

Integrated Guideline Part 4c:

# Labelling of Logistic Units

Supply Chain Management for Fresh Fruit & Vegetables



in collaboration with



## Contributors

Name	Contributors
Heide Buhl	GS1 Germany
Radbout Buijs	Nature´s Pride
Emanuela Casalini	GS1 Italy
Ferran Domènech	GS1 Spain
Johan den Engelse	Frug I Com
Annett Frisch	Internationale Fruchtimport Gesellschaft Weichert
Klaus Förderer	GS1 Germany
Harry Geelen	Geelen Data Management
Heinz Graf	GS1 Switzerland
Peter Jönsson	GS1 Sweden
Carolin Prinz	REWE Group Buying
Mikko Luokkamäki	GS1 Finland
Sarina Pielaat	GS1 Netherlands
Reinier Prenger	GS1 Netherlands
Xavier Pujol	GS1 Spain
Tom Quets	CAPESPAN Continent NV
Norbert Röhl	EDEKA ZENTRALE AG & Co. KG
Pere Rosell	GS1 Spain
Harrij Schmeitz	FrugICom
Angela Schillings-Schmitz	GS1 Germany
Gabriel Sobrino	GS1 Netherlands
Frederieke Vlieg	GS1 Netherlands
Christoph Waltert	SanLucar Fruit
Quets, Tom	CAPESPAN Continent NV
Röhl, Norbert	EDEKA ZENTRALE AG & Co. KG
Rosell, Pere	GS1 Spain
Rowe, Greg	GS1 Global Office
Schmeitz, Harrij	Frug I Com
Steins, Marc-Oliver	GS1 Germany
Waltert, Christoph	SanLucar Fruit S.L.
Wockenfuß, Oliver-Martin	1WorldSync GmbH

## Partners involved in the development of this document

### GS1 in Europe

GS1 in Europe is a collaboration of 47 GS1 member organisations and leads the creation and implementation of harmonised, user-driven solutions for improving the supply and demand chain of European companies. Further information on GS1 in Europe and the activities in the area of fruit and vegetables can be obtained from [www.gs1.eu](http://www.gs1.eu).

### Frug I Com (Foundation Platform Fresh Chain Information)

Frug I Com is a unique collaboration of the Dutch Potato, Fruit and Vegetable Supply Chain. The ultimate goal is to establish electronic exchange of information between the participants in the Potato, Fruit and Vegetable Supply Chain by means of uniform labelling using electronic messages. Working with information standards allows Fruit and Vegetable Supply Chain companies to make optimum use of the information available in the supply chain and to apply it to order processing, tracing of products, optimising logistics and quality improvement. The result? A faster and more efficient supply chain which is less error-prone. Further information see [www.frugicom.nl](http://www.frugicom.nl).

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# Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>5</b>
1.1.	Purpose and Scope of this Guideline	5
1.1.1.	Purpose	5
1.1.2.	In Scope	5
1.1.3.	Out of Scope	5
1.2.	Who can use this Document?	6
1.3.	General Guidance	6
1.4.	Key Terms	7
<b>2.</b>	<b>Relevant GS1 standards and Principles</b>	<b>8</b>
2.1.	GS1 Standard for Logistic Unit Identification (SSCC)	8
2.2.	GS1 Barcode in Logistics Applications	9
2.3.	GS1 Application Identifiers	9
2.4.	Barcode Quality	10
<b>3.</b>	<b>Logistic Units</b>	<b>11</b>
3.1.	Three Types of Logistic Units Transport Labels	11
3.2.	Label Rules for Logistic Units	11
3.2.1.	Lay-out of the Label	11
3.2.2.	Barcode Orientation	12
3.2.3.	Human Readable Interpretation (HRI)	12
3.2.4.	Non-Human Readable Text	12
3.2.5.	Label Size	12
3.2.6.	Barcode Measurements in General Distribution	12
3.2.7.	Label Placement (Where to put the label) and Number of labels	13
3.3.	Specific Label Scenarios for Logistic Units	15
3.3.1.	Label for Logistic Unit which contains Homogenous Trade Items	16
3.3.2.	Label for Logistic Unit which is also a Trade Unit (1:1)	17
3.3.3.	Label for Logistic Unit which consists of Different Trade Units (comprised for transport purposes only – e.g. mixed pallet)	18
3.3.4.	Bad examples	18
<b>4.</b>	<b>Resources</b>	<b>19</b>
<b>5.</b>	<b>Annex</b>	<b>20</b>
5.1.	Cross Reference of Terms	20
5.2.	Logistics Label Verification	20
5.3.	Logistics Label Symbol and Text Sizes - Examples	23

# 1. Introduction

It is usual business for the global fruit and vegetable sector to provide fresh products every day. Consumers value the high quality and wide range of fruit and vegetables on the shelves of their retail stores; however supply and demand can change easily in the short term based on factors such as: climate, season, weather and plant health issues. This makes it very important for fruit and vegetable retailers to be able to react rapidly to get the right produce in their stores.

Efficient order and delivery processes, flexibility and traceability: the demands of the fruit and vegetables business have constantly increased over the last years. By means of unique product and transport unit identification, which can be achieved by using the GS1 standards, these demands can be fulfilled by small, medium and large size companies.

## 1.1. Purpose and Scope of this Guideline

The main topic of this guideline is the labelling of logistic units. A logistic unit is an item of any composition established for transport and / or storage which needs to be managed throughout the supply chain.

The GS1 Logistics Label allows users to identify logistic units uniquely so that they can be tracked and traced from the sender to the consignee. The only mandatory requirement is that each logistic unit must be identified with a unique serial number, the Serial Shipping Container Code (SSCC). Scanning the SSCC at every interface enhances visibility and enables efficient processes.

This document is based on the GS1 Logistics Label Guideline which was made with the goal to be applied across all target markets. In order to assist the processes in the fruit & vegetable sector and to ensure regulatory or business compliance within this specific market this guideline highlights industry specific requirements in terms of what data is exactly needed on the label and what GS1 modules are used to encode these. If users need more generic background information this can be obtained from the GS1 Logistics Label Guideline (<https://www.gs1.org/transport-management>).

### 1.1.1. Purpose

The purpose of this document is to provide companies with clear guidance on labelling of logistic units in the fresh fruit and vegetables sector in order to support current and future market requirements.

### 1.1.2. In Scope

In scope is the labelling of fresh fruit and vegetables at the logistic unit level. Labelling of consumer units (each) and trade units (boxes or pallets) are addressed in other parts. These terms are explained in Section 1.4 below and cross-referenced with GS1 terms and fruit and vegetable sector terms in the annex section of this guideline.

### 1.1.3. Out of Scope

Variable measure logistic units are out of scope as they are rather the exception in the fruit & vegetable sector. If the need arises to apply a label with data for variable measure transport units please contact your local GS1 Member Organization ([www.gs1.org](http://www.gs1.org)).

## 1.2. Who can use this Document?

Any party that is requested to apply and process label data for fresh fruit and vegetables in the produce supply chain will benefit from this practical guideline. They should understand business opportunities and requirements needed to implement standardized labels using the GS1 standards for identification and data capture. This document is of special interest for packers as they are responsible for labelling and label contents.

## 1.3. General Guidance

This label is a typical example of a logistics label. It always contains the SSCC (Serial Shipping Container Code) as primary identification number for the transport unit (for more details please see chapter 2.1). The content on the logistics label includes GS1-128 barcode symbols and human readable interpretation (HRI).

<b>Sender:</b> GS1 Germany <u>Maarweg 133</u> 50825 Köln	<b>Consignee:</b> GS1 Spain Ronda General <u>Mitre 10</u> E-08017 Barcelona
<b>SSCC</b>	3 4012345 123456789 5
<b>GTIN</b>	40 12345 33333 6
<b>Lot No.</b>	123456
 (01)04012345333336(10)123456	
 (00)340123451234567895	

- Human Readable Interpretation (HRI) is the information below or beside a barcode which is encoded in the barcode
- Non-HRI Text is all other text on package, label or item.
- For detailed measurement rules please see chapter 3.
- The barcodes on the GS1 Logistics Label conform to the GS1-128 standard. The GS1-128 standard is a special version or subset of the Code 128 standard. GS1-128 barcodes can hold GS1 identification keys (GTIN, SSCC, GLN) and attribute data (batch/lot number, expiry date, etc.).

## 1.4. Key Terms

Some relevant terms used in this guideline are explained below in order to facilitate a better understanding of the guideline.

Term	Explanation
Consumer Unit (Each)	This term is used in this guideline for the labelling of individual consumer level fresh fruit and vegetables items at retail/PoS. This could be a loose produce item or packaged item.
Fixed Measure Trade Item	A unit (Each) always sold in the same pre-defined measure such as size, weight, contents (e.g. a punnet with 6 round tomatoes or a box with 6 packages á 100 g Chilli).
Human Readable Interpretation (HRI)	Human readable text located below a barcode symbol representing the characters encoded in the barcode.
Homogenous Logistic Unit	A homogeneous logistic unit contains one type of trade item. All the items are the same and are identified with the same GTIN.
Global Trade Item Number (GTIN)	The GS1 Identification Key used to uniquely identify trade items. The GTIN includes a company prefix and the item identification which is encoded into the barcode for automatic identification and data capture when scanned.
GS1 Application Identifier	The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.
Logistic Unit / Transport Unit	This term is used in this guideline for the labelling of fresh fruit and vegetables for transportation and storage in the produce supply chain.* It denotes an item of any composition established for transport and / or storage which needs to be managed throughout the supply chain.
Light margin/quiet zone	A clear space which precedes the start character of a barcode and follows the stop character.
Non-HRI Text	Human readable text on a label used for purposes other than representing the characters encoded in the barcode. (Examples: marketing information, nutritional information, country of origin, legal information etc.).
Trade Item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Trade Unit* (Case)	This term is used in this guideline for case labelling of fresh fruit and vegetables. "Case" is a generic term which includes any item handled as a single unit in the transport and distribution process. This definition covers a wide variety of package types such as pallets, PRCs, cartons, cases, bins and totes. These items can be trade items and/or logistic units.
Sandwich pallet	Group of pallets that are stacked for shipment.
Serial Shipping Container Code (SSCC)	The GS1 identification key used to identify logistic units. The key comprises an extension digit, GS1 Company Prefix, serial reference, and check digit.
Variable Measure Trade Item	A trade item which may be traded without pre-defined measure, such as size or weight.
Verification	Technical process by which a barcode is measured to determine its conformance with the specification for that symbol.

Please find the complete GS1 glossary in the GS1 General Specifications, chapter 8.

\* Big bags and pallets can be a trade unit and a logistic unit. Please see chapter 3.3.2.

## 2. Relevant GS1 standards and Principles

GS1 standards and GS1 keys support the produce supply chain processes. The relevant standards for the identification of logistic units are summarised below.

 **Note:** If a company wants to implement GS1 standards the company has to be a member of a national GS1 Member Organization (MO). For a complete list of all GS1 Member Organisations please see the GS1 web site at [www.gs1.org](http://www.gs1.org) then contact your local office. European guidelines and brochures are available at [www.gs1.eu](http://www.gs1.eu).

### 2.1. GS1 Standard for Logistic Unit Identification (SSCC)

The Serial Shipping Container Code (SSCC) provides functionality to support the management (tracking, tracing, storage, etc.) of logistic units through the supply chain. Scanning the SSCC bar code on each logistic unit allows the physical movement of units to be matched with the electronic business messages that refer to them. Using the SSCC to identify individual units opens up the opportunity to implement a wide range of applications such as cross docking, shipment routing, and automated receiving.

The format of the SSCC is as follows:

Extension Digit	GS1 Company Prefix	Serial Reference	Check Digit
N <sub>1</sub>	N <sub>2</sub> N <sub>3</sub> N <sub>4</sub> N <sub>5</sub> N <sub>6</sub> N <sub>7</sub> N <sub>8</sub> N <sub>9</sub> N <sub>10</sub> N <sub>11</sub> N <sub>12</sub> N <sub>13</sub> N <sub>14</sub> N <sub>15</sub> N <sub>16</sub> N <sub>17</sub>		N <sub>18</sub>

The Extension Digit can have any value from 0 to 9 and is used to increase the numbering capacity of the Serial Reference. Its use is at the discretion of the company allocating the SSCC.

The GS1 Company Prefix (GCP) is allocated by GS1 Member Organisations to the company that allocates the SSCC – here the physical builder or the brand owner of the logistic unit. It makes the SSCC unique worldwide but does not identify the origin of the unit. The length of a GS1 Company Prefix depends on each GS1 Member Organisation's policy on number allocation.


The Serial Reference is a serial number created by the company allocating the SSCC. The simplest way to allocate the serial number is sequentially, for example ...00000, ...00001, ...00002.

The Check Digit is calculated using the algorithm defined by GS1 General Specifications, section 7.



## 2.2. GS1 Barcode in Logistics Applications

This section provides guidance for the selection and use of GS1 barcode symbols on logistics labels. The GS1-128 is the only GS1 bar code to be used on the logistics label.

GS1 barcode	Content	Comments
GS1-128 barcode 	Encodes a SSCC Serial Shipping Container Code	<ul style="list-style-type: none"> <li>Used for general distribution identification of logistic units</li> </ul>

## 2.3. GS1 Application Identifiers

A GS1 Application Identifier (AI) is a numeric code of two or more characters that uniquely defines the format and meaning of the following information. The AI number preceding a piece of information supports its correct interpretation and processing. By means of AIs several pieces of information can be encoded in one barcode and correctly interpreted and processed.

The chart below describes the GS1 Application Identifiers used in this implementation guideline.

AI	Data Content	Format (*)	FNC1 Required (****)	Data Title
01	Global Trade Item Number (GTIN)	$N_2 + N_{14}$		GTIN
02	GTIN of contained trade items	$N_2 + N_{14}$		Content
00	SSCC	$N_2 + N_{18}$		SSCC
10	Batch or Lot Number	$N_2 + X_{\dots 20}$	(FNC1)	BATCH/LOT
37	Count of trade items	$N_2 + N_{\dots 8}$	(FNC1)	COUNT
13	Packaging date	$N_2 + N_6$		Pack Date

### ✓ NOTES:

(\*): The first position indicates the length (number of digits) of the GS1 Application Identifier. The following value refers to the format of the data content. The following convention is applied:

- N numeric digit
- X any character in Figure 7.11-1 in the General Specifications showing the GS1 subset of ISO/IEC 646
- N3 3 numeric digits, fixed length
- N..3 up to 3 numeric digits

(\*\*\*\*): All GS1 Application Identifiers indicated with (FNC1) are defined as of variable length and SHALL be delimited unless this element string is the last one to be encoded in the symbol. The delimiter SHALL be a Function 1 Symbol Character in GS1-128 symbology, GS1 DataBar Expanded Versions and GS1 Composite symbology and SHOULD be a Function 1 Symbol Character in GS1 DataMatrix and GS1 QR Code symbology.

[source: GS1 General Specifications, chapter 3.2]

✓ **Note:** For a complete list of AIs refer to the GS1 General Specification, chapter 3.2.


## 2.4. Barcode Quality

Barcode quality is of critical importance because only readable barcodes support efficient processes. If a barcode cannot be decoded additional cost and time resources are consumed. Therefore all parties should ensure that their barcodes meet with GS1 General Specification requirements.

Verification is the technical process by which a barcode is measured to determine its conformance with the specification for that symbol. ISO/IEC 15416 is the international specification of the ISO barcode verification methodology for linear symbologies (e.g. EAN/UPC symbol, GS1-128 symbol), and the numeric grading system.

GS1's advice is to use the ISO/IEC 15416 methodology as a tool to improve overall scanning performance. An ISO-based verifier is of enormous assistance in diagnosing the problem and providing a standard means of reporting among printing companies and their trading partners.

Since ISO verification does not measure dimensions, it is part of the additional visual checking that has to be carried out to ensure that, for example, the symbol height meets the application requirements. Many GS1 Member Organisations offer related services, so if quality problems arise or before implementing a new label please contact your local MO to make sure the label meets quality requirements.

 **Note:** Please see Chapter 3.2 and Annex 5.3 for crucial parameters e.g. the barcode size (usually indicated in x-dimensions), barcode height, contrast (dark bars on light background), light margins before and after the symbol, check digits etc.

## 3. Logistic Units

When it comes to the labelling of logistic units with the GS1-128 logistics label three types can be distinguished. According to the constellation of the logistic unit, product data such as GTIN may be included on the label or not.

### 3.1. Three Types of Logistic Units Transport Labels

The SSCC is the single mandatory element for all GS1 Logistics Labels. Other information, when required, shall comply with the specifications in this document and with the proper use of application identifiers.

#### 1. Logistic Unit which contains homogenous trade units

A homogeneous logistic unit containing one type of trade item. All the items are the same and are identified with the same GTIN.

Example: a pallet containing 50 boxes of apples

In this case information of GTIN can be included on the label in bar coded form.

(please see example in chapter 3.3)

#### 2. Logistic Unit is also a Trade Unit (1:1)

A logistic unit that is also a trade unit that is priced or ordered or invoiced, i.e. is part of the supplier's regular offer. Such logistic units can be homogeneous (for example a whole box of apples) or heterogeneous (for example a box with different types of apples).

In this case information of GTIN can be included on the label in bar coded form.

(please see example in chapter 3.3).

#### 3. Logistic Unit with different trade units compiled for transport purposes (e.g. mixed pallet)

For mixed logistic units it is not possible to include trade item information on the logistics label and therefore the use of electronic messaging is strongly encouraged to support the exchange of data linked with the SSCC.

In this case information of GTIN cannot be included on the label in bar coded form. (please see example in chapter 3.3).

### 3.2. Label Rules for Logistic Units

#### 3.2.1. Lay-out of the Label

The GS1 Logistics Label has three building blocks for the different kind of data used in order to facilitate interpretation by machines and people:

1. The TOP block contains free format information such as Non-HRI text (e.g. address of sender) and graphics (logo of sender).
2. The MIDDLE block contains Non-HRI text reflecting the information represented in the GS1-128 barcode(s). This data is preceded rather by data titles than application identifiers. Optionally additional information not represented in barcodes (preferably including data titles) may be added.
3. The BOTTOM block contains the GS1-128 barcode(s) including human readable interpretation (HRI).



### 3.2.2. Barcode Orientation

Barcodes must be placed in a picket fence orientation relative to the base of a logistic unit, this means, the bars and spaces are perpendicular to the base on which the logistic unit stands. In all cases, the GS1-128 barcode encoding the SSCC SHALL be placed in the lowest portion of the label.

These building blocks are usually placed top down: Free Format (top), Non-HRI text including Data Titles (middle), Barcodes and HRI (bottom). If space permits it, and providing the barcodes conform to the size specifications for the application, the lower two building blocks may be placed side by side.

### 3.2.3. Human Readable Interpretation (HRI)

Below each barcode a human readable interpretation (HRI) must show the content. On GS1 Logistics Labels HRI characters SHALL be no less than 3 mm high.

### 3.2.4. Non-Human Readable Text

Non-Human Readable text shall be no less than 7 mm high.

### 3.2.5. Label Size

The size of the label depends on the amount of data and the size of the logistic unit. It is important to observe the technical specifications shown under 3.2.6. Barcodes must be readable. Common label sizes for logistic units are A6 (105 mm x 148 mm) and A5 (148 mm x 210 mm).

### 3.2.6. Barcode Measurements in General Distribution

The X-dimension is the specified width of the narrowest element in a barcode symbol. The recommended X-dimension depends on scanning environment. Very often fixed scanners are used in General Distribution. Therefore it is essential to maintain an X-dimension of 0,495 mm to achieve acceptable scan rates. Scanning systems work more effectively if all barcodes have similar X-dimensions.

Symbol(s) specified	(*) X-dimension mm (inches)			(**) Minimum symbol height for given X mm (inches)			Quiet Zone		Minimum quality specification
	Minimum	Target	Maximum	For minimum X-dimension	For target X-dimension	For maximum X-dimension	Left	Right	
GS1-128	0.495 (0.0195*)	0.495 (0.0195*)	0.940 (0.0370*)	31.75 (1.250*)	31.75 (1.250*)	31.75 (1.250*)	10X	10X	1.5/10/660

\* If the logistic unit is physically too small to accommodate the minimum X-dimension, the minimum X-dimension is 0.250 millimetre (0.0098 inch).

\*\* The minimum symbol height indicated is for bar height only and does not include the human readable interpretation.

If the logistic unit is physically too small to accommodate the minimum, the minimum bar height is the greater of 15 percent of the symbol width including Quiet Zones or 12.70 millimetres (0.500 inch). If the package is physically too small to accommodate this rule, further truncation is permitted, but in no case SHALL the bar height be less than 5.08 millimetres (0.200 inch).

There is no maximum for the height, but if the maximum X-dimension is used, the symbol height must be equal to or greater than those listed in the Minimum Symbol Height column.

Source: GS1 General Specifications 2017, chapter 5.5.2.7.5

### 3.2.7. Label Placement (Where to put the label) and Number of labels

When placing logistics labels on fruit and vegetables, the following principles, practices and examples should be considered to assure the labels will be properly and efficiently scanned.

#### Number of logistics labels on the unit

Each logistic unit shall display at least one logistics label. If the printing process makes this possible it is recommended that two logistics labels are placed on the unit. They must have the same data. The benefit is that one label is always visible (e.g., pallets that are stored either long or short edge facing).

#### Placement on Cartons and Outer Cases < 1 m Height

For cartons and outer cases, barcode placement will vary slightly in practice, however the target placement for the bottom of the barcode is 32 millimetres (1.25 inches) from the natural base of the item. The barcode, including its Quiet Zones, should be at least 19 millimetres (0.75 inch) from any vertical edge to avoid damage.



If a (returnable) crate is used the crate type determines where to put the card/label.

**Placement on Pallets**

For all types of pallets, including full pallets containing individual trade items and single trade items, the target height for the bottom of the barcode is, also for reasons of automated recognition, between 400 millimetres (16 inches) and 800 millimetres (32 inches) from the base of the pallet.

For pallet less than 400 millimetres (16 inches) high, the barcode shall be placed as high as possible while protecting the barcode. The barcode, including its Quiet Zones, shall be at least 50 millimetres (2.0 inches) from any vertical edge to avoid damage.



**Stacked Pallets**

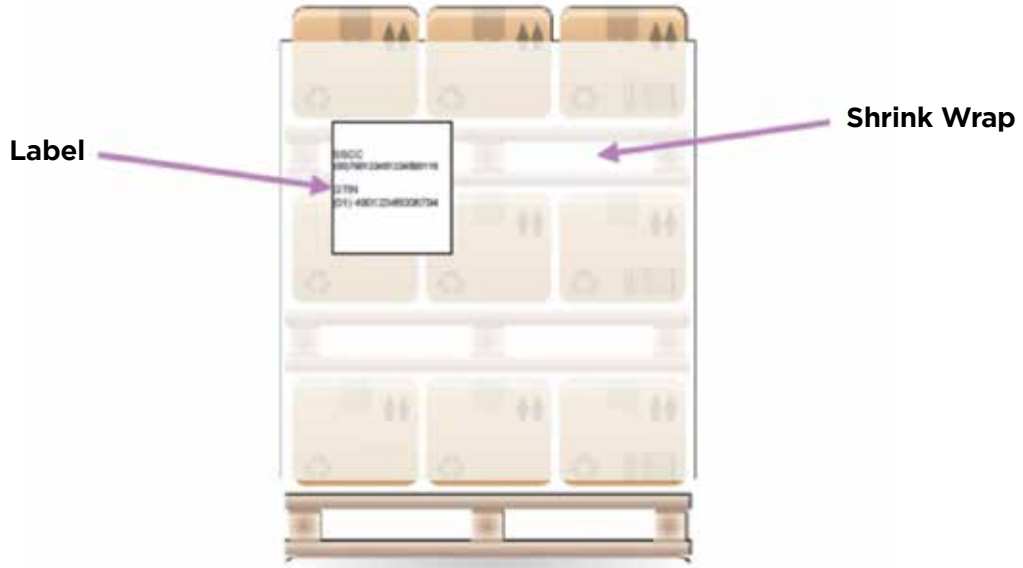
Stacked pallets, also referred to as sandwich pallets, are groups of pallets that are stacked for shipment.

When pallets are stacked they should be considered independent logistic units (see figure below), each pallet should be identified with a unique SSCC.

*Stacked Pallets as Independent Logistic Units*



If the group will be shipped as a unit and is physically joined using shrink-wrap, straps, or similar means (see figure below), the group should be considered as a single logistic unit as well and an additional SSCC should be assigned to the stacked pallet group.




Source: GS1 Logistics Label Guideline, Chapter 8

### 3.3. Specific Label Scenarios for Logistic Units

The paragraphs below provide label details of the three relevant label types for logistic units.

#### 3.3.1. Label for Logistic Unit which contains Homogenous Trade Items

Information in the barcode	Further Information on the label
<p><b>Mandatory:</b> SSCC with AI 00</p> <p><b>Optional:</b> GTIN with AI 02 Count of GTIN with AI 37 Lot number with AI 10 if valid for the whole unit Packaging Date with AI 13</p> <p><b>Data Carrier:</b> GS1-128 barcode</p>	<p>Human Readable Interpretation below each barcode (HRI)</p> <p> <b>Note:</b> The lot number should be preceded by the letter 'L' except in cases where it is clearly distinguishable from the other indications on the label.</p>




**Note:** When GTINs are encoded in a GS1-128 bar code a 14-digit data string is required. GTINs with less than 14-digits in length will add leading zeroes to create a 14-digit number. The leading zeroes simply act as filler characters. The presence or lack of these leading zeroes does not change the GTIN concerned.

### 3.3.2. Label for Logistic Unit which is also a Trade Unit (1:1)

Information in the barcode	Further Information on the label
<p><b>Mandatory:</b> SSCC with AI 00</p> <p><b>Optional:</b> GTIN with AI 01 Lot number with AI 10</p> <p><b>Data Carrier:</b> GS1-128 barcode</p>	<p>Human Readable Interpretation below each barcode (HRI)</p> <p><b>Note:</b> The lot number should be preceded by the letter 'L' except in cases where it is clearly distinguishable from the other indications on the label.</p>



As soon as the trade unit is to be transported it needs a SSCC and therefore a logistics label is added next to the trade unit label. In this case two labels - a commercial label and a transport label - are used. Both must be clearly readable.

 **Note:** Legal and regulatory data are usually indicated on the trade unit label (please see Part 4b Trade Unit Labelling Guideline, chapter 3.4.2)

<b>Sender:</b> GS1 Germany <u>Maarweg 133</u> 50825 Köln	<b>Consignee:</b> GS1 Spain Ronda General <u>Mitre 10</u> E-08017 Barcelona
<b>SSCC</b>	3 4012345 123456789 5
<b>GTIN</b>	40 12345 33333 6
<b>Lot No.</b>	123456
 (01)04012345333336(10)123456	
 (00)340123451234567895	

**3.3.3. Label for Logistic Unit which consists of Different Trade Units (comprised for transport purposes only – e.g. mixed pallet)**

Information in the barcode	Further Information on the label
<p><b>Mandatory:</b> SSCC with AI 00</p> <p><b>Data Carrier:</b> GS1-128 barcode</p>	<p>Human Readable Interpretation below each barcode (HRI)</p>



### 3.3.4. Bad examples

If labels are not readable they prevent smooth processes in the supply chain. Please see below two bad examples.



Transport label hiding the original



Damaged label

## 4. Resources

GS1 General Specifications

<http://www.gs1.org/barcodes-epcrfid-id-keys/gs1-general-specifications>

GS1 Logistics Label Guideline

[https://www.gs1.org/docs/tl/GS1\\_Logistic\\_Label\\_Guideline.pdf](https://www.gs1.org/docs/tl/GS1_Logistic_Label_Guideline.pdf)

GS1 in Europe

[www.gs1.eu](http://www.gs1.eu)

GS1 in Europe Guidelines on Fruit & Vegetables

<http://www.gs1.eu/activity-folder/fruits-and-vegetables>

GS1 Global Office

[www.gs1.org](http://www.gs1.org)

## 5. Annex

### 5.1. Cross Reference of Terms

Produce Sector Term	Guideline Term	GS1 Glossary Term	GS1 Definition
Each Base Unit Saleable Unit	Consumer Unit (Each) Unit Item Loose Pre packed Pre proportioned	Trade Item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, ordered, or invoiced at any point in any supply chain.
Case Traded Unit Bin Tote Pallet RPC Tray	Trade Unit (Case)	Trade Item Grouping	A standard composition of trade item(s) that are not intended for point-of - sale scanning.
Pallet Non-Standard Mixed Case	Logistic Unit (Pallet)	Logistic Unit	An item of any composition established for transport and/or storage that needs to be managed through the supply chain.

### 5.2. Logistics Label Verification

This section provides a brief summary of the GS1 Logistics Label Verification procedures as applied by GS1 Member Organisations in order to assess the quality of logistics labels.

#### *Basic principles*

Logistics label verification aims at checking the label's compatibility with the GS1 standards and guidelines. Verification helps to ensure that GS1 Logistics Label implementations comply with the GS1 System, and result in logistics labels that can be used by all supply chain partners.

Verification should be an integral part of quality control processes. It should be performed during initial implementation and repeated at regular intervals once operational.

Verification can be performed by GS1 Member Organisations or by companies authorised by GS1 to issue such verification. In case of a problem, standard verification reports should be used to communicate the source of the problem.

#### *Common verification approach*

To ensure a common logistics label verification approach a standard verification procedure is needed. This will guarantee similar results regardless of where the symbols are tested. This section aims at highlighting critical issues relating to verification.

### ***Visual appearance***

The visual assessment includes:

- the dimension of the label
- the correct placement of segments and building blocks
- correct languages of data titles applied
- correct data titles in the middle part for encoded information
- Are there any lines through the barcodes or speckles?
- Is the barcode at least 31.75 mm / 1.250" high?
- Is there sufficient space on either side of the barcode?

### ***Data content***

Data content verification includes:

- company prefix (or prefixes applied)
- GS1 identification keys applied (e.g. GTIN, SSCC)
- check digits of all GS1 identification keys applied (e.g. GTIN, SSCC)
- Applied GS1 Application Identifiers and their structure

### ***Technical parameters***

Verification of technical parameters includes all the checks for GS1-128 symbols as defined in the GS1 Barcode Verification Process implementation guide, and additionally:

- correct combinations of data elements, mandatory association of data elements (e.g. AI (02) and AI (37))
- correct structure of data elements
- correct check digits of GS1 identification keys (e.g. GTIN, SSCC) presented in the barcode symbol

### ***Verification report***

Verification reports should include:

- the list of parameters that were verified
- information on whether a given parameter complies with GS1 requirements
- in case of a negative assessment – information on correct data and recommendations on how to avoid mistakes
- A copy of the verified label should be attached to the report.

*Example of a GS1 verification report (Testing Summary)*

Source: GS1 General Specifications

**5.5.3.5.3 GS1 barcode verification template for linear symbols**

**<NAME>** **Issue date <Date of Issue>**  
**<Line one address>**  
**<Line two address>**  
**<Town>**  
**<Postcode>**  
**Product Description:** **<Brand and name of product>**  
**Type of barcode:** **<Symbol type>**  
**Data encoded:** **< Data encoded>**  
**Number of barcodes on product:** **<Number of symbols>**

**Please Note:** These assessments are based on meeting the minimum GS1 standards.  
To ensure efficient scanning, the barcode should exceed the minimum.

## Testing summary of the linear symbol

<b><i>GS1 General Specifications for linear symbols tested environments:</i></b>	
<b>PASS or FAIL or Not assessed</b> for retail point-of-sale scanning	
<b>PASS or FAIL or Not assessed</b> for general distribution and logistics scanning	
<b>PASS or FAIL or Not assessed</b> for other scanning applications (specify) _____	
<b>Complies with GS1 symbol location recommendations</b>	<b>In/out spec (&amp; comment on business critical issue)</b>
<b>ISO/IEC print quality grade</b>	<b>ISO/IEC &lt;x.x&gt;/06/660 (0.0 – 4.0) PASS/FAIL</b>
<b>Business critical comments</b>	

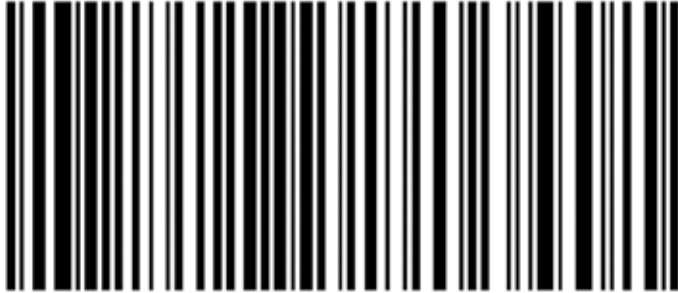
### 5.3. Logistics Label Symbol and Text Sizes - Examples

The examples are meant for better implementation and do not mirror the exact indicated measurements.

Example 1: A6 Label with example data



Example 2: A5 Label

<p>Minimum free format text size: 3.2 mm / 0.28 in (Arial 7)</p>
<p>Minimum size of data field: 7.1 mm / 0.28 in (Arial 18)</p>
<p>Minimum barcode measurements: Height 31,75 mm / 1.26 in Width 77 mm / 3.05 in</p>  <p>(00)340123451234567895</p> <p>HRI: 4.8 mm / 0.19 in (Arial 12)</p>







# Contact GS1 in Europe locally:

**GS1 Albania**

+355 4 232073  
info@gs1al.org  
www.gs1al.org

**GS1 Armenia**

+374 10 272 622  
gs1arm@am.org  
www.gs1am.org

**GS1 Austria**

+43 1 505 86 01  
office@gs1.at  
www.gs1.at

**GS1 Azerbaijan**

+99412 4987405  
ean@gs1az.org  
www.gs1az.org

**GS1 Belarus**

+ 375 17 298 09 13  
info@gs1by.by  
www.gs1by.by

**GS1 Belgium & Luxembourg**

+32 2 229 18 80  
info@gs1belu.org  
www.gs1belu.org

**GS1 Bosnia-Herzegovina**

+387 33 258 646  
info@gs1bih.com  
www.gs1bih.com

**GS1 Bulgaria**

+359 2 988 3139  
gs1bulgaria@gs1bg.org  
www.gs1bg.org

**GS1 Croatia**

+385 1 48 95 000  
info@gs1hr.org  
www.gs1hr.org

**GS1 Cyprus**

+357 2 889800  
info@gs1cy.org  
www.gs1cy.org

**GS1 Czech Republic**

+ 420 234 633145  
info@gs1cz.org  
www.gs1cz.org

**GS1 Denmark**

+45 39 27 85 27  
info@gs1.dk  
www.gs1.dk

**GS1 Estonia**

+372 660 5535  
info@gs1.ee  
www.gs1.ee

**GS1 Finland**

+358 75 756 3500  
asiakaspalvelu@gs1.fi  
www.gs1.fi

**GS1 France**

+33 1 409 554 10  
infos@gs1fr.org  
www.gs1.fr

**GS1 Georgia**

+995 32 29 4724  
info@gs1ge.org  
www.gs1ge.org

**GS1 Germany**

+49 221 947 14 - 0  
info@gs1-germany.de  
www.gs1-germany.de

**GS1 Greece**

+30 210 990 4260  
info@gs1greece.org  
www.gs1greece.org

**GS1 Hungary**

+36 1 412 3954  
info@gs1hu.org  
www.gs1hu.org

**GS1 Iceland**

+ 354 511 3011  
info@gs1.is  
www.gs1.is

**GS1 Ireland**

+353 1 208 0660  
info@gs1ie.org  
www.gs1ie.org

**GS1 Israel**

+972 3 519 88 39  
sigal@gs1il.org  
www.gs1il.org

**GS1 Italy**

+39 02 777 2121  
info@indicod-ecr.it  
www.indicod-ecr.it

**GS1 Kazakstan**

+7 3272 756578  
+7 7272 479348  
info@gs1.kz  
www.gs1.kz

**GS1 Kyrgyzstan**

+996 312 900 521  
info@gs1kg.org  
www.gs1kg.org

**GS1 Latvia**

+ 371 67830 822  
gs1@gs1lv.org  
www.gs1lv.org

**GS1 Lithuania**

+370 5 2614532  
gs1@gs1lt.org  
www.gs1lt.org

**GS1 Macedonia**

+389 2 32 54 250  
gs1mk@gs1mk.org.mk  
www.gs1mk.org.mk

**GS1 Moldova**

+373 22 211 669  
info@gs1md.org  
www.gs1md.org

**GS1 Montenegro**

+382 20 658 277  
office@gs1.me  
www.gs1.me

**GS1 Netherlands**

+31 20 511 3820  
info@gs1.nl  
www.gs1.nl

**GS1 Norway**

+47 22 97 13 20  
firmapost@gs1.no  
www.gs1.no

**GS1 Poland**

+48 61 8504977  
gs1pl@gs1pl.org  
www.gs1pl.org

**GS1 Portugal**

+35 1 21 752 07 40  
info@gs1pt.org  
www.gs1pt.org

**GS1 Romania**

+40 21 3178031  
office@gs1.ro  
www.gs1.ro

**GS1 Russia**

+7 495 730 7103  
info@gs1ru.org  
www.gs1ru.org

**GS1 Serbia**

+381 11 3132 312  
office@gs1yu.org  
www.gs1yu.org

**GS1 Slovakia**

+421 41 565 11 85  
info@gs1sk.org  
www.gs1sk.org

**GS1 Slovenia**

+386 1 5898320  
info@gs1si.org  
www.gs1si.org

**GS1 Spain**

+34 93 252 39 00  
info@gs1es.org  
www.gs1es.org

**GS1 Sweden**

+46 8 50 10 10 00  
info@gs1.se  
www.gs1.se

**GS1 Switzerland**

+41(0)58 800 70 00  
mail@gs1.ch  
www.gs1.ch

**GS1 Turkey**

+90 312 218 20 00  
gs1turkey@tobb.org.tr  
www.gs1tr.org

**GS1 Turkmenistan**

+99 312 46 80 21  
+99 312 46 80 25  
info@gs1tm.org

**GS1 UK**

+44 20 7092 3500  
info@gs1uk.org  
www.gs1uk.org

**GS1 Ukraine**

+380 44 486 0734  
ean@gs1ua.org  
www.gs1ua.org

**GS1 Uzbekistan**

+998 71 252 6604  
info@gs1uz.org  
www.gs1uz.org

GS1 in Europe is a collaboration of 47 GS1 member organisations. We lead the creation and implementation of harmonised, user-driven solutions for improving the supply and demand chain of European companies.

## About GS1 Europe

GS1 in Europe is a collaboration of 47 GS1 member organisations and leads the creation and implementation of harmonised, user-driven solutions for improving the supply and demand chain of European companies. Further information on GS1 in Europe and the activities in the area of fruit and vegetables can be obtained from [www.gs1.eu](http://www.gs1.eu).

### GS1 Europe

T +33 (1) 40 95 21 79

E [camille.dreyfuss@gs1eu.org](mailto:camille.dreyfuss@gs1eu.org)

[www.gs1.eu](http://www.gs1.eu)

