (LLC). In this case, the label provides unique identification of the unit, including details regarding its logistics properties and contents. The information on the label is generally used to control consignments along single-stage or multi-stage transport chains from the supplier to the customer and support the receipt of the goods by the customer with subsequent internal handling including storage in the customer's warehouse.
- **Packaging Unit (PU):** Examples: cardboard boxes and plastic boxes (also known as Small Load Carriers – SLC). In this case the label provides unique identification of the product, together with additional logistics data. The label generally supports the internal handling of the PU by the supplier up to the point of consolidation in a THU and by the customer¹ once the THU is broken down again.

In cases where the PU is also the THU, the label combines the functions of the above two levels. This type of unit is usually described as a **Simplified Handling Unit**

¹ The internal packaging labels are often referred to as small load carrier SLC Labels.

4. CONSIGNMENTS AND TRANSPORT

The sender of the goods (Ship From) combines THUs into consignments (shipments). A consignment thus consists of all THUs that are shipped together from the despatch point of the supplier to the designated delivery address of the customer (unloading point at the Ship To²). The consignment remains a unit until it is separated into its component parts, irrespective of the method of transport by which it reaches the delivery address. A consignment therefore remains intact even if it passes through one or more cross-dock points and is unloaded and re-loaded several times.

A transport includes all consignments that are transported by a freight carrier along the same transport leg to the delivery address.

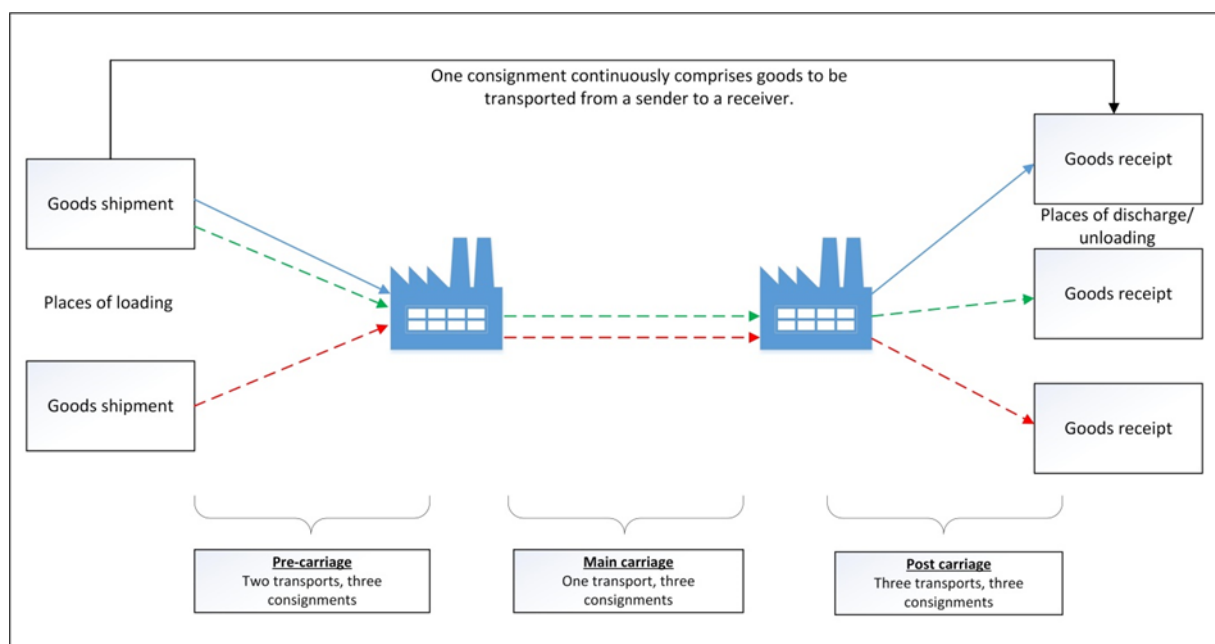


Figure 2 - Relationship between consignment and transport

For cross-dock processes, it might be necessary to print additional information on the THU labels. For details, see chapter 8.

² NAD + ST/LOC+11

5. SIZE, LAYOUT AND APPLICATION OF LABELS

4.1 DIMENSIONS

Labels can vary in size according to the size of the THU or PU they will be attached to and can sometimes vary according to the region of the world in which they are to be used.

The following sizes are considered to be a fairly exhaustive list:

- a. A5 – see Figure 3
- b. Half-Letter 216mm x 140mm – see Figure 4
- c. A6, 148mm x 105mm – see Figure 5
- d. 152.4mm (6 inches) x 101.6mm (4 inches) – see Figure 5
- e. SLC 1: Label for small load carriers 210mm x 74mm - see Figure 6
- f. SLC 2: Label for flat small load carriers 210mm x 42mm – see Figure 7
- g. SLC 3: Label for flat small load carriers 210mm x 30mm – see Figure 8
- h. Blister: Label for blisters 150mm x 25mm – see Figure 9

As A6 and 6 x 4 inches formats are virtually identical in size, they are described together.



Figure 3 - Label A5 size

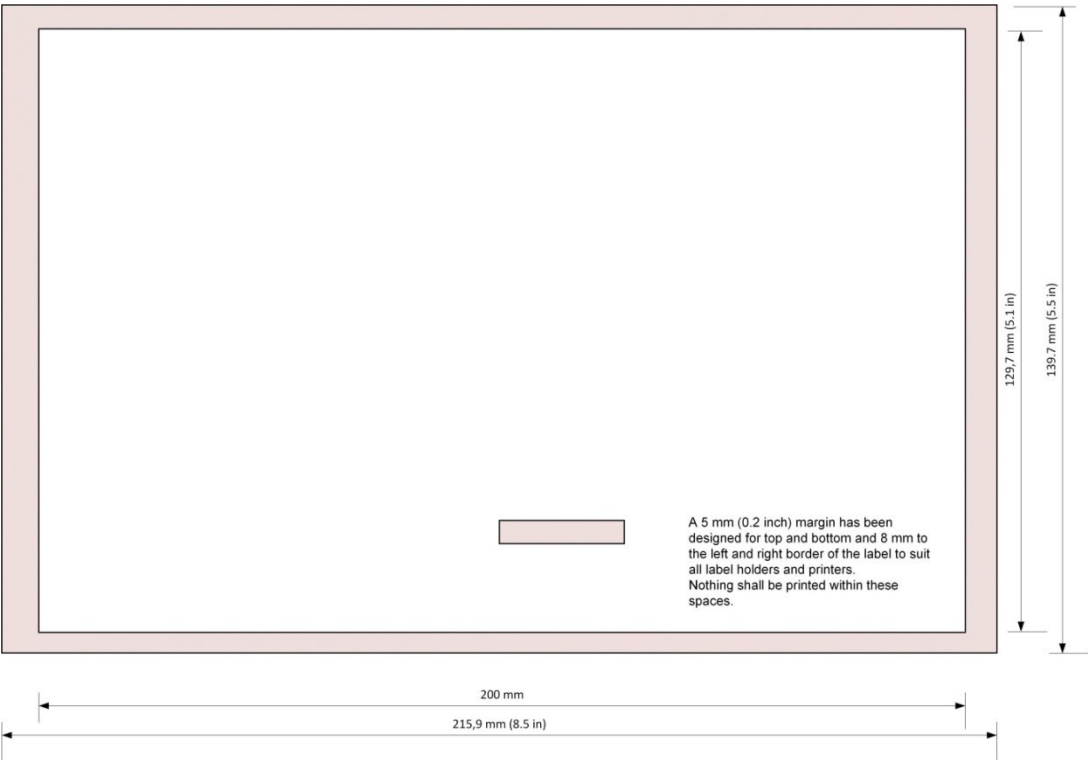


Figure 4 - Label Half-Letter size



Figure 5 - Label size A6/US 6x4"

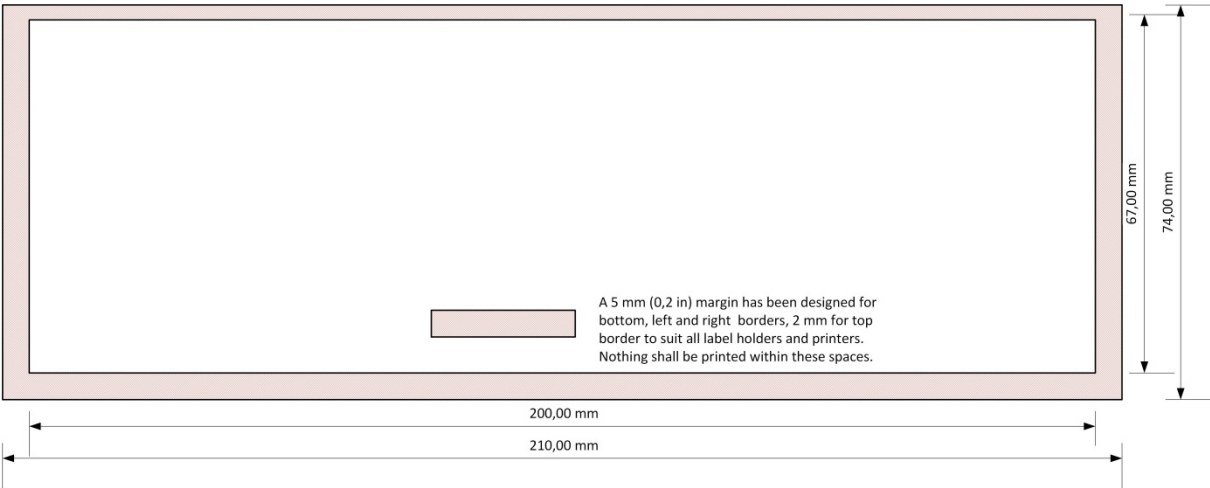


Figure 6 – SLC 1 size

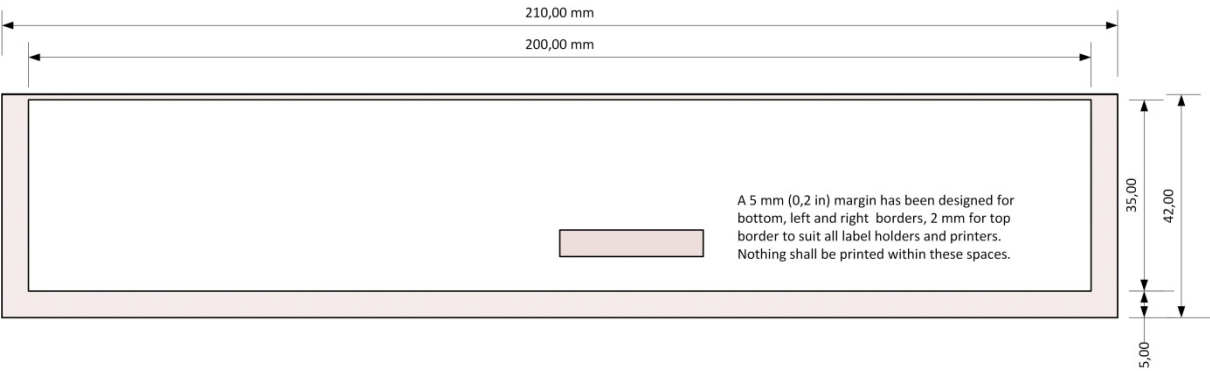


Figure 7 – SLC 2 size

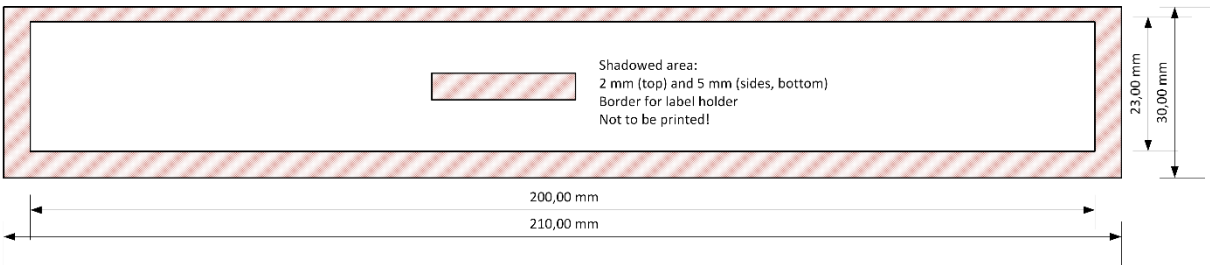


Figure 8 - SLC 3 size

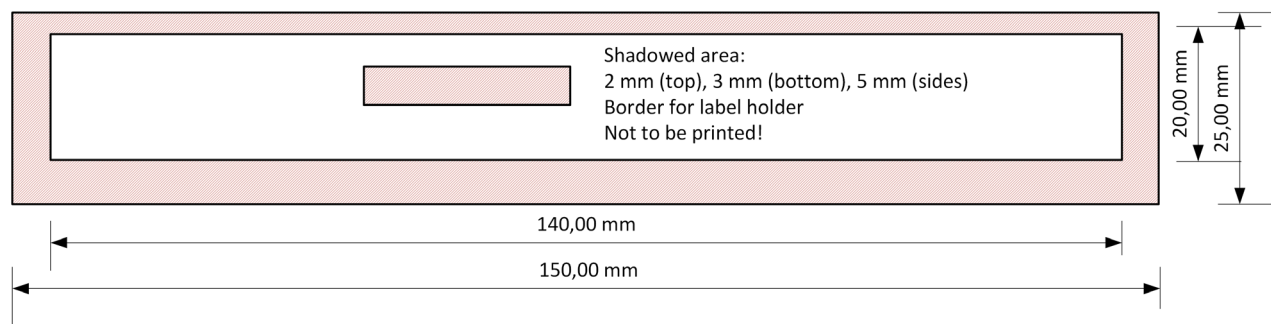


Figure 9 - Blister size

4.2 DATA FIELDS ON LABELS

The information printed on the label is divided into logical fields of data according to the applicable layout template. The following information blocks are defined:

- A1 - Goods sender (ship from)
- A2 - Goods recipient (ship to)
- A3 - Label type and 2D barcode symbol
- B1 - Customer reference 1
- B2 - Customer routing information
- B3 - Logistics reference
- C - Customer's article number
- D1 - Package ID
- D2 - Customer reference 2
- E1 - Optional information as defined by supplier
- E2 - Customer reference 3

For more information, see chapter 5.

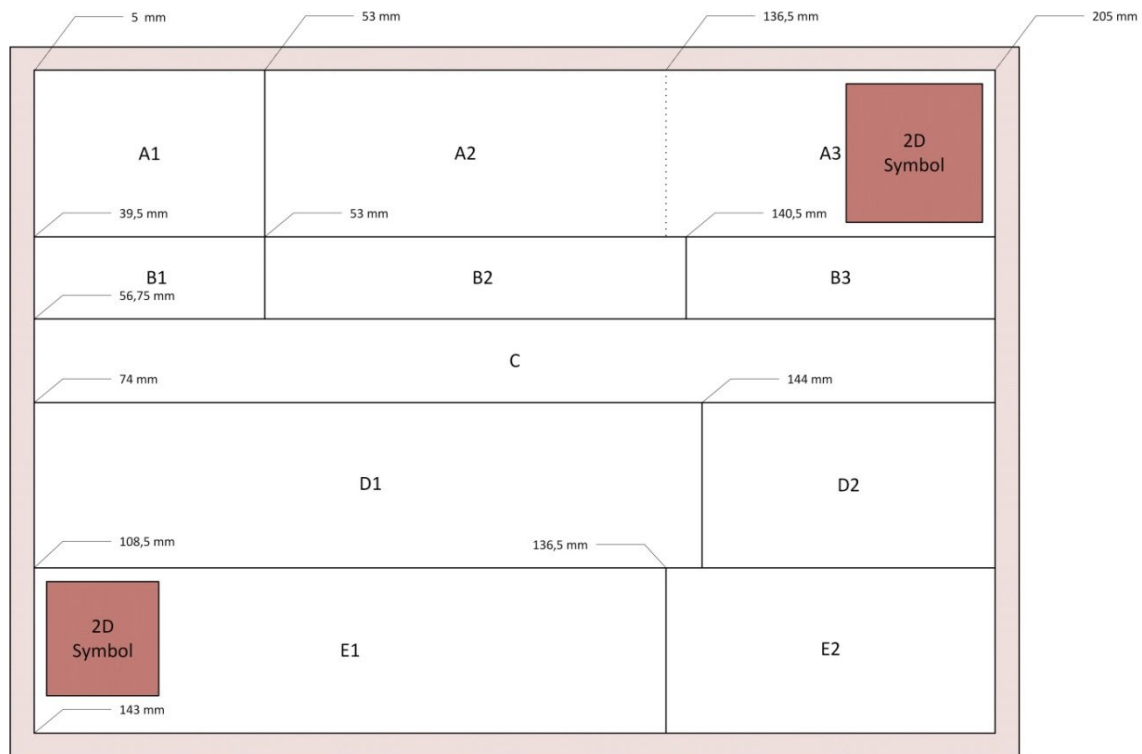


Figure 10 - Dimensions and layout of data fields - label format A5

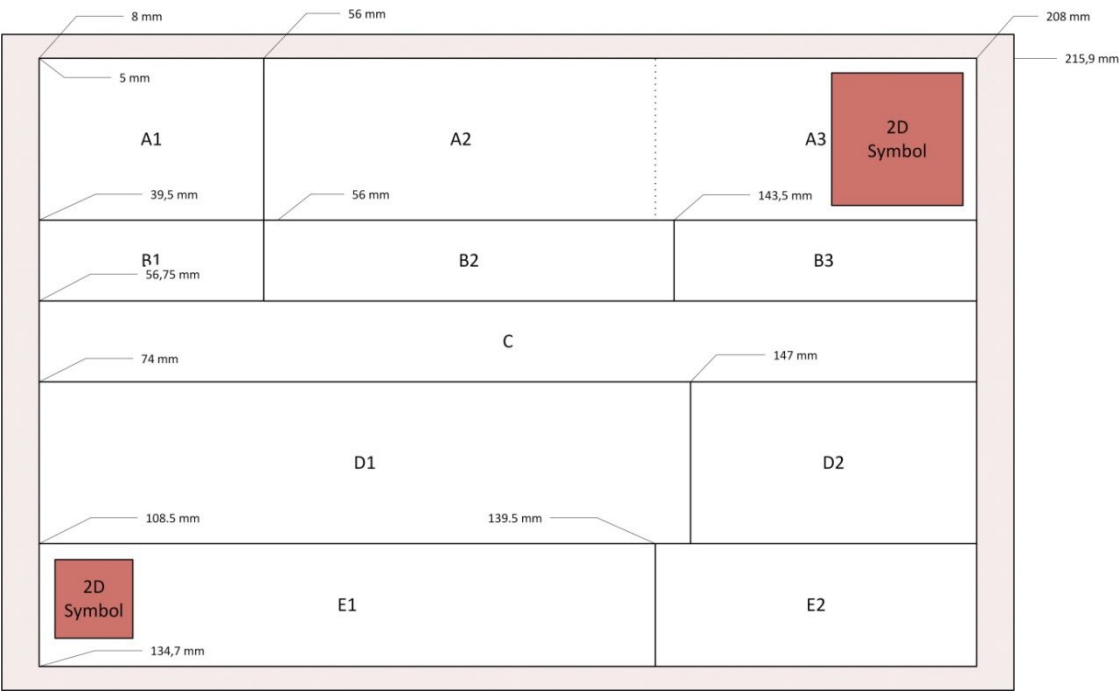


Figure 11 - Dimensions and layout of data fields - Label Half-Letter format

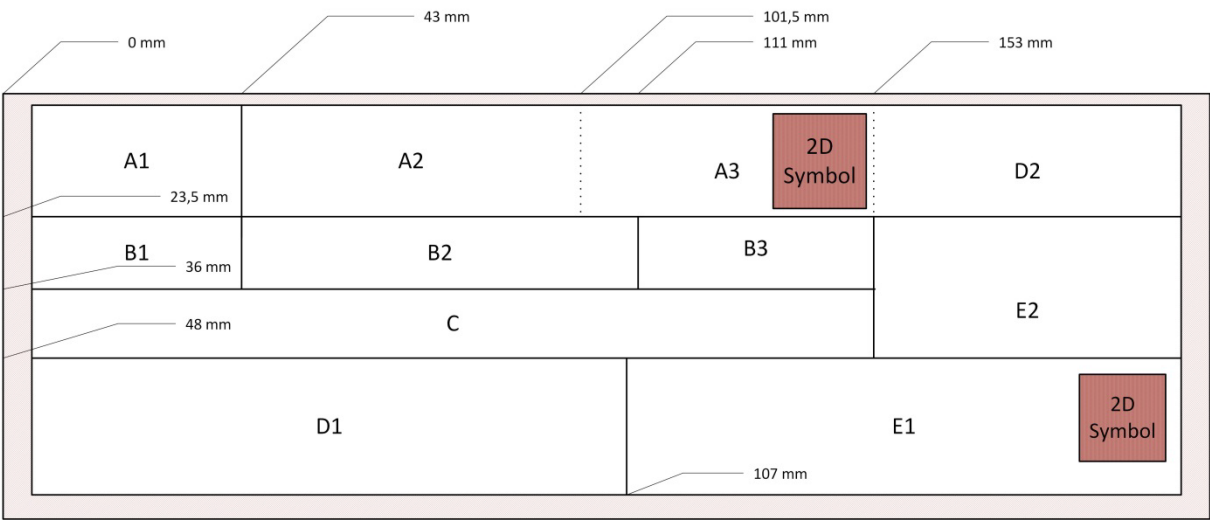


Figure 12 - Dimensions and layout of data fields - Label format SLC 1

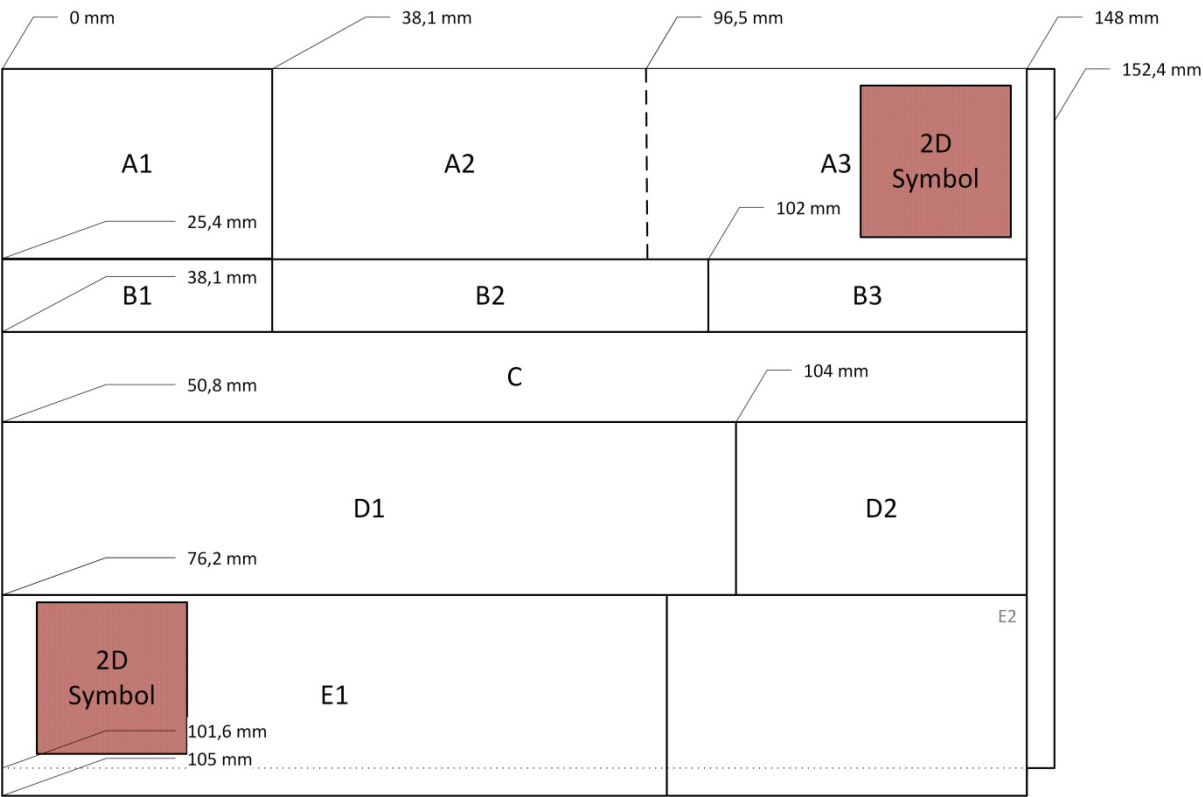


Figure 13 - Dimensions and layout of data fields - Label format A6 / US 6x4 "

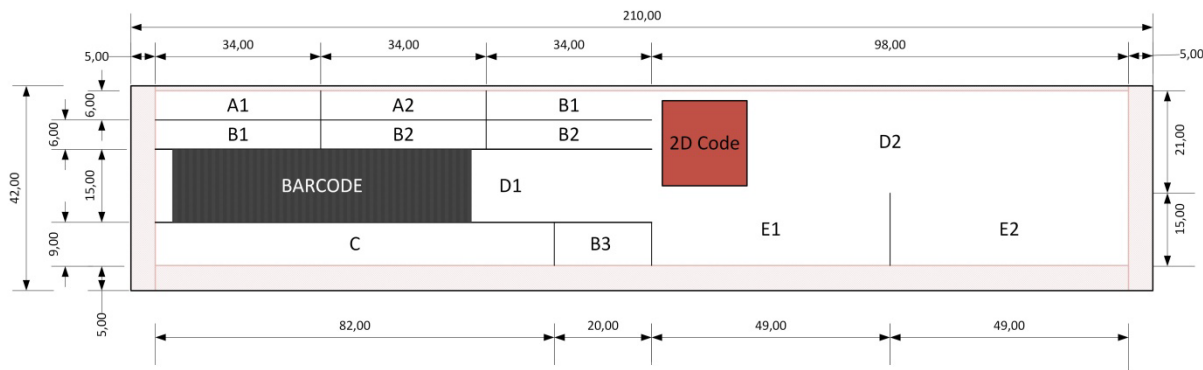


Figure 14 - Dimensions and layout of data fields - Label format SLC 2

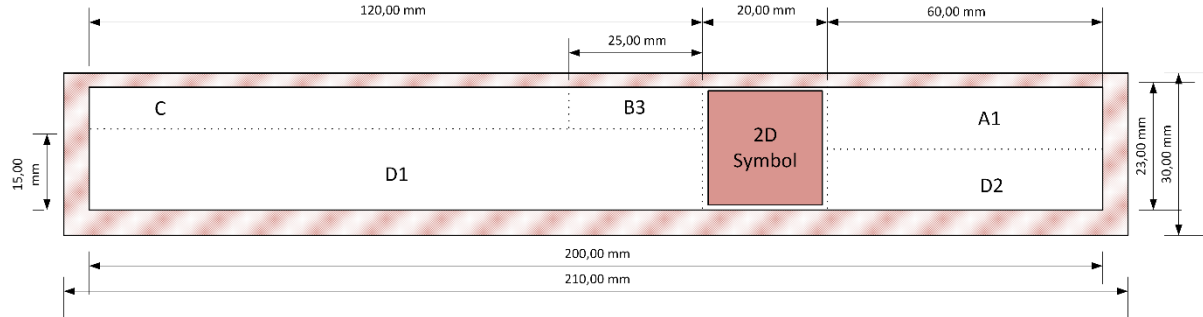


Figure 15 - Dimensions and layout of data fields - Label format SLC 3

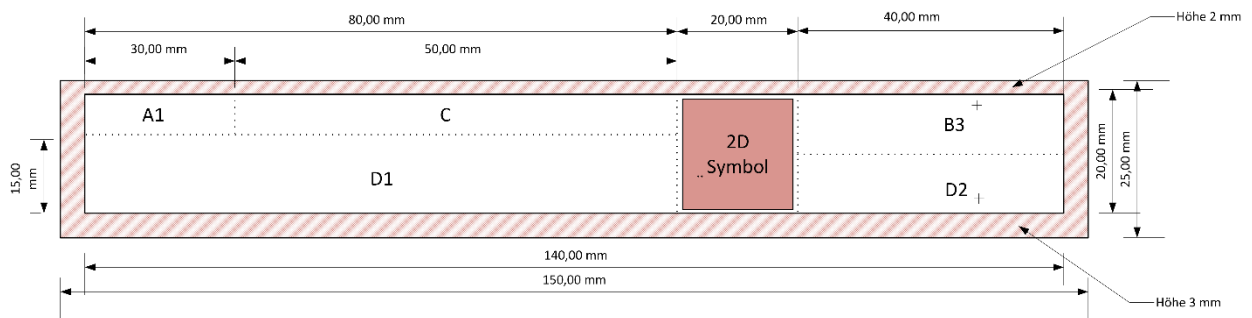


Figure 16 - Dimensions and layout of data fields - Label format Blister

Note: Due to the small size, the SLC 2, SLC 3 and Blister Label only contain a subset of the information printed on the other labels. Also, to avoid reading problems with the 2D Symbol, certain lines, which separate the blocks, are not printed on SLC 2, SLC 3 and Blister labels (see also examples later in this document).

4.3 TECHNICAL REQUIREMENTS

- | | | |
|--------------------|---|----------------|
| - Insert label | = min. 120 | g/m^2 |
| - Adhesive label | = min. 80 | g/m^2 |
| - Combined label | = approx. 130-170 | g/m^2 |
| - Carrier material | = approx. 50-90 | g/m^2 |
| - Label material | = approx. 80 | g/m^2 |
| - Paper | = white, machine-finished, moisture-resistant | |
| - Adhesive | = moisture-resistant, easy to remove | |

Depending on customer requirements, insert labels might be secured with adhesive dots, or might be produced from a heavier paper.

For use with returnable containers, adhesive labels must be easy to remove without leaving behind any residue.

If the labels are to be attached to boxes without label holders, then adhesive components will need to be used (sticky labels, adhesive dots). The method to be used must be approved by the customer.

For shipments to and from North America, labels of size Half-Letter or 6x4" might be used, if approved by the customer.

In principle, the labelling rules (number of labels, positioning, attachment, type of label) must be agreed bilaterally between the business partners. For trouble-free machine reading, however, the labels must be attached horizontally on the packaging.

Before applying new labels, all old (and thus invalid) labels must be removed from the packaging.

4.4 LABELS FOR TRANSPORT HANDLING UNITS (THU)

For THUs, label format A5 landscape should be used. It can be designed as an insert label (if a suitable label frame/holder is available) or as a self-adhesive label. Depending on the type, the following specifications must be observed:

Labels for THUs:

- Label for matched (homogeneous) THU: the THU holds individual PUs which all contain the same article number (e.g. packed in SLCs). The individual PUs are equipped with separate Single Labels.
- Label for mixed (non-homogeneous) THU: the THU holds individual PUs which do not all contain the same article number. The individual PUs are equipped with separate Single Labels.
- Label for simplified THU: the THU contains only parts with the same article number which are **not** packed in individual PUs. The THU is equipped with a Single Label.

Labels applied to THUs are also sometimes referred to as Main Labels or Master Labels.

4.5 LABELS FOR SMALL LOAD CARRIERS (SLC)

For some small load carriers, the A5 Label might be too large to fit without having to be folded.

Instead of using folded labels, the SLC 1, SLC 2 or SLC 3 should be used. Likewise, for blisters the special blister format can be used. Please follow customer's instructions regarding use of SLC 1, SLC 2, SLC 3 or blister format and whether adhesive paper is allowed, recommended or forbidden to be used.

6. DESCRIPTION OF DATA FIELDS

For all text content, the font Arial Narrow, bold (alternative font: Helvetica Condensed, bold) should be used. Text must be printed in capital letters. The font size is 6 pt.

The data fields and lines must be identified with headings or titles as specified in the table below.

For more easy readability of date fields we recommend printing the date with a dash (-) character separating year from month and month from day.

The table below lists the contents of the individual fields in detail.

A1 - Goods despatcher

Function:	Information regarding goods despatcher and country of origin
Title:	SHIP FROM
Content:	L1: Name of goods sender L2: Name of goods sender, continued or blank L3: Town/city L4: Country code (ISO 2 alpha code) and postal code L5: ID (supplier number) of the ship from L6: Country of origin of goods (ISO 2 alpha code)
Example	SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554 COUNTRY OF ORIGIN: DE

A2 - Goods recipient

Function:	Information regarding goods recipient, unloading point, storage location
Title:	SHIP TO
Content:	L1: Name of goods recipient L2: Name of goods recipient, continued or blank L3: Street name and street number of goods recipient L4: Country, postal code and town/city of goods recipient (210 x 74 mm) L5: Plant, unloading point, customer internal destination, separated by forward slashes "/" Note: Line 3 is only printed in A5 or half-letter size labels. In smaller formats the line is omitted because of limited space. The separating line between A2 and A3 is not printed. If the identifiers of the plant, unloading point and customer internal destination exceed the space available in A2, they may extend into field A3. There must, however, always be a blank space of at least 3mm width before the 2D symbol.
Example	SHIP TO MODERN CAR INC. LONDON PLANT 72 GREAT PETER STREET UK SW1P 2BN LONDON PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 013 / RAMP 15 / WH4 Alternative: SHIP TO MODERN CAR INC. LONDON PLANT UK SW1P 2BN LONDON PLANT / UNLOADING POINT / STOCK LOCATION 013 / RAMP 15 / WH4

A3 - Label type and 2D barcode symbol

Function:	Identification of label type (Matched, Mixed, Single) and 2D code
Title:	None
Content:	Label type codes: M = Label for TU holding PUs containing identical parts (Matched) MIX = Label for TU or PU containing non-identical parts (Mixed) S = Label for lowest package level containing identical parts (Single) Data Matrix symbol 1 (see User data for coding in Data Matrix) On A5 and A6 Labels, there should be a 10mm right margin to the 2D code.
	 Note: The separating line between A2 and A3 is not printed. If the identifiers of the plant, unloading point and customer internal destination exceed the space available in A2, they may extend into field A3. There must, however, always be a blank space of at least 3mm width before the 2D symbol.

B1 - Customer reference 1

Function:	Reference data #1 of customer
Title:	DELIVERY NOTE NUMBER / SUPPLIER NUMBER
Content:	Associated delivery note number, assigned by ship from. Supplier number assigned by the customer.
Example	DELIVERY NOTE NUMBER 12345678 SUPPLIER NUMBER 987654321

B2 - Customer routing information

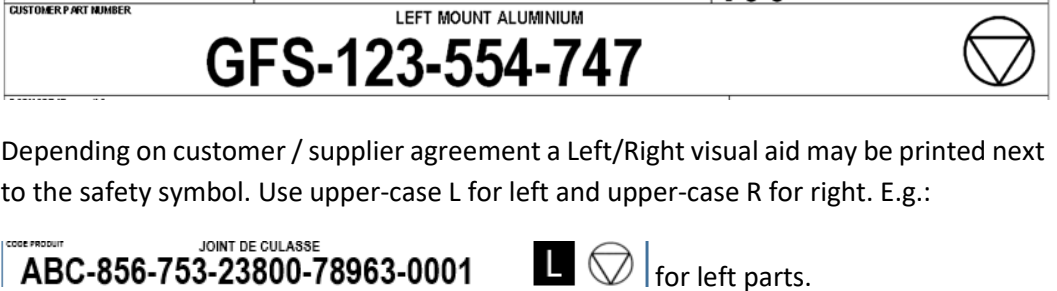
Function:	Details required by the customer for the internal routing of the container after receipt of the goods.
Title:	CUSTOMER ROUTING INFO
Content:	Customer-specific routing information ID and reference number(s), assigned by customer. This information is supplied as part of the call-off and does not need to be interpreted by the supplier. The data must be passed 1:1 through the IT system of the supplier for printing on the label. The customer can change the structure or syntax of the information without the need for any adjustments in the IT system by the supplier. Point of use Internal place of consumption of the part at the customer's premises This field is only completed, if the respective information has been communicated by the customer as part of the call-off. Otherwise, the field remains blank.
Example	CUSTOMER SPECIFIC ROUTING INFORMATION ROUTE 66 Single-line version KUNDENSPEZIFISCHES ROUTING ROUTE 66 LINE15 Two-line version Depending on the customer requirements, Customer Routing may be printed in reverse print, e.g.: 012W4567W90W23

B3 - Logistics reference

Function:	Logistics reference details for customer
Title:	ETA, QUANTITY, QUANTITY UNIT, NET, GROSS WEIGHT
Content:	Expected time of arrival - ETA: expected/requested delivery time of the goods at the customer's premises. This field is also used for cross-dock processes, for instance to define shipping priorities. This information is only useful for labels on THUs. Quantity: Number of parts contained in PU or THU. Quantity unit: Quantity unit code (see Table 2). The quantity unit is printed dynamically in the title. Net weight: Net weight of the parts in PU or THU, in KG, including decimal separator where required. Gross weight: Gross weight of PU or THU in KG, without decimals; if the gross weight is < 1kg, it is stated as 1kg. ³
Example	ETA 2016-01-15/13:30 QUANTITY (PC) 100 NET KG 7,8 GROSS KG 10 A5 Label ETA 2016-01-15/13:30 QUANTITY PC 100 GROSS KG 10 NET KG 7.8 SLC 1 Label

³ The decimal separator may be a full stop or a comma, as decided by the label producer. Thousand separators are not used.

C - Customer's article number

Function:	Customer's article number; safety symbol (if required): circle with triangle (see figures)
Title:	ARTICLE NUMBER
Content:	Article number: Customer-assigned article number of part. Safety symbol where applicable. Certain parts are subject to special documentation requirements. If required by the customer, packages containing such parts must be labelled accordingly. The safety symbol must be printed in the field with a blank area of 2mm to the right. The customer's part designation may be printed to the right of the heading.
	 Depending on customer / supplier agreement a Left/Right visual aid may be printed next to the safety symbol. Use upper-case L for left and upper-case R for right. E.g.: CODE PRODUIT JOINT DE CULASSE ABC-856-753-23800-78963-0001 L  for left parts.

D1- Package ID

Function:	Transmission of unique package ID (licence plate)
Title:	PACKAGE ID
Content:	Package ID in plain text, formatted for printing (with spaces between Issuing Agency Code, Company Identifier and serial number; see also chapter 6), preceded by data identifier in brackets. Data identifier concatenated with the globally unique package ID (licence plate) in form of a barcode, encoded according to Code 128, see chapter 7. 6mm blank area to the left and right For details regarding the package ID, see chapter 6. For details regarding the barcode, see chapter 7.1



Note: if Odette IDs are used, the 6-character OSCAR code (A12301 in example) is used to identify the originator of the serial number (licence plate).

D2 - Customer reference 2

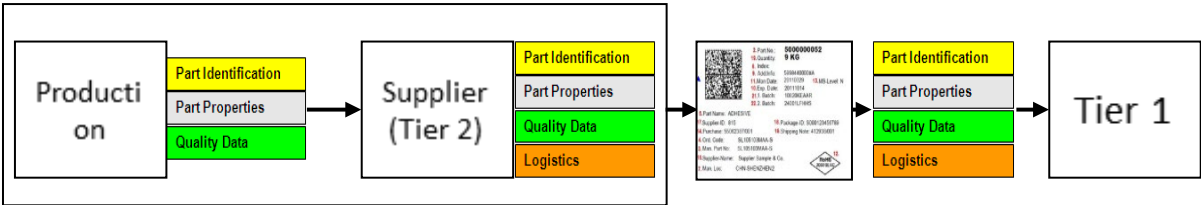
Function:	Reference data #2 of customer
Title:	<i>Depending on content (see example)</i>
Content:	Package type, qualified date, parts generation status, batch number On labels attached to THUs: Package type, shipping date, number of inner packages The following applies to PUs and simplified THUs: • If there is an expiry date, it must be printed. The expiry date must be preceded by the letter "E". • If there is no expiry date, and if the shipping date is known at the time of printing the label, the shipping date should be printed. The shipping date must be preceded by the letter "S". • If none of the above dates are known or apply, the production date should be printed. The production date must be preceded by the letter "P".

Example	PACKAGING TYPE 0009PAL BATCH NUMBER SHIPMENT DATE S 2016-01-14 NO OF INN PCK 40	Field D2 on M or MIX Label
	PACKAGING TYPE 6280RL BATCH NUMBER CH1234 PART - / HARDW. - /SOFTW. -REVISION V3.0B654 SHIP / EXPIRY / PROD. - DATE E 2016-06-15	Field D2 on Single Label

E1 - Optional information as defined by supplier

Function:	Supplier’s internal information
Title:	Not defined
Content:	May be used by the supplier for internal purposes, e.g. for 2D code. On A5/A6 Labels, the symbol is aligned to the left, with a left margin of 10mm. On labels of size 210mm x 74mm or 210mm x 42mm, the symbol is aligned to the right with a right margin of 10mm. The use of 1D barcodes is not permitted in this field. If the smallest THU is also the smallest PU and the MAT-label process applies*⁴, then the field E1 may also contain data of the MAT-label. Some of these data may also be included in the Data Matrix Code (see Chapter 7.2.5).
Example	SUPPLIER AREA F61F008AD4 

⁴ *MAT-Labels are used to add extended material and product traceability information to supplies, mainly from tier 2 to tier 1 suppliers (see VDA 4992). The MAT-Label is applied to the smallest PPU.



E2 - Customer reference 3

Function:	Other customer reference information
Title:	Not defined
Content:	This field contains customer data that is transmitted in the PCI segment (qualifier 16 or 3) of the customer call-off. PCI+16: Maximum size: 5 lines. For each line, the customer transmits one DE 7102 in the PCI segment. To ensure that the code is correct, the DE 7102 must not exceed 25 characters per line. If the customer transmits more characters per line, all characters that exceed the prescribed length are lost when the label is printed. PCI+3: The customer can use all 10 x 35 characters (DE 7102) in the PCI segment. The content is printed as Data Matrix Code. At customer request, however, the field can be used to repeat the date from D2 (shipment/expiry/production) in larger font so that it can be more easily read from a longer distance in logistics processes.
	 CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5 E 2016-06-15

On 210 x 42mm Labels, the fields are completed as follows:

Table 1 - Field contents for SLC 2 Label

Block	Title	Content(s)
A1	SHIP FROM ID	Ship from unique identifier
A2	SHIP TO	Name of goods recipient
B1 (1)	DELIVERY NOTE	Delivery note number
B1 (2)	SUPPLIER NUMBER	Supplier number
B3	QUANTITY	Quantity per package and quantity unit
C	ARTICLE NUMBER	Customer assigned article number The customer's part designation may be printed to the right of the heading
D1	PACKAGE ID	Package ID in plain text, formatted for printing (with spaces between IAC, CID and serial number; see also chapter 6), preceded by data identifier in brackets. Data identifier concatenated with the globally unique package ID (licence plate) in the form of a barcode, encoded according to code 128. On SLCs, the barcode has a height of 15mm. For A5 Labels, it must be minimum 17mm high. There must be a blank area of 6mm to the right and left.
D2	PACKAGE TYPE EXPIRY DATE SHIPMENT DATE PRODUCTION DATE	Package type, qualifying date, parts generation status, batch number. The following applies to PUs and simplified THUs: • If there is an expiry date, it must be printed. The expiry date must be preceded by the letter "E". • If there is no expiry date, and if the shipping date is known at the time of printing the label, the shipping date should be printed. The shipping date must be preceded by the letter "S".

	BATCH ENGINEERING CHANGE ID	If none of the above dates are known or apply, the production date should be printed. The production date must be preceded by the letter "P". Batch number Engineering change ID
E1	Not defined.	May be used by the supplier for internal purposes, e.g. for 2D code. On DIN A5/A6 Labels, the symbol is aligned to the left, with a left margin of 10mm. On labels of size 210mm x 74mm or 210mm x 42mm, the symbol is aligned to the right with a right margin of 10mm. The use of 1D barcodes is not permitted in this field.
E2	Not defined	This field contains customer data that is transmitted in the PCI segment (qualifier 16 or 3) of the customer call-off. PCI+16: Maximum size: 5 lines. For each line, the customer transmits one DE 7102 in the PCI segment. In order to ensure that the code is correct, the DE 7102 must not exceed 25 characters per line. If the customer transmits more characters per line, all characters that exceed the prescribed length are lost when the label is printed. PCI+3: The customer can use all 10 x 35 characters (DE 7102) in the PCI segment. The content is printed as Data Matrix Code.

On 210 x 30mm and 210 x 25mm labels, the fields are completed as follows:

Table 2 - Field contents for SLC 3 and Blister Label

Block	Title	Content(s)
A1	SHIP FROM ID	Ship from unique identifier
A3	DATA MATRIX CODE	Data matrix content – see chapter 7
B3	QUANTITY	Quantity per PU and unit of measure
C	ARTICLE NUMBER	Customer assigned article number The customer's part designation may be printed to the right of the heading

D1	PACKAGE ID	Package ID in plain text, formatted for printing (with spaces between IAC, CID and serial number; see also chapter 6), preceded by data identifier in brackets. Data identifier concatenated with the globally unique package ID (licence plate) in the form of a barcode, encoded according to code 128. On SLCs, the barcode has a height of 15mm. There must be a blank area of 6mm to the right and left.
D2	PACKAGE TYPE EXPIRY DATE SHIPMENT DATE PRODUCTION DATE BATCH ENGINEERING CHANGE ID	Package type, qualifying date, parts generation status, batch number. The following applies to PUs and simplified THUs: • If there is an expiry date, it must be printed. The expiry date must be preceded by the letter "E". • If there is no expiry date, and if the shipping date is known at the time of printing the label, the shipping date should be printed. The shipping date must be preceded by the letter "S". If none of the above dates are known or apply, the production date should be printed. The production date must be preceded by the letter "P". Batch number Engineering change ID

Table 3- EDIFACT units, ANSI units and abbreviations/codes used on labels

UN/EDIFACT	ANSI X12.3	Printed on Label	Signification
PCE / C62	PC	PC	Piece
MTR	MR	M	Meter
CMT	CM	CM	Centimetre
MMT	MM	MM	Millimetre

MTK	SM	M2	Square meter
MTQ	CR	M3	Cubic meter
LTR	C8	L	Litre
LEF	X7	LF	Sheet
PR	PR	PA	Pair
RO	RL	RO	Roll
KGM	KG	KG	Kilogram
GRM	GR	G	Gram
KMT	DK	KM	Kilometre
TNE	MP	T	Ton (metric)

Note: The data identifier used in the Data Matrix Code requires the unit of measure to be coded according to ANSI X12. On the other hand, on the label the unit of measure should be understandable to the human reader. The table above contains the cross references of applicable codes.

Complete labels can look like:



SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554		SHIP TO MODERN CAR INC. LONDON PLANT 72 GREAT PETER STREET UK SW1P 2BN LONDON PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 013 / RAMP 15 / WH4		M	
COUNTRY OF ORIGIN: DE		DELIVERY NOTE NUMBER 12345678			
CUSTOMER PART NUMBER		LEFT MOUNT ALUMINIUM GFS-123-554-765			
PACKAGE-ID (SJ) UN 987654321 000123456 		PACKAGING TYPE 0009PAL BATCH NUMBER CH1234		SHIPMENT DATE S 2016-01-14 NUMBER OF INNER PACKAGES 40	
SUPPLIER AREA  Lieferantendaten Zeile 1 Lieferantendaten Zeile 2 Lieferantendaten Zeile 3		CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5			

Figure 17 - A5 Label for Matched (homogeneous) THU

SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554		SHIP TO MODERN CAR INC. LONDON PLANT 72 GREAT PETER STREET UK SW1P 2BN LONDON PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 013 / RAMP 15 / WH4		MIX 	
COUNTRY OF ORIGIN: DE		DELIVERY NOTE NUMBER 12345678		ETA 2016-01-15/13:30 NET KG 780 GROSS KG 850	
CUSTOMER PART NUMBER					
PACKAGE-ID (5J) UN 987654321 000123458 				PACKAGING TYPE GLT4711 SHIPMENT DATE S 2016-01-14 BATCH NUMBER NUMBER OF INNER PACKAGES 40	
SUPPLIER AREA 		SUPPLIER DATA LINE 1 SUPPLIER DATA LINE 2 SUPPLIER DATA LINE 3		CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5	

Figure 18 - A5 Label for Mixed (non-homogeneous) THU

SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554		SHIP TO MODERN CAR INC. LONDON PLANT 72 GREAT PETER STREET UK SW1P 2BN LONDON PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 013 / RAMP 15 / WH4		S		
COUNTRY OF ORIGIN: DE		DELIVERY NOTE NUMBER 12345678				ETA 2016-01-15/13:30
SUPPLIER NUMBER 987654321		CUSTOMER SPECIFIC ROUTING INFORMATION ROUTE 66 LINE15		QUANTITY (PC) 1000	NET KG 780	GROSS KG 850
CUSTOMER PART NUMBER		LEFT MOUNT ALUMINIUM		GFS-123-554-765		
PACKAGE-ID (1J) UN 987654321 000123457				PACKAGING TYPE KLT4738 BATCH NUMBER CH1234 ENGINEERING CHANGE / HARDWARE REV. / SOFTWARE REV. 2015-11-01		
SUPPLIER AREA 		SUPPLIER DATA LINE 1 SUPPLIER DATA LINE 2 SUPPLIER DATA LINE 3		CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5		

Figure 19 - A5 Label for simplified THU or for PU

SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554		SHIP TO MODERN CAR INC. LONDON PLANT UK SW1P 2BN LONDON PLANT / UNLOADING POINT / STOCK LOCATION 013 / RAMP 15 / WH4		S		PACKAGING TYPE KLT4738		SHIP / EXPIRY / PROD. - DATE P 2016-01-14	
COUNTRY OF ORIGIN DE		DELIVERY NOTE NUMBER 12345678				ETA 2016-01-15/13:30	BATCH NUMBER CH1234		
SUPPLIER NUMBER 987654321		CUSTOMER SPECIFIC ROUTING INFORMATION ROUTE 66 LINE15		QUANTITY PC 1000	GROSS KG 850	PART - / HARDW. - / SOFTW. - REVISION 2015-11-01			
CUSTOMER PART NUMBER		LEFT MOUNT ALUMINIUM		NET KG 780		CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5			
PACKAGE-ID (1J) UN 987654321 000123457		GFS-123-554-765				SUPPLIER DATA LINE 1 SUPPLIER DATA LINE 2 SUPPLIER DATA LINE 3			
									

Figure 20 – SLC format Single label 210 x 74 mm for PU



Figure 21 - SLC2 (tray) format label 210 x 41 mm for PU

Remark: To enhance the readability of the DMC the separator lines left of block A2 and on top of block E1/E2 will not be printed.



Figure 22 – SLC3 (tray) format label 210 x 30 mm for PU



Figure 23 - Blister Label 150 x 25 mm for PU

SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554 C. OF ORIGIN: DE		SHIP TO MODERN CAR INC. 72 GREAT PETER STREET UK SW1P 2BN LONDON PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 013/RAMP 15/WH4		S			
DELIVERY NOTE NUMBER 12345678		CUSTOMER SPECIFIC ROUTING INFORMATION ROUTE 66 LINE15		ETA 2016-01-15/13:30			
SUPPLIER NUMBER 987654321				QUANTITY (PC) 1000		GROSS KG 850 NET KG 780	
CUSTOMER PART NUMBER GFS-123-554-765		LEFT MOUNT ALUMINIUM					
PACKAGE-ID (1J) UN 987654321 000123457		PACKAGING TYPE KLT4738		PRODUCTION DATE P 2016-01-14			
		BATCH NUMBER CH1234		ENGINEERING / HARDWARE REV. / SOFTWARE REV. 2015-11-01			
		SUPPLIER DATA LINE 1 SUPPLIER DATA LINE 2 SUPPLIER DATA LINE 3		CUSTOMER DATA LINE 1 CUSTOMER DATA LINE 2 CUSTOMER DATA LINE 3 CUSTOMER DATA LINE 4 CUSTOMER DATA LINE 5			

Figure 24 - Single Label US 6x4"

7. IDENTIFICATION OF PACKAGING UNITS AND TRANSPORT UNITS

In the complex and often multi-stage logistics processes that prevail in the automotive industry, correct identification of PUs and THUs is crucial for the efficient control of the various process steps. It is therefore necessary to devise a global identification system that covers all PUs and THUs.

The automotive industry has generally adopted identifiers based on ISO/IEC 15459.

A package identifier hereafter referred to as the package ID, and the data identifier (DI) have the following structure:

Table 4 - General structure of package ID

DI	IAC	CIN	SN
Data Identifier	Issuing Agency Code	Company Identification Number	Serial Number
XX	YY	Variable	Fixed
2 char (an)	2 char (an)	6 - 9 char (an)	9 char (n)

The data identifier (DI) is a classifying characteristic and precedes the actual barcode content. The data identifier classifies the packages into Single, Matched (Homogeneous), or Mixed (Non-Homogeneous), see Table 6. The data identifier forms part of the barcode and is displayed on the label in brackets, preceding the package ID.

Each package ID begins with an Issuing Agency Code (IAC). This is the code of the agency or organisation that has issued the ID.

It is essential to use a globally unique numbering system. Examples of such numbering systems include the OSCAR code issued by Odette and the DUNS number issued by Dun & Bradstreet.

Table 5 Example of a package ID using an Odette ID to identify the issuer

DI	IAC	CIN	SN
Data Identifier	Issuing Agency Code	Company Identification Number	Serial Number
1J	OD	Fixed	Fixed
2 char (an)	2 char (an)	6 char (an)	9 char (n)

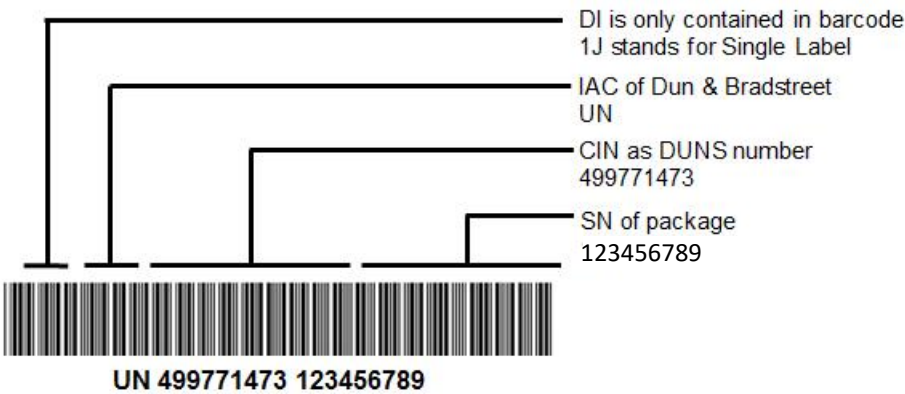
The Odette OSCAR code uses 6 alphanumeric characters.

Data Identifier		Odette		OSCAR Code from OdetteSecure						Serial Number								
1	J	O	D	A	0	1	2	1	5	1	2	3	4	5	6	7	8	9

The serial number of the package is generated by the despatcher of the goods. To ensure compatibility with the legacy systems, it is highly recommended that the serial number is numeric and has exactly 9 digits (with added leading zeros, where required). Since the package identifier uniquely identifies this package for extended periods of time, serial numbers should be assigned consecutively using all available numbers from 000000001 to 999999999.

This Recommendation does not restrict the generator of the ID in choosing an ID, provided that the package ID is a globally unique identifier.





Example of package ID

The total length of the package identification number, including DI, must not exceed 22 digits.

Table 6 - Admissible data identifiers

J	Unique package ID of a bundle in the empty packaging process (currently under review)
1J	Unique licence plate number assigned to a THU, which is the lowest package level, packed with like items
3J	Unique licence plate number - JIS handling unit with trays
4J	Unique package ID of JIS loading unit with 1...n JIS packages
5J	Unique licence plate number assigned to a THU holding PUs packed with unlike items.
6J	Unique licence plate number assigned to a THU holding PUs packed with like items.

8. BARCODE, 2D CODE AND OPTIONAL RFID TAG

The structure of the barcode and its conformity with the applicable standard must be verified with an IT tool. The barcode quality must be verified as follows: for code 128 according to ISO/IEC 15416; for 2D codes according to ISO/IEC 15415. These standards include test specification to determine the quality of the barcode.

To validate the barcode, the measured print quality must be minimum grade 3.0 (B). This is to ensure that the print quality does not drop below 1.5 (C) at the point of scanning (measured with an instrument aperture of 0.254mm (0.01 inch) and a light wavelength of 660nm +- 10nm).

7.1 1D BARCODE

The barcode is a code 128 barcode. It contains the package ID (licence plate). In readable versions, the data identifier (1J, 5J, 6J) is omitted. Otherwise, the barcode corresponds to the readable version of the package ID. Spaces are only included to make the printed text more readable but are omitted in code 128.

Module width "X" for one element in code 128: X = minimum 0.51mm (20mil) and maximum 0.64mm (25mil). The blank area to the left and right is minimum 10 x module size.

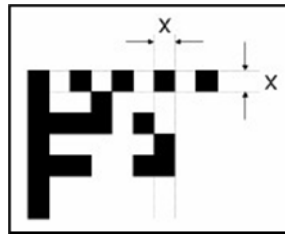
The minimum height of code 128 for SLC 1, A6 and 6" x 4" Labels is 15mm. For A5 Labels, the minimum height is 17mm. For A5 and Half-Letter Labels, however, we recommend that the barcode should be 20mm high.

The minimum distance to the dividing line or printed letters above the barcode is 1mm.

7.2 2D DATA MATRIX SYMBOL

7.2.1 SYMBOL SIZE

The data matrix code is a Data Matrix ECC 200 code (see also ISO/IEC 16022). The nominal height/width of the modules (x) is 0.4mm and should not exceed 0.5mm (see also Module dimensions for code symbol module (x)).



Module dimensions for code symbol module (x)

The blank area around the Data Matrix code must correspond to minimum twice the module widths at all sides of the code.

Based on the available area (A6 and SLC Labels: 20mm x 20mm) and the minimum size of the modules (0.4mm), the matrix consists of 52 x 52 modules. The maximum size of the Data Matrix symbol is thus 304 characters (including control characters).

7.2.2 CHARACTER SETS

1. Characters 0..127 are defined in accordance with ISO/IEC 646, with G0 Set and C0 Set. In C0 Set, characters 28..31 are modified and represent FS, GS, RS and US. Characters 32..127 correspond to the EDIFACT UNOB character set.
2. Characters 128..255 conform to ISO 8859-1 (also known as extended ASCII). This character set corresponds to that defined by EDIFACT UNOC.

7.2.3 MESSAGE STRUCTURE ACCORDING TO ISO 15434

Each Data Matrix symbol contains one message whose structure is based on ISO/IEC 15434 using format Factor 06 identifying the data fields with data identifiers. Each symbol, according to ISO/IEC 15434 starts with a control sequence also known as preamble " $[] >^R_s 06^G_s$ " ⁵ preceding the data and post-amble " $^R_s E_{OT}$." at the end of the data string.

As an alternative to "Macro 06", the above control characters might be used. The separator between the data elements preceded by individual ASC data identifiers (DIs) is the Group Separator " G_s ".

For the encoding of data in Data Matrix symbols in the form of ISO 15434 messages, it is necessary to include a message envelope consisting of a header and a trailer between which the user data is placed.

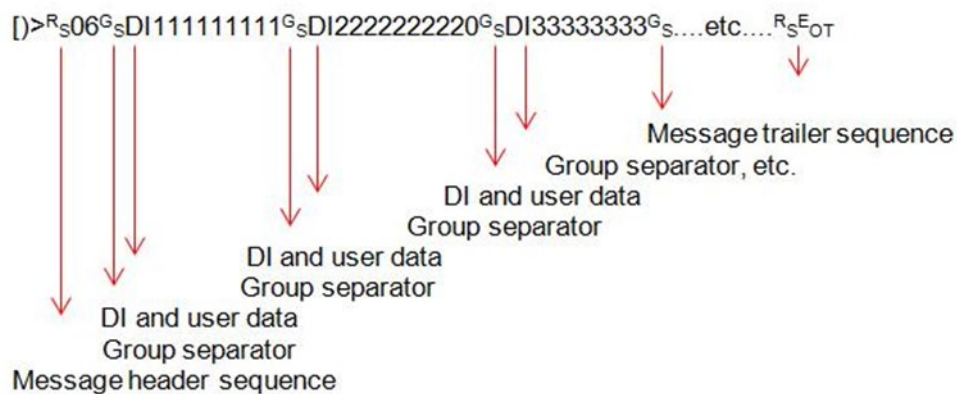
The message has the following structure:

⁵ G_s (hex 1D / dec 29) R_s (hex 1E / dec 30) E_{OT} (hex 04 / dec 04)

- Message header: $[] >^R_s$ (string, hex 5B 29 3E 1E / dec 91 41 62 30)
- Format header: 06 (for structure with DI)
- Group Separator: G_s (hex 1D / dec 29)
- DI with user data
- Group separator
- DI with user data
- Group separator
- DI with user data
- Group separator
-
- etc.
- Message trailer: R_s (hex 1E / dec 30)
- Record separator: E_{OT} (hex 04 / dec 04)

Example of message,

with dummy user data "11111111", "22222222", "333333", etc.:



7.2.4 MESSAGE STRUCTURE ACCORDING TO AFNOR NF Z 63-400 / DIN 16598

Many modern handheld devices are able to scan various 2D symbols using features integrated in the operating system or provided by commonly available apps. They simulate, however, a keyboard input. Consequently, the non-printable characters specified by ISO 15434 are not transmitted to the processing application. To overcome this problem, a syntax according to AFNOR NF Z 63-400 / DIN 16598 can be used for the DMC content.

The syntax is indicated by a leading “.” (dot) as syntax flag character, followed by the first Data Identifier and its associated data. The following data fields to be included in the data stream are preceded by the separator character “^” (circumflex accent). Again, a Data Identifier qualifies the field followed by the relevant data. The last character or digit of the data terminates the data stream, there is no EOT, CR or LF as terminator character necessary.

The above shown example would be encoded as follows:

.DI11111111^DI22222222^DI33333333

7.2.5 USER DATA FOR CODING IN DATA MATRIX

The following user data must be included in the Data Matrix Code:
(For further details, please refer to Appendix C - Mapping of Data Fields with EDI messages).

Table 7 - User data for Data Matrix code in field A3

User data	Equivalent in Global DESADV	DI	Comment	Sample data
Identification of specification	None	12P	Identification of specification (Identifies the syntax according to this document. GTL3 is a fixed content until a new specification requires another fixed ID). The fixed content of GTL3 must not be used by the supplier to identify the 2D symbol in the supplier area E1!	12PGTL3
Specification version	None	9K	Specification version (Identifies the revision of this specification. 01 is a fixed content until a new version of this document with impact on the syntax is published).	9K01

GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

User data	Equivalent in Global DESADV	DI	Comment	Sample data
Ship From unique ID	SG2/NAD+SF DE 3039	3L		3L998877665
Country of origin	SG17/ALI DE 3239	4L	Country of origin, in ISO 3166 2 alpha code	4LDE
Ship To unique ID	NAD+ST DE 3039	8V		8V0110120131
Unloading point ID	NAD+ST/LOC+11 DE 3225	2L		2L0815-12345
Internal destination 1	NAD+ST/LOC+7 or 159 DE 3225 depending on customer's specification	20L		20L12315
Internal destination 2 (Place of consumption)	SG20/LOC+159 or 7 DE 3225 depending on customer's specification	22L		22LB3P234
Supplier number	NAD+SF DE 3039 or RFF+ADE DE 1154 under NAD+SF	V		V123456789012



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

User data	Equivalent in Global DESADV	DI	Comment	Sample data
(Given by customer)	depending on customer's specification			
Despatch Advice number/ Delivery Note number	BGM 1004/SG18/RFF+AAU DE 1154	2S		2S123456789012
Customer specific routing	SG18/RFF+AMU DE 1154	23L		23L050115- 1420RNP
Expected time of arrival	DTM+2/132 DE 2380	8D	8D followed by date and time in format CCYYMMDDHHMM and qualifier DE 2005 qualifier value in corresponding DTM segment: 2 (agreed delivery date and time) or 132 (estimated delivery date). Depending on the delivery scenario, the DESADV contains the one or other of the dates.	8D2015122214302



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

User data	Equivalent in Global DESADV	DI	Comment	Sample data
Quantity	M Label: no source in the DESADV. Must be taken from internal source SG11/QTY+52 DE 6060 (S Label)	Q	Data identifier, followed by quantity.	Q250
Measure unit	M Label: no source in the DESADV. Must be taken from internal source SG11/QTY+52 DE 6411 (S Label)	3Q	Measure unit of the quantity, coded according to ANSI X12.3 DE 355 Unit of Measure Code – see Table 2.	3QPC
Gross weight	SG16/MEA+AAZ+AAB DE 6314 transport unit SG11/MEA+AAY+G DE 6314 package unit	2Q		2Q9999
Article number	SG17/LIN DE 7140	P	Customer part number	P123456789



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

User data	Equivalent in Global DESADV	DI	Comment	Sample data
Package ID (Licence Plate)	SG15/GIN+ML DE 7402 (2)	J/1J/ 5J/6J	DI + IAC + CID + SN The serial number must be 9 numerical digits For DI - refer to Table 6	1JUN98765432112 3456789
Package type	SG11/PAC DE 7065	B		B0009PAL
Expiry date	SG14/DTM+36 DE 2380	14D	Format CCYYMMDDHHMM	14D201512312359
Production / manufacturing date	SG14/DTM+94 DE 2380	16D	Format CCYYMMDD	16D20151224
Batch number	SG14/GIR+1 DE 7402 / DE 7405 = BX	1T		1T1234567890123 456
Hardware revision	SG17/PIA+1 DE 7143 = BT	20P		20PH12345



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

User data	Equivalent in Global DESADV	DI	Comment	Sample data
Software revision	SG17/PIA+1 DE 7143 = AG	21P		21PS237.1
Engineering change ID	SG17/PIA+1 DE 7143 = EC	2P		2PEC123



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

For MAT-label information the following data can be included (however, the total capacity of the DMC of 300 characters must not be exceeded):

Additional part number related information	PCI+17 DE 7102	23P	Format an..30	23PWerkzeug1, Nest 2
RoHS-Guideline	PIA+1 DE 7140 DE7143=X01	30P	Format an..10	30P2029/65/EU
Manufacturer (may differ from supplier)	SG17/NAD+MF DE3039 DE 3055=16	12V	Manufacturer's D-U-N-S-Number Format n9	12V987654321
Part number, assigned by manufacturer	PIA+1 DE 7140 DE7143=MF	1P	Format an..35	1PSL105C103MAA-S
Indicator, if the container is the smallest material package	SG10/SG13/GS14.GIR+7 DE 7402 = 1 for yes, 2 for no DE 7405 = AM	33T	Y = yes, the container is the smallest material package	33TY



			N = no, within the container there are even smaller material packages, which are marked with separate. MAT labels.	
--	--	--	--	--

If the customer specific data in block E2 is to be printed as a 2D DMC, the symbol is generated as follows:

User data	Equivalent in DESADV	DI	Comment	Sample data
Identification of the 2D barcode	None	12P	ID - CUS for customer specific data. The fixed content CUS must not be used by the supplier to identify the 2D symbol in the supplier area E1!	12PCUS
Data line 1	SG13/PCI+3 DE 7102#1	11Z		11ZABCDEFG
Data line 2	SG13/PCI+3 DE 7102#2	12Z		12Z1234567890
...	...			...



GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

Data line 10	SG13/PCI+3 DE 7102#10	20Z		20ZXYZ12345
--------------	-----------------------	-----	--	-------------

Also for this symbol the syntax is identified with the preamble $[] >^R_s 06^G_s$ according to ISO/IEC 15434 with format factor 06.



7.3 RFID TAGS USED IN CONJUNCTION WITH SMART LABELS

It is expected that the package ID (licence plate) will not only be stored in certain processes where smart labels are used but will also be saved on RFID transponders to facilitate radio frequency identification.

The main technical requirements for the use of RFID in such cases are described below, based on the general recommendation for the use of RFID in the automotive industry (Odette LR01): RFID in Supply Chain Container Management V2.1.

7.3.1 FUNCTION OF PASSIVE RFID TRANSPONDERS

According to Odette LR01 passive RFID transponders are particularly suitable for the automated identification of packages. Their maintenance and operating costs are low, as there is no need to change the batteries, etc. Suitably sturdy transponders generally last for the entire life cycle of the return container.

7.3.2 AIR INTERFACE AND FREQUENCY RANGE

The design of the air interface conforms to ISO/IEC 18000-63/ EPC class 1 Generation 2. For more details regarding valid frequency ranges and the use of passive RFID transponders in the automotive industry, please refer Odette LR01.

7.3.3 STRUCTURE AND SIZE OF MEMORY BANKS

Passive RFID transponder conforming to ISO/IEC 18000-63/EPC Class 1 Generation 2 feature four logical memory banks (MB):

- MB 00 "RESERVED" – Kill- and Access-Password
- MB 01 "UII" – Unique Item Identifier
- MB 10 "TID" – Tag Identification
- MB 11 "USER" – User Memory (UM)

The unique package ID is saved in memory bank MB 01. After writing, the memory bank is protected with a password-enabled lock or perma-lock command to prevent interference with the ID.

The precise size of the memory banks depends on the type of chip in the RFID transponder. The transponder type and the chip must be chosen based on the actual data structure to be saved on the RFID transponder (see also chapter 7.3.4). In addition, the method of coding and the volume of data must be taken into account. In the automotive industry, the most common data structure for the unique item identifier (UII) is maximum 22 alphanumerical (an) digits.

The principal rules for unique item identification based on the relevant ISO-IEC standards are described in detail in Odette LR01. In this document, we focus exclusively on codes that are typically used for the identification of packages. The globally unique package ID is saved in memory bank MB 01. The package ID is coded in the form of a 6-bit character. For package IDs with a length of 22 digits conforming to this recommendation, 224 bits (net) must be available on the transponder in memory bank MB 01. In the context of package identification according to ISO/IEC, the following Application Family Identifiers (AFIs) have been defined:

Table 8

AFI	Standard
A2	ISO 17365 – Supply chain applications of RFID – Transport Units
A7	ISO 17365 – Supply chain applications of RFID – Transport Units (hazardous materials)

7.3.4 EXAMPLE OF CODE ACCORDING TO ISO 17367

Example: (1J) UN 499774731 123456789

Text string: 1JUN499774731123456789

The text string is 6-bit encoded (see table xyz), and padding bits are added until the total number of UII bytes is an even number. The UII length in the PC block (header) can thus be recorded in 16-bit words (2 bytes).

Reference ID (plain text)
1JUN499774731123456789

Compaction 6-bit code including <EoT>					
110001	001010	010101	001110	110100	111001
111001	110111	110111	110100	110111	110011
110001	110001	110010	110011	110100	110101
110110	110111	111000	111001	100001	

Split into 8-bit fragments including padding bits					
11000100	10100101	01001110	11010011	10011110	01110111
11011111	01001101	11110011	11000111	00011100	10110011
11010011	01011101	10110111	11100011	10011000	01100000

Hex code					
C4	A5	4E	D3	9E	77
DF	4D	F3	C7	1C	B3
D3	5D	B7	E3	98	60

PC data in MB01 (see chapter 7.3.3)

UII-length of 16-bit words:	0b	01001	(18 bytes → #9 words)
Valid User Memory:	0b	0	(no user memory)
XPC:	0b	0	(not used – reserved)
EPC or ISO code:	0b	1	(ISO)
All PC bits:	0b	01001001	(hex 49)

Protocol Control	AFI
49	A2

Complete content of MB 01 (including header):

P C	A F I	UII Reference ID																	
49	A2	C4	A5	4E	D3	9E	77	DF	4D	F3	C7	1C	B3	D3	5D	B7	E3	98	60

Table 9 - Coding table 6-bit character encoding according to ISO 17367 Table C.1

Character	Binary value	Character	Binary value	Character	Binary value	Character	Binary value
Space	100000	0	110000	@	000000	P	010000
<EoT>	100001	1	110001	A	000001	Q	010001
<Reserved>	100010	2	110010	B	000010	R	010010
<FS>	100011	3	110011	C	000011	S	010011
<US>	100100	4	110100	D	000100	T	010100
<Reserved>	100101	5	110101	E	000101	U	010101
<Reserved>	100110	6	110110	F	000110	V	010110
<Reserved>	100111	7	110111	G	000111	W	010111
(	101000	8	111000	H	001000	X	011000
)	101001	9	111001	I	001001	Y	011001
*	101010	:	111010	J	001010	Z	011010
+	101011	;	111011	K	001011	[	011011
,	101100	<	111100	L	001100	\	011100
-	101101	=	111101	M	001101	]	011101
.	101110	>	111110	N	001110	<GS>	011110
/	101111	?	111111	O	001111	<RS>	011111

Normally, parts are produced prior to receipt of a binding call-off so not all information necessary for shipping is available at the time of production. Suppliers therefore often need to store the articles in PUs bearing labels which need to be changed upon receipt of the call-off. Apart from the inefficiency of this process, it can also lead to errors. It is therefore very useful to identify cases where these original labels may be left in place as transport labels.

In principle we can distinguish between 3 cases:

Case 1	Production for single customer and delivery to single recipient
Case 2	Production for single customer and delivery to multiple recipients with identical packaging instructions and article number
Case 3	Production for multiple customers

In Cases 1 and 2, it is possible to use PU labels on which certain information is omitted, provided that product tracing remains possible and parts can be blocked from being used in production at the customer site, should there be problems in relation to their quality. For such cases, it is recommended to use batch numbers.

Case 1:

The supplier produces the part for a single goods recipient. The customer-side logistics references (unloading point, storage location, point of use (if used)) are always the same and known.

In this case, it may be possible to leave a Single Label in place as a transport label on the PUs.

Requirements at the customer side:

- the receipt of the incoming goods and their storage is controlled on the basis of the information on the THU Label;
- the parts can be fully traced internally by means of the package ID and/or the batch number

In this case, the following information can be omitted on the Single Labels for the PU:

- Delivery note number

Example of PPU label in Case 1:

GLOBAL TRANSPORT LABEL – EUROPEAN PROFILE

DOC REF No: LL08

Version No: 2.3

Date: December 2024

SHIP FROM SUPPLIER.COMPANY STREET CITY COUNTRY-ZIP.CODE ID: 12345678 COUNTRY OF ORIGIN DE DELIVERY NOTE NUMBER		SHIP TO CUSTOMER.COMPANY PLANT XY COUNTRY ZIP.CODE CITY PLANT / UNLOADING POINT / STOCK LOCATION PLANT / UNLOADING / STORAGE CUSTOMER SPECIFIC ROUTING INFORMATION ROUTE 66 LINE 15		S 	PACKAGING TYPE KLT4147	SHIP / EXPIRY / PROD. - DATE P 2016-05-10
SUPPLIER NUMBER 12345678		ETA QUANTITY PC 24			BATCH NUMBER A12345	PART- / HARDW.- /SOFTW.-REVISION INDEX A
CUSTOMER PART NUMBER 1234567890123 - 001		PART NAME				
PACKAGE-ID (1J) UN 123456789 554433222 		A2C1234567890				

Case 2:

If the part number and the packaging instructions are identical for all recipients of the goods, it may be possible to leave a Single Label in place as a transport label on the PUs.

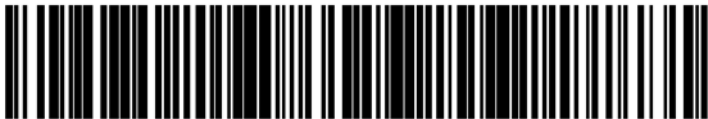
Requirements at the customer side:

- the receipt of the incoming goods and their storage is controlled on the basis of the information on the THU Label;
- the customer does not require routing ID / point of consumption information;
- the supplier number is the same for all recipients of the parts;
- the parts can be fully traced internally by means of the package ID and/or the batch number.

In this case, the following information can be omitted on the Single Labels for the PU:

- Goods recipient
- Delivery note number
- Routing/point of consumption information

Example of PU label in Case 2:

SHIP FROM LIEFERANT AG WERK BERLIN BERLIN DE-10117 ID: 887766554		SHIP TO GB PLANT / UNLOADING POINT / CUSTOMER INTERNAL DESTINATION		S 	
COUNTRY OF ORIGIN: DE		DELIVERY NOTE NUMBER		CUSTOMER SPECIFIC ROUTING INFORMATION	
SUPPLIER NUMBER 987654321		ETA		QUANTITY (ST)	NET KG GROSS KG
				25	11,80 14
CUSTOMER PART NUMBER		RIGHT MOUNT ALUMINIUM			
		GFS-123-554-765			
PACKAGE-ID (1.0)		UN 987654321 000123476		PACKAGING TYPE PRODUCTION DATE	
				6280RL P 2016-01-14	
				BATCH NUMBER CH1234	
				ENGINEERING CHANGE / HARDWARE REV. / SOFTWARE REV. 2015-11-01	
SUPPLIER AREA A1B2C3D4E5F6G7 					

Case 3:

In all scenarios that do not meet the requirements for Cases 1 and 2, the label on the PU must be printed and applied as part of the shipping preparation process. At this point, all necessary information is available and can be printed on the label.

The use of Single Labels (Case 1 or 2) on inner packages must be agreed bilaterally between the customer and the supplier.

Cross-dock shipments

There are two types of cross-dock processes:

1. The unloading point (and thus the location of performance for the supplier) is the factory of the recipient of the goods (see also figure 2). If necessary, the first cross-dock along the transport chain (consolidation point) is identified as a cross-docking point in order to provide the necessary details to the initial goods carrier.
2. The unloading point is the (first) cross-docking point. Subsequently, the goods are forwarded from the cross-dock to the actual recipient and handed over to the customer/recipient of the goods.

In the first case, the parties have agreed binding routes between the consolidation centre and the subsequent routes. If necessary, the route needs to be specified in field E2 on the label in order to assist the partners in compiling the consignment.

In the second case, new consignments are produced for shipping from the cross-dock to the individual recipients of the goods. The necessary routing information can again be included in field E2.

In both cases, the customer decides on the scope and detail of the information to be included in the PCI segment of the call-offs sent to the supplier.

8 LABEL FOR SHIPMENTS OF EMPTY PACKAGING

The increasing complexity of transport and delivery processes has led to a need for more transparency in the empty packaging supply chain also. Unique identification of transport units in this area can contribute to improved processes.

The Odette project group dealing with the management of empty packaging has developed an extension to the specification of the GTL for this purpose. In principle, labels for empty packaging follow the same rules as described earlier in this document for material deliveries with the following deviations:

- The label type is marked with an E (for empty)
- The quantity field contain the volume of the THU in m3.
- As part number – if used at all – is the part number of the empty packaging bundle stated.
- The data identifier is J.
- In section E1 the sender of the empty packaging can give additional information for internal process control, such as the bill of material of the bundle.

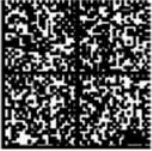
SHIP FROM RENAULT SANDOUVILLE LE HAVRE FR-66169 ID: COUNTRY OF ORIGIN: FR DELIVERY NOTE NUMBER 87654321		SHIP TO SUPPLIER XYZ Industry park 123 FR SANDOUVILLE LE HAVRE PLANT UNLOADING POINT / CUSTOMER INTERNAL DESTINATION 87654321 / GATE 15 / CUSTOMER SPECIFIC ROUTING INFORMATION CARRIER ABCD		E ETA 2019-06-18 QUANTITY 1.5 NET KG GROSS KG 70	
CUSTOMER PART NUMBER SBD 123					
PACKAGE ID (4) OD A12301 273000944 			PACKAGING TYPE SHIPMENT DATE S 2019-06-18 BATCH NUMBER		
SUPPLIER AREA  Supplier Number: 123446661 Pallet xyz 1 Lid ABC 40 SLC 6240					

Figure 25: Sample empty packaging label

9 APPENDICES

(File must be opened with Adobe Acrobat to access attachments)

A. TRANSLATION OF DATA AREA TITLES

Separate document attached.

B. DATA IDENTIFIERS FOR THE LICENCE PLATE

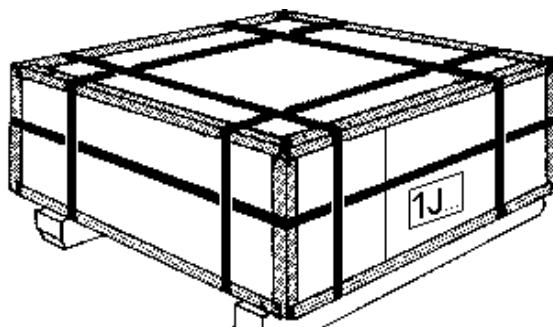
Data identifier ‘1J’

The Licence Plate number that uniquely identifies the lowest level of identification is data identifier **1J**. That is, **1J** identifies the unbreakable unit, e.g., cartons of articles, on their own or constrained with other ones to form a transport unit.

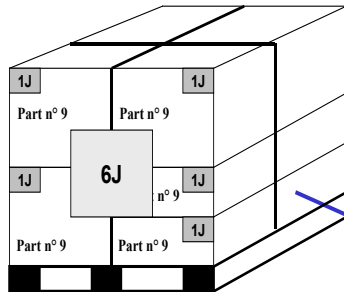
Data identifiers 6J, and 5J

The Licence plate number which uniquely identifies a THU containing multiple PUs of **like parts** is data identifier **6J**. For example, such a transport unit could be a pallet containing two or more 1J identified PUs.

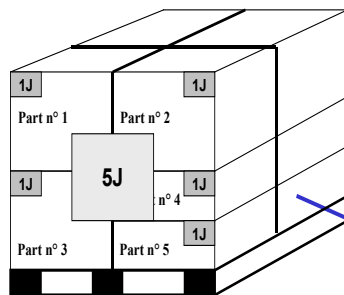
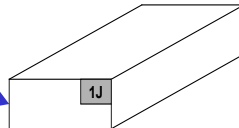
The Licence plate number that uniquely identifies a THU containing multiple PUs of **unlike parts** is data identifier **5J**. For example, such a transport unit could be a pallet containing two or more 1J identified PUs.



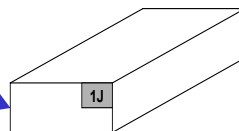
Data Identifier '1J' Individual Load



Data Identifier '6J' THU label for a matched (homogeneous) load



Data Identifier '5J' THU label for a mixed (non-homogeneous) load



C. MAPPING OF DATA FIELDS WITH EDI MESSAGES

Separate document attached