

Integrated Guideline Part **4b**:

Labelling of Trade Units

Supply Chain Management for Fresh Fruit and Vegetables



in collaboration with



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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.

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.

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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 at short term notice 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 past years. By means of unique product identification, which can be achieved by using the GS1 standards, these demands can be fulfilled by small, medium and large size companies.

This guideline was developed by the GS1 in Europe Fruit & Vegetable Group with a focus on target-market Europe as well as legal labelling requirements in the European Union.

1.1. Purpose and Scope of this Guideline

There is an increasing expectation within industry to utilise common, global standards for product identification and marking combined with automated electronic data processing. For all sectors, this is the most efficient way to manage ordering, receiving, tracking and tracing and labelling of products easily and without problems.

Experts within the fruit and vegetable sector have created this guideline which includes an overview on the different label formats and layouts recommended for fruit and vegetable products and provides business examples explaining the right content and sizes to use.

Every effort was made to make this guideline relevant across all target markets. However in some instances regional guidelines have been developed to assist the industry and to ensure regulatory or business compliance within those specific markets.

Readers are urged to understand and apply regulatory and business requirements specific to a target market and encouraged to contact their local GS1 Member Organisation (MO) for assistance in the use of the GS1 standards.

1.1.1. Purpose

The purpose of this document is to provide companies with clear guidance on labelling fresh fruit and vegetables in the produce supply chain to support current and future market requirements.

1.1.2. In Scope

In scope is the labelling of fresh fruit and vegetables at the trade unit (case) level. Included are also trade units (cases) that may be sold at the Point of Sale. Labelling of consumer unit (each) and logistic unit (pallet) levels are addressed in other parts of this integrated guideline. 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

2D-Symbologies are out of scope. Variable Measure Trade Items with leading 9 are mentioned but rather out of scope as they are rather the exception in Fruit & Vegetable. Order processes for fresh food and vegetables are mostly carried out with GTIN-13. Suppliers define their trade items as fixed measure trade items. According to season and customer they may decide later on how to calculate the price, i.e. whether they sell them fix or variable.

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

The composition of a label is dependent upon the application, legal and regulatory requirements for the target market and desired optional information such as marketing information.

The content on the label will include GS1 barcode symbols and human readable interpretation (HRI), to enable the implementation of the GS1 standards for supply chain efficiencies. The content on the label will also include other human readable text (Non-HRI text) to permit compliance with target market legal requirements such as EU 1169/2011. And the content may include other elements such as artwork and Non-HRI text

The GS1 standards for labelling include:

- The barcode symbol for automatic identification and data capture (AIDC)
- 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.

Below is an example of a barcode with HRI:



- Quality requirements to assure proper reading of barcode symbols, such as label placement and print quality

Since this implementation guideline cannot address all target market legal and regulatory requirements, it is the responsibility of the party applying the labels to be knowledgeable of the requirements within their target markets.

Within this implementation guideline there are notes identified using the Note icon shown below.



Note

1.4. Key Terms

Some relevant terms used in this guideline are explained below in order to facilitate a better understanding of the guideline. A more extensive glossary can be found in the annex.

Term	Explanation
GS1 Application Identifier	The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.
Consumer Unit (Each)	This term is used in this guideline for the labelling of individual consumer level fresh fruit and vegetables items at retail where the customer selects their produce and takes the produce to the point of sale. This could be a loose produce item or packaged item. The following terms could also be used to identify produce and packaged produce at retail level: Each, Loose, Item, Trade Item, Unit, Consumer Unit, Bulk, Pre-packaged, and Pre-portioned..
Calibrated Trade Items	This term is used in the sense of Fixed Measure Trade Items.
Each	An individual fruit or vegetable (e.g. an apple, a pineapple or a pepper).
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).
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.
General Distribution Scanning	Scanning environments that include barcoded trade items packaged for transport, logistic units, assets, and location tags.
Human Readable Interpretation (HRI)	Human readable text located below a barcode symbol representing the characters encoded in the barcode.
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.).
Loose	Fresh fruit and vegetables which are delivered to the store loose in boxes or cases, and then put into a bag or selected individually by the customer for purchase.
Logistic 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.
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.
Variable Measure Trade Item	A trade item which may be traded without pre-defined measure, such as size or weight.

* Big bags and pallets can be a trade unit and a logistics unit at the same time.


1.5. Legal and Regulatory Requirements

This guideline does not cater to all legal aspects in different countries and regions. The examples shown are not all inclusive. Users should refer to GS1 country or regional guidelines for their local requirements. Where country or regional guidelines are not available users needing additional information or instruction regarding local or national legal and regulatory requirements should contact their local GS1 Member Organisation.

Legal labelling requirements for the European Union are covered in the annex. However it needs to be checked if the national implementation of the EU requirements is deviating.

2. Relevant GS1 standards and Principles

GS1 standards and GS1 keys support the produce supply chain processes. The relevant standards for the identification of consumer items, trade units and 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 then contact your local office. European guidelines and brochures are available at www.gs1.eu

2.1. GS1 standards for Item Identification (GTIN)

The Global Trade Item Number (GTIN) is the GS1 standard for the unique identification of all trade items (consumer units and trade units), including fresh fruit and vegetables. The GTIN supports trade item identification for Business to Business (B2B) and Business to Consumer (B2C) processes. The GTIN is a GS1 key with a specific structure and allocation rules to assure global uniqueness. The GS1 General Specification prescribes the specifications for the GTIN. The table below gives an overview of the GTINs that are used for labelling fruit and vegetables in general. All parties in the process should be able to process these variants of the GTIN.

GTIN	GTIN format
GTIN-8	N7 + C
GTIN-12	N11 + C
GTIN-13	N12 + C
GTIN-14	N13 + C

N – Numeric digit

C – Check digit

When any of these GTINs are encoded in a data carrier (i.e. barcode symbol) that encode a fixed-length data string of 14-digits, 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. These series of GTINs may be stored with or without leading zeroes in the same database field, depending on the requirements of the particular application. GTIN-8 is usually only used for smaller consumer units with pack size constraints.

 **Note:** Systems should always cater for 14-digit GTINs.

2.2. GS1 Barcodes

This section provides guidance for the selection and use of GS1 barcode symbols.

2.2.1. General Distribution (trade units that are not intended for Point-of-Sale)

In general distribution, the business process for ordering, invoicing and transporting produce up to but not crossing the point of sale, the following barcode symbols are the most relevant in fruit & vegetable:

GS1 barcode	Content	Comments
<p>UPC-A symbol</p> 	Encodes a GTIN-12	<ul style="list-style-type: none"> Used for general distribution identification of pre-packaged, fixed weight/count, trade item (especially in North America)
<p>EAN-13 symbol</p> 	Encodes a GTIN-13	<ul style="list-style-type: none"> Used for general distribution identification of pre-packaged, fixed weight/count, trade item
<p>GS1-128 symbol (for a fixed measure item)</p>  <p>The GTIN number is 4000000000259 The batch number is 123456</p>	Encodes any GTIN and additional information like batch number.	<ul style="list-style-type: none"> Used for trade item identification (fixed weight/count) throughout the supply chain but NOT at point-of-sale. Data encoded in GS1-128 is used in combination with GS1 application identifiers, which determine the data, its format and its structure. The GTIN must have a 14-digit format. Therefore a leading zero is added as a filler.
<p>GS1-128 symbol (for a variable measure item)</p>  <p>The GTIN number is 98712345123454 The net weight is 000025 = 2,5 kg</p> <p>Technically, the GS1 system offers a solution to uniquely identify variable measure trade items. As the fruit & vegetable industry mainly works with fixed measure items this approach is only mentioned for reasons of completeness.</p>	Encodes a GTIN-14 starting with '9' plus net weight in kilograms	<ul style="list-style-type: none"> Used for trade item identification with variable weight throughout the supply chain but NOT at point-of-sale. Data encoded in GS1-128 is used in combination with GS1 application identifiers, which determine the data, its format and its structure.

 **Note:**

- Systems always need to cater for 14-digit GTINs.
- When GTINs are encoded in a GS1 data carrier other than EAN-13 symbol they must encode a fixed-length data string of 14-digits (as in GS1-128 barcode). GTINs less than 14 digits in length must be prefixed by leading zeroes that simply act as filler characters. The presence or lack of these leading zeroes does not change the GTIN concerned. These series of GTINs may be stored with or without leading zeroes in the same database field, depending on the particular application.
- The GTIN-14 starting with the Indicator 9 is used to identify a Variable Measure Trade Item not scanned at PoS. The presence of the variable measure information is mandatory for the complete identification of a particular Variable Measure Trade Item. The digit 9 in the first position is an integral part of the GTIN. This approach is rather the exception in Fruit & Vegetables as most suppliers allocate GTIN-13..
- *The GTIN-14 starting with a logistics indicator from 1 – 8 is used for applications where companies use the indicator digit to refer to a certain packaging hierarchy/logistics variant.
- In practice, data content and data carrier are often not clearly differentiated from each other. This may lead to misunderstandings. It is particularly important to bear in mind that data content (e.g. the identification number plus attributes like batch can be encoded in different data carriers according to the application).
- This document does not focus on GS1 DataBar barcode because it is not common practice for trade units in the fruit & vegetables sector, although it is allowed to encode GTIN plus lot number in logistics applications in GS1 DataBar according to the GS1 Standards. For more details please see GS1 General Specifications (www.gs1.org).

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. (Please see GS1-128 barcode examples in chapter 2.2.1).

The chart on the following page describes the GS1 Application Identifiers used in this implementation guideline.

AI	Data Content	Format (*)	FNC1 Required (****)	Data Title
01	Global Trade Item Number (GTIN)	N2+N14		GTIN
10	Batch or Lot Number	N2+X..20	(FNC1)	BATCH/LOT
13	Packaging date	N2+N6		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:

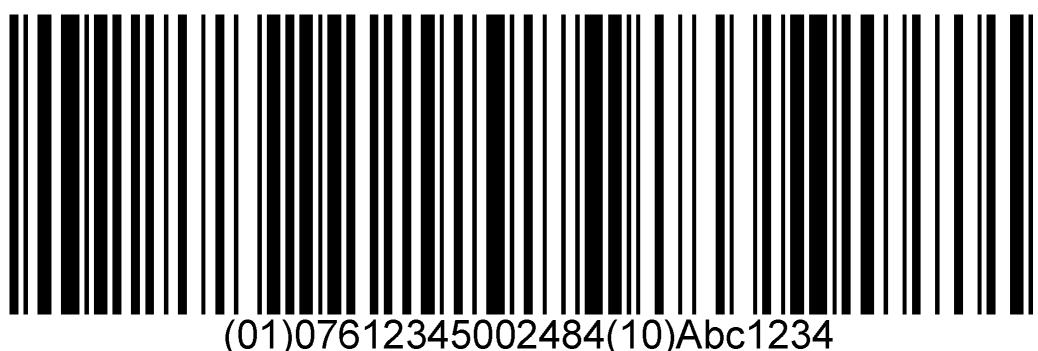
- N numeric digit
- X any character in Figure 7.11-1 in the General Specifications showing the GS1 subset of ISO/IEC 646
- N3 3 numeric digits, fixed length
- N..3 up to 3 numeric digits

(****): 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]

Example: GS1-128 bar code with GTIN and batch number

AI (01) announces a “Global Trade Item Number”. The format is clearly defined, i.e. numeric, 14 digits. As soon as the scanner reads AI (01) in a GS1 symbol (here from a GS1 128 barcode) it knows that a GTIN with 14 digits, purely numeric, follows. The example below has one more piece of information, i.e. AI 10 announces the lot number.



 **Note:**

- Although there is no rule as to the sequence of the data elements it has proven common practice to put AI 01 for the GTIN first and to put variable length data elements at the end. A scanner can operate any element as long as the standard is met.
- For more details on the use of application identifiers please see the General Specifications, Section 3 and section 4.13
- For a complete list of AIs please refer to the GS1 General Specification, Section 3.0.
- If a party does not need to process all data elements encoded in a barcode they can select the data elements by means of the application identifiers.

2.4. Symbol Placement Principles

Consistency of symbol placement is critical to successful scanning. With automated scanning (e.g. in warehouses on a conveyor belt), the symbol must be positioned so that it will pass through the field of vision of a fixed scanner as it travels past.

With manual scanning (e.g. at cash & carry), variation of symbol placement makes it difficult for the scanning operator to predict where the symbol is located, and this reduces efficiency. Respecting the GS1-guidance in this section and under 3.5 will result in the consistency and predictability required.

Avoiding Scanning Obstacles

Anything that will obscure or damage a barcode will reduce scanning performance and must be avoided.

Non-adjacent placement

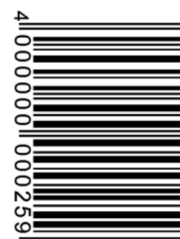
Wherever two symbols are used for different applications like an EAN-Symbol for POS and a GS1-128 Symbol for General Distribution, they SHOULD be placed non-adjacent to one another.

Barcode orientation

Barcode orientation is determined primarily by the print process and any curvature of the item. If the printing process and curvature allow, the preferred placement is picket fence orientation, in which the bars of the barcode are perpendicular to the surface on which the package stands in its normal display position.



Preferred placement: Picket fence orientation



Only in case of curvature: ladder orientation


2.5. 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 Annex 5.4 for an example of a testing summary of a symbol. Crucial parameters are 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. Trade Units (outer cases / pallets / crates)

This chapter refers to trade units labelling in general distribution, i.e. logistics and warehouse processes.

It also addresses trade units labelling in mixed scanning environments, i.e. trade units that have to be scanned in general distribution and at PoS. These units are subject to different scanning requirements in terms of barcode choice and measurements.

3.1. Trade Units intended for General Distribution only (Non-POS)

According to the existing standards and requirements of the business partners for trading as well as regulatory requirements all trade units are labelled. There is currently no unique approach but instead various label designs. Labels vary with size of packages, crates etc.

Trade Units consist of one or more consumer products.

- **Trade Unit (Fixed measure/weight/count):**

A package that contains one or more consumer units and serves as a unit in ordering, invoicing and delivery processes. Fixed measure units dominate in the fruit & vegetable sector.

- **Trade Unit (variable measure/weight/count):**

A package which is ordered as a unit and priced per weight/count. Variable measure units are rather the exception in the fruit & vegetable sector.



3.2. Trade Items intended for General Distribution and PoS processes

Some trade units are intended for general distribution and PoS processes. These units must carry an EAN/UPC barcode to meet the requirements at the PoS (or in rare circumstances GS1 DataBar). If more than a GTIN has to be encoded for the logistics processes a GS1-128 barcode should be added as secondary symbol encoding the same GTIN plus e.g. batch number.

3.3. General Label Considerations for Trade Units

3.3.1. Using Barcodes

Trade items intended for General Distribution only (Non-PoS);

- Each item shall have at least one barcode
- If both a GTIN and a batch number are to be encoded in a barcode use GS1-128 barcode.
- In 2014 GS1 DataBar became an open symbology and all scanning environments must be able to read these symbols. It can be used to encode GTIN or GTIN plus attribute, especially in case of space constraints.

The barcodes on units SHALL be upright (i.e. in picket fence orientation) and placed on the sides of the unit. As not all products are packed in an identical way, this general rule may not apply to unusual packaging types (e.g., low height items, display cases, bags). The barcodes SHALL be kept away from any vertical edges so that the barcodes are less likely to be accidentally damaged in transit.

General rules for trade items intended for general distribution and Point-of-Sale scanning

- These trade items must carry a EAN 13 barcode (or GS1 DataBar symbology) for scanning processes at PoS. Placement rules for PoS application should be observed.
- For scanning processes in logistics applications an additional GS1-128 barcode with the same GTIN and batch number is added. The GS1-128 barcode SHALL be upright (i.e. in picket fence orientation) and placed on the sides of the unit.

3.3.2. 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 0,495mm to achieve acceptable scan rates. Scanning systems work more effectively if all barcodes have similar X-dimensions.

Symbol(s)	(*) 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 (0.0260")	1.016 (0.0260")	31.75 (1.350")	31.75 (1.800")	31.75 (1.800")	10X	10X	1.5/10/660
EAN-13	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	11X	7X	1.5/06/660

For other GS1 Barcodes measurements in General Distribution see Annex 5.3

 **Note:**

- For GS1-128, a smaller X-Dimension may be used if there is absolutely no possibility of printing the full size barcode because the trade item is physically too small; the X-Dimension SHALL NOT be less than 0.250 millimetre (0.0098 inch).
- The regular minimum standard height for GS1-128 symbols in General distribution scanning is 31.75 millimetres (1.250 inch). If the trade item is physically too small to accommodate the minimum, for GS1-128 the minimum height can be reduced to 12.70 millimetres (0.500 inch).

3.3.3. Label Size

The size of the label depends on the amount of data and the size of the trade unit. It is important to observe the technical specifications shown under 3.3.2. Barcodes must be readable. Minimum legal information must be readable.

1. Common label sizes for trade units are A6 (105 mm x 148 mm) for a carton if there is enough space.
2. If there are space constraints, labels may be smaller.
3. On crates: Crates often require smaller labels than A6 and different placement rules. According to the slot for the label it may be recommended to put the bar code on top of the label or elsewhere so that the barcode is readable. Otherwise this may result in a bad example as shown in the examples under 3.6 where the barcode is not readable due to space constraints.

 **Note:** For label examples please see chapter 3.6

As the size of the barcode is crucial for the size of the label see three GS1-128 barcode examples below (all with X-dimension 0,495 mm):



Encoded data is AI 01 with GTIN
Width incl. light margin: 77 mm
Height: 31,75 mm

1. Example



Encoded data is AI 01 with GTIN AI 10 with purely numeric lot/batch number
 Width incl. light margin: 93 mm
 Height: 31,75 mm

2. Example



Encoded data is AI 01 with GTIN AI 10 with alphanumeric lot/batch number.
 Width incl. light margin: 109 mm
 Height: 31,75 mm

3. Example

3.3.4. Human Readable Interpretation/Human Readable text

- Below each bar code a human readable interpretation (HRI) must show the content.
- Further human readable text (Non-HRI) may be added on the label according to business process and legal requirements. This may include country of origin, variety, nutritional information, etc.

3.4. Label Design (How to design a label)

The supplier/packer decides how the label is structured and designed by taking into account marketing aspects, legal requirements and GS1 specifications and implementation guidelines. In case of private labels, the retailer provides the relevant requirements. Barcode size and quality should be in accordance with the GS1 General Specifications.

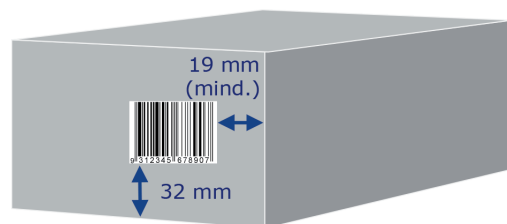
3.5. Label Placement (Where to put the label)

When placing labels on fruit and vegetables, the following principles, practices and examples should be considered to assure the labels will be properly and efficiently scanned. The GS1 General Specifications provide specifications for label placement as follows:

Barcode 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 millimeters (1.25 inches) from the natural base of the item. The barcode including, its Quiet Zones, should be at least 19 millimeters (0.75 inch) from any vertical edge to avoid damage.

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



Barcode 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 between 400 millimetres (16 inches) and 800 millimetres (32 inches) from the base of the pallet.

For reasons of automated recognition in warehouses the placement of the barcodes should be between 400 and 800 mm from the bottom.

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.

In case the trade unit is a logistics unit at the same time further requirements in terms of identification and labelling must be observed. To this purpose see “Integrated Guideline Part 4c – Labelling of Logistic Units”.

3.6. Label Examples

For the size of the right x-dimension and the actual size of the barcode please see 3.3.2.

3.6.1. Carton Label

a) Carton label with GTIN (AI 01) and lot number (AI 10) in GS1-128 barcode and other human readable text.



Produkt: Trauben weiss
Sorte: *Victoria*
Gewicht: 4,5 kg **Klasse:** I
Ursprung: Italien
Los Nr: L0805
Karton-GTIN: 8430631055797



(01)08430631055797(10)L0805

CT:184306310010000012 Packer: RGS 2116832/CS

Gepackt für : Sanlucar Fruit S.L. C/Serra Llarga 24
46530 Puzol Valencia (Italien)

b) Carton label with with GTIN AI (01) and lot number AI (10) in GS1-128 barcode

Label dimension: 10,16 cm x 6,35 cm

The diagram shows a label with the following content and callouts:

- Barcode:** (01)04311527229109(10)0308
- Brand, Bio, Produce:** BRAND ORGANIC CHERRY TOMATOES ON THE VINE (Arial 20, bold, Capital letters)
- Other data:** Class II 10x200g 20/30mm L0308 (Arial 14, bold)
- Packer data:** Germany, Vierlanden (Arial 10)
- Indication of GGN optional:** DE-BIO-039 EU-Landwirtschaft
- Additional text:** Packer GmbH, New-York-Ring 13, D-22292 Hamburg GGN: 4055400000002

3.6.2. Labels for returnable asset items

a) Crate with label in slot



b) Labels in slot with barcode on top

Label dimension: 8,8 cm x 6 cm

(01)04311527229109(10)0308

**BRAND ORGANIC CHERRY
TOMATOES ON THE VINE**

Class II 10x200g 20/30mm L0308
Germany, Vierlanden

Packer GmbH, New-York-Ring 13,
D-22292 Hamburg GGN:4055400000002

DE-BIO-039
EU-Landwirtschaft

Brand, Bio, Produce
(Arial 18, bold, Capital letters)

Other data
(Arial 12, bold)

Packer data
(Arial 10)


(01)08717959120015(10)0308

PEARS, CONFERENCE

Class I 12kg 65-70mm L0308
Origin: Netherlands

Frug-I Com, Louis Pasteurlaan 6
2719 EE Zoetermeer, Netherlands GLN:8717959010005

In case of doubt opt for example b) with the barcode on top as this allows for a bigger barcode and therefore better readability.

 **Note:** For possible barcode sizes see 3.3.2 The grid on the label above is for illustration purposes only and not on the actual label.

3.6.3. Bad examples

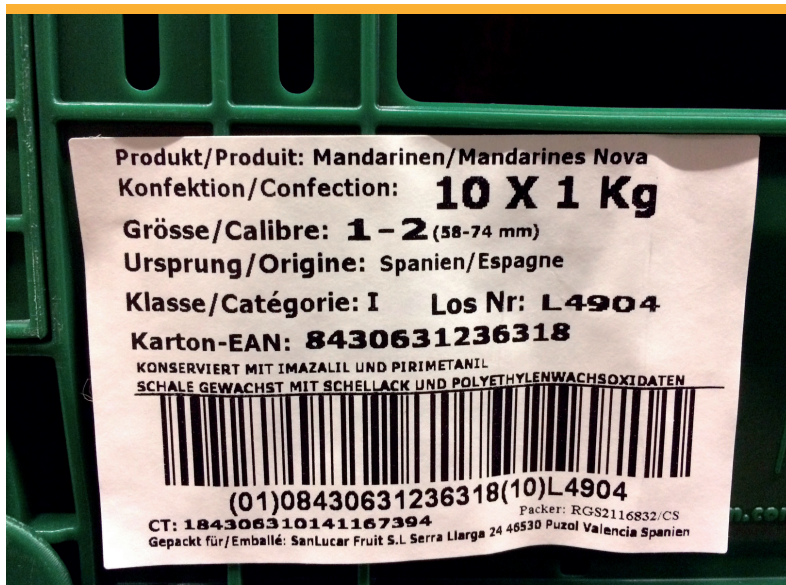
a) Barcode is not readable as light margin on the left side is affected.



b) The barcode height is too low and may affect readability.



- c) Usually labels are not allowed to be put as sticker on a crate unless there is a special agreement. In this case the glue should be checked in different procedures and then be approved for use with relevant trading partners




3.7. Specific Label Scenarios for Trade Units

The paragraphs below provide label details of the most relevant label solutions for:

1. Trade unit (fixed weight, for general distribution only)
2. Trade unit (fixed weight, for PoS and General Distribution)

3.7.1. Label for Trade unit (fixed weight, for warehouse/general distribution only)

Information in the barcode	Further Information on the label
<p>Mandatory:</p> <p>GTIN with AI 01</p> <p>Lot number with AI 10</p> <p>Optional:</p> <p>Packaging Date with AI 13</p> <p>Data Carrier:</p> <p>GS1-128 barcode</p>	<p>Human Readable Interpretation below each barcode (HRI)</p> <p> Note:</p> <p>Regulatory requirements may apply to labels used on trade item (e.g. country of origin). Please refer to your local regulatory requirements and the legal summary provided within this guideline in Annex.</p> <p>According to EU directive 2011/91 EU it is recommended to put the L in front of the lot number, even if the lot number is indicated in local language, to qualify this piece of data. In this case the L precedes the lot number and is NOT part of the encoded lot number itself. In the bar code AI 10 always indicates a lot number and is thus the equivalent for the human readable L.</p>

Note: When GTINs are encoded in a GS1-128 barcode 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. These series of GTINs may be stored with or without leading zeroes in the same database field, depending on the requirements of the particular application.

3.7.2. Label for Trade unit (fixed weight, for PoS and warehouse/general distribution)

This scenario combines the requirements of two reading environments. In this case two bar codes are recommended by fruit & vegetable industry to meet the requirements.

Information in the barcode	Further Information on the label
<p>Mandatory for general distribution:</p> <p>GTIN with AI 01</p> <p>Lot number with AI 10</p> <p>Optional:</p> <p>Packaging Date with AI 13</p> <p>Data Carrier:</p> <p>GS1-128 barcode</p> <p>Mandatory for PoS</p> <p>GTIN in EAN/UPC symbol for PoS</p>	<p>Human Readable Interpretation below each barcode (HRI)</p> <p>Note:</p> <p>Regulatory requirements may apply to labels used on item (e.g. country of origin).</p> <p>According to EU directive 2011/91 EU it is recommended to put the L in front of the lot number, even if the lot number is indicated in local language, to qualify this piece of data. In this case the L precedes the lot number and is NOT part of the encoded lot number itself. In the bar code AI 10 always indicates a lot number and is thus the equivalent for the human readable L.</p>

Front side: Label with GTIN in EAN-Symbol for PoS



Adjacent side: Label with identical GTIN plus lot number in GS1-128 barcode for general distribution



4. Resources

GS1 General Specifications

www.gs1.org/barcodes-epcrfid-id-keys/gs1-general-specifications

Information about structure and use of the GTIN:

www.gs1.org/barcodes/technical/idkeys/gtin

GS1 in Europe

www.gs1.eu

Legal Requirements in the EU for Labels on Fruit & Vegetables as well as other GS1 in Europe
Guidelines on Fruit & Vegetables

<http://www.gs1.eu/activity/fruit-and-vegetable-traceability>

GTIN Allocation Rules for Fresh Foods

www.gs1.org/1/gtinrules/index.php/tid=32

GS1 Global Office

www.gs1.org

UNECE Standards for Fresh Fruits and Vegetables (FFV)

www.unece.org/trade/agr/standard/fresh/FFV-StandardsE.html

UNECE Standards for Dry and Dried Produce (DDP)

www.unece.org/trade/agr/standard/dry/DDP-Standards.html

Codex Alimentarius – International Food Standards

www.codexalimentarius.org

EU Regulation on Fruit & Vegetables EU 543/2011 and EU Regulation 1169/2011

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:157:0001:0163:EN:PDF>

IFPS Produce PLU “A Users’ Guide”

www.ifpsglobal.com and/or www.plucodes.com

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. Glossary – GS1 Terms & Definitions

Term	Definition
Automatic identification and data capture (AIDC)	A technology used to automatically capture data. AIDC technologies include barcodes, smart cards, biometrics and RFID.
Barcode	A symbol that encodes data into a machine readable pattern of adjacent, varying width, parallel, rectangular dark bars and pale spaces.
Barcode verification	The assessment of the printed quality of a barcode based on ISO/IEC standards using ISO/IEC compliant barcode verifiers.
Batch/Lot	The batch or lot number associates an item with information the manufacturer considers relevant for traceability of the trade item. The data may refer to the trade item itself or to items contained in it.
Brand owner	The party that is responsible for allocating GS1 identification keys. The administrator of a GS1 Company Prefix.
Check digit	A final digit calculated from the other digits of some GS1 Identification Keys. This digit is used to check that the data has been correctly composed. (See GS1 Check Digit Calculation.)
Customer	The party that receives, buys, or consumes an item or service.
Data character	A letter, digit, or other symbol represented in the data field(s) of an element string.
Data field	A field that contains a GS1 Identification Key, an RCN, or attribute information

Data titles	Data titles are the abbreviated descriptions of Element Strings which are used to support manual interpretation of barcodes.
EAN/UPC symbology	A family of barcodes including EAN-8, EAN-13, UPC-A, and UPC-E barcodes. Although UPC-E barcodes do not have a separate symbology identifier, they act like a separate symbology through the scanning application software. See also EAN-8 barcode, EAN-13 barcode, UPC-A barcode, and UPC-E barcode.
EAN-13 barcode	A barcode of the EAN/UPC symbology that encodes GTIN-13, Coupon-13, RCN-13, and VMN-13.
Element	A single bar or space of a barcode.
Extension digit	The first digit within the SSCC (Serial Shipping Container Code) which is allocated by the user and is designed to increase the capacity of the SSCC.
Fixed measure trade item	An item always produced in the same pre-defined version (e.g., type, size, weight, contents, and design) that may be sold at any point in the supply chain.
Fresh foods	Trade items in the following product categories: fruits, vegetables, meats, seafood, bakery and ready to serve food such as cheeses, cold cooked or cured meats, and salad, etc. Fresh Foods is defined as food that is not preserved by canning, dehydration, freezing or smoking.
General Distribution Scanning	Scanning environments that include barcoded trade items packaged for transport, logistic units, assets, and location tags.
Global Trade Item Number (GTIN)	The GS1 identification key used to identify trade items. The key comprises a GS1 Company Prefix, an item reference and check digit.
GS1 AIDC data carrier	A means to represent data in a machine readable form; used to enable automatic reading of the Element Strings as specified for use by GS1.
GS1 Application Identifier	The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.
GS1 Company Prefix	A unique string of four to twelve digits used to issue GS1 identification keys. The first digits are a valid GS1 Prefix and the length must be at least one longer than the length of the GS1 Prefix. The GS1 Company Prefix is issued by a GS1 Member Organisation. As the GS1 Company Prefix varies in length, the issuance of a GS1 Company Prefix excludes all longer strings that start with the same digits from being issued as GS1 Company Prefixes. See also U.P.C Company Prefix.
GS1 DataBar	A family of barcodes, including GS1 DataBar Omnidirectional; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked GS1 DataBar Truncated, GS1 DataBar Limited, and GS1 DataBar Stacked symbols.
GS1 Global Data Dictionary	A repository tool used to record GS1 member standards agreements on business terms and definitions used by all business units.
GS1	Based in Brussels, Belgium, and Princeton, USA, it is the organisation that manages the GS1 System. Its members are GS1 Member Organisations.
GS1-128 symbology	A subset of Code 128 that is utilised exclusively for GS1 system data structures.
GS1 Identification Key	A numeric or alphanumeric data field defined by GS1 to ensure the global, unambiguous uniqueness of the identifier in the open demand or supply chain.
GS1 Identification Keys	A globally managed system of numbering used by all GS1 Business Units to identify trade items, logistic units, locations, legal entities, assets, service relationships, consignment, shipments and more. Any identification number that combines GS1 member company identifiers (GS1 Company Prefix) with standards based rules for allocating reference numbers is a key.

GS1 Member Organisation	A member of GS1 that is responsible for administering the GS1 System in its country (or assigned area). This task includes, but is not restricted to, ensuring brand owners make correct use of the GS1 System, have access to education, training, promotion and implementation support and have access to play an active role in GSMP.
GS1 Prefix	A unique string of two or more digits issued by GS1 Global Office and allocated to GS1 Member Organisations to issue GS1 Company Prefixes or allocated to other specific areas.
GS1 system	The specifications, standards, and guidelines administered by GS1.
GTIN application format	A format for a GTIN-8, GTIN-12, or GTIN-13 used when a GTIN application uses a fixed field length, for example, when a GTIN-13 is encoded in symbology using Application Identifier (01).
GTIN-12	The 12-digit GS1 Identification Key composed of a U.P.C. Company Prefix, Item Reference, and Check Digit used to identify trade items.
GTIN-13	The 13-digit GS1 Identification Key composed of a GS1 Company Prefix, Item Reference, and Check Digit used to identify trade items.
GTIN-14	The 14-digit GS1 Identification Key composed of an Indicator digit (1-9), GS1 Company Prefix, Item Reference, and Check Digit used to identify trade items.
GTIN-8	The 8-digit GS1 Identification Key composed of a GS1-8 Prefix, Item Reference, and Check Digit used to identify trade items.
Human Readable Interpretation (HRI)	Characters, such as letters and numbers, which can be read by persons and are encoded in GS1 AIDC data carriers confined to a GS1 standard structure and format. The Human Readable Interpretation is a one-to-one illustration of the encoded data. However start, stop, shift and function characters, as well as the symbol check character, are not shown in the human readable interpretation.
Leading Zero(s)	Digits (always zeroes) which must be placed in the leftmost position(s) of a data string when GTIN-8, GTIN-12, or GTIN-13 are encoded in an GS1 AIDC data carrier that requires 14-digits (see also GTIN Application Format) or when used for the same intent in other data structures such as GRAI.
Logistic unit	An item of any composition established for transport and/or storage that needs to be managed through the supply chain. It is identified with an SSCC.
Loose Produce	Fruits and vegetables which are delivered to the store loose, in boxes or cases, and then put into a bag or selected individually by the customer for purchase.
Non-HRI Text	Characters such as letters and numbers that can be read by persons and may or may not be encoded in GS1 AIDC data carriers and are not confined to a structure and format based on GS1 standards (e.g., a date code expressed in a national format and format based on GS1 standards (e.g., a date code expressed in a national format that could be used to encode a date field in a GS1 AIDC data carrier, brand owner name, consumer declarations).
Point-of-Sale (POS)	Refers to the retail checkout where omnidirectional barcodes must be used to enable very rapid scanning or low volume checkout where linear or 2D matrix barcodes are used with image-based scanners.
Serial Shipping Container Code	The GS1 identification key used to identify logistics units. The key comprises an extension digit, GS1 Company Prefix, serial reference, and check digit.
Shipment	A grouping of logistics and transport units assembled and identified by the seller (sender) of the goods travelling under one despatch advice and/or Bill of Lading to one customer (recipient).

Trade item grouping	A predefined composition of trade item(s) that is not intended for Point-of-Sale scanning. It is identified with a GTIN-14, GTIN-13, or GTIN-12.
Symbol	The combination of symbol characters and features required by a particular symbology, including Quiet Zone, Start and Stop Characters, data characters, and other auxiliary patterns, which together form a complete scannable entity; an instance of a symbology and a data structure.
Symbol character	A group of bars and spaces in a symbol that is decoded as a single unit. It may represent an individual digit, letter, punctuation mark, control indicator, or multiple data characters.
Symbology	A defined method of representing numeric or alphabetic characters in a barcode; a type of barcode.
Symbology element	A character or characters in a barcode used to define the integrity and processing of the symbol itself (e.g., start and stop patterns). These elements are symbology overhead and are not part of the data conveyed by the barcode.
Symbology element	A character or characters in a barcode used to define the integrity and processing of the symbol itself (e.g., start and stop patterns). These elements are symbology overhead and are not part of the data conveyed by the barcode.
Symbology identifier	A sequence of characters generated by the decoder (and prefixed to the decoded data transmitted by the decoder) that identifies the symbology from which the data has been decoded.
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.
Variable Measure Trade Item	A trade item which may be traded without a pre-defined measure, such as its weight or length.
X-dimension	X-dimension The specified width of the narrowest element of a barcode.

[source: GS1 General Specifications]

5.3. Barcode measurements in general distribution

Extract from General Specifications 2017:

5.5.2.7.2 Symbol Specification Table 2 – Trade Items Scanned in General Distribution Only

Figure 5.5.2.7.2-1 GS1 System Symbol Specification Table 2

Symbol(s)	(*) 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	
EAN-13	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	11X	7X	1.5/10/660
EAN-8	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	27.35 (1.077")	36.46 (1.435")	36.46 (1.435")	7X	7X	1.5/10/660
UPC-A	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	9X	9X	1.5/10/660
UPC-E	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	9X	7X	1.5/10/660
ITF-14	0.495 (0.0195")	0.495 (0.0260")	1.016 (0.0400")	31.75 (1.250")	31.75 (1.250")	31.75 (1.250")	10X	10X	1.5/10/660
GS1-128	0.495 (0.0195")	0.495 (0.0260")	1.016 (0.0260")	31.75 (1.350")	31.75 (1.800")	31.75 (1.800")	10X	10X	1.5/10/660
GS1 Databar Omnidirectional	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	16.34 (0.644")	21.78 (0.858")	21.78 (0.858")	NA	NA	1.5/10/660
GS1 Databar Stacked Omnidirectional	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.16 (1.346")	45.54 (1.794")	45.54 (1.794")	NA	NA	1.5/10/660
GS1 Databar Expanded	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	16.83 (0.663")	22.44 (0.884")	22.44 (0.884")	NA	NA	1.5/10/660
GS1 Databar Expanded Stacked	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	16.83 (0.663")	22.44 (0.884")	22.44 (0.884")	NA	NA	1.5/10/660

For trade units scanned at general retail POS and general distribution please see the figure below:

5.5.2.7.3 Symbol Specification Table 3 – Trade items scanned at general retail POS general distribution

Figure 5.5.2.7.3-1 GS1 System Symbol Specification Table 3

Symbol(s)	(*) 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	
EAN-13	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	11X	7X	1.5/06/660
EAN-8	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	27.35 (1.077")	36.46 (1.435")	36.46 (1.435")	7X	7X	1.5/06/660
UPC-A	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	9X	9X	1.5/06/660
UPC-E	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	34.28 (1.350")	45.70 (1.800")	45.70 (1.800")	9X	7X	1.5/06/660
GS1 Databar Omnidirectional (***)	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	22.77 (0.897")	30.36 (1.196")	30.36 (1.196")	None	None	1.5/06/660
GS1 Databar Stacked Omnidirectional (***)	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	47.03 (1.853")	62.70 (2.470")	62.70 (2.470")	None	None	1.5/06/660
GS1 Databar Expanded	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	16.83 (0.663")	22.44 (0.884")	22.44 (0.884")	None	None	1.5/06/660
GS1 Databar Expanded Stacked	0.495 (0.0195")	0.660 (0.0260")	0.660 (0.0260")	35.15 (1.385")	46.86 (1.846")	46.86 (1.846")	None	None	1.5/06/660

5.4. Barcode Quality – Example of a testing summary

Source: General Specifications 2017

5.5.3.5.3 GS1 Barcode verification template for linear symbols

<Name>	Issue date <Data 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>

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

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

Testing summary of the linear symbol

GS1 parameters	Comment reference	Assessed	With standard range	Required
Symbol structure ¹			✓	(dependent on symbol encoded)
X-dimension (magnification)		0.330 mm ³ (0.0130 inch)	✓	0.264–0.660 mm (0.0104–0.0260 inch)
Barcode height		23 mm (0.9 inch)	✓	22.85 mm (0.900 inch)
Quiet Zone (left)			✓	3.63 mm (0.143 inch)
Quiet Zone (right)			✓	2.31 mm (0.091 inch)
Human readable			✓	One-to-one match with barcode data
Barcode width			✓	≤ 165.10 mm (≤ 6.500 inch)
Validity of GS1 Company Prefix			✓	
Data structure			✓	(dependent on structure encoded)

ISO/IEC parameters	Comment reference	Grade ISO/IEC	With standard range	Required
Overall ISO6IEC grade ²		3.8/06/660	✓	≥1.5
Decode		4.0	✓	
Symbol contrast		3.8	✓	
Minimum reflectance		4.0	✓	
Edge contrast		4.0	✓	
Modulation		4.0	✓	
Defects		4.0	✓	
Decodability		4.0	✓	

Educational comments⁴

(1) Includes check digits, ITF-14 wide-to-narrow ratio, etc. (2) 0.5 acceptable for ITF-14 with X-dimension ≥ 0.635mm




(3) The text in orange in this table provides sample results from the testing of an EAN/UPC symbol.

(4) Educational comments are based on the technical analysis of the symbol. In this comment box the operator comments on what the problem is and how to make the symbol better.

5.5. Legal requirements for labels on fruit & vegetables trade units in the European Union

Apart from the requirements between the business partners, it is necessary to provide on labels for trade units the right information according to a number of relevant EU directives like EU 1169/2011 or EU 543/2011 and their national implementations. Based on a business view, the following tables aim to help companies in the fruit & vegetable sector and their business partners to have the same understanding regarding the legal requirements and provide guidance about the needed information on a label from a legal point of view.

Unprocessed Fruit & Vegetables - Label requirements for Trade Packages

	Open trading package (case) containing consumer items E 	Closed trading package (case) containing consumer items F 	Trading package (case) containing bulk/loose commodity G 
Description	The label on prepacked consumer items is visible from the outside of the trading package.	The label on prepacked consumer items is not visible from the outside of the trading package.	Trading packages containing loose items may be covered by e.g. paper, carton or foil.
General	Labelling of a trading package is not required when it contains labelled consumer units which are visible from the outside.	All mandatory information applying to consumer items must also be declared or labelled on the trading package (Crate, Carton, Box).	Information on the trading package is obliged.
Nature of produce = Regulated product name	Not applicable for open trade packages with clearly visible consumer package labels.	A common and general name must be used. The name describes the nature of the produce.	A common and general name must be used. The name describes the nature of the produce.
Language	Not applicable for open trade packages with clearly visible consumer package labels.	The EU requires that the text on the label must be written in one of the official languages of an EU member state and be comprehensible for the consumer.	The EU requires that the text on the label must be written in one of the official languages of an EU member state and be comprehensible for the consumer.
Minimum Fontsize	Not applicable.	There is no regulation for minimum fontsize on trading packages.	There is no regulation for minimum fontsize on trading packages.
Country of Origin	Not applicable for open trade packages with clearly visible consumer package labels.	The full name of the country of origin must be declared on the label. In case the article contains components coming from various countries, the label will contain a list of ingredients detailing the amount and countries of origin for each component.	The full name of the country of origin must be declared on the package label.
Identification of packer or other relevant parties	Not applicable for open trade packages with clearly visible consumer package labels.	The name and address of the packer must be declared. This may be replaced by the officially issued or accepted code mark representing the packer and/or the dispatcher, indicated in close connection with the reference 'Packer and/or Dispatcher' (or equivalent abbreviations).	The name and address of the packer must be declared. This may be replaced by the officially issued or accepted code mark representing the packer and/or the dispatcher, indicated in close connection with the reference 'Packer and/or Dispatcher' (or equivalent abbreviations).
Quantity: Net content expressed as count or net weight	Not applicable for open trade packages with clearly visible consumer package labels.	The size (sorting) of products for which specific marketing standards apply must be identified in accordance to the standard concerned.	The size (sorting) of products for which specific marketing standards apply must be identified in accordance to the standard concerned.
Best Before Date/ Expiry Date	Not applicable for fresh fruit & vegetables.	Not applicable for fresh fruit & vegetables.	Not applicable for fresh fruit & vegetables.
Production Lot number	Not applicable for open trade packages with clearly visible consumer package labels.	A production batch identification or lot number is mandatory on the trading package (Crate, Carton, Box).	A production batch identification or lot number is mandatory on the trading package (Crate, Carton, Box).
List of Ingredients	Not applicable for open trade packages with clearly visible consumer package labels.	Not applicable for trading packages.	Not applicable for trading packages.
Allergenic declaration	Not applicable for open trade packages with clearly visible consumer package labels.	Not applicable for trading packages.	Not applicable for trading packages.
Declaration of nutritional value	Not applicable for open trade packages with clearly visible consumer package labels.	Not applicable for fresh fruit & vegetables.	Not applicable for fresh fruit & vegetables.
Additives including waxes	Not applicable for trading packages with unprepared fruit and vegetables.	Not applicable for trading packages with unprepared fruit and vegetables.	Not applicable for trading packages with unprepared fruit and vegetables.
Post Harvest Treatment	Not applicable for open trade packages with clearly visible consumer package labels.	Anti-moulding agents added in a post-harvest treatment on citrus fruits must be mentioned on the trade package	Anti-moulding agents added in a post-harvest treatment on citrus fruits must be mentioned on the trade package
Protective Atmosphere	Not applicable for trading packages.	Not applicable for trading packages.	Not applicable for trading packages.
Product dependent information requirement	For products for which the specific marketing standards apply, additional information about Quality Class Size, Variety or Commercial Type and Post-harvest treatment has to be declared either on the product or in close proximity (on the shelf) in accordance with the specific UNECE product standard.		

Trading package (case) is sold in consumer phase as a consumer unit case, non prepacked H 	Additional remarks	Relevant Regulation (Source)
All regulations for consumer items and for trading packages apply.	These definitions for processed and unprocessed fruit and vegetables are only applicable for the labelling process. There are other definitions of prepared for other purposes in other regulations. The distinction between prepared and processed produce is defined in EU 852/2004, EU 1169/2011 defines information requirements for processed products.	EU 852/2004; EU 543/2011 Annex VI contains the categories of processed products; EU 1169/2011.
In the trading phase labelling on the package is required. The marketing of packages with mixes of different species of fruit and vegetables is allowed provided they contain a net weight of 5kg or less.	When mandatory information on a consumer item is not visible when packed in a case, then the same information must be displayed on the case as well.	EU 543/2011 art. 5 & 6; EU 1169/2011 art. 9 part 1, art. 12 & 13.
A common and general name must be used. The name describes the nature of the produce.	When a product is in a certain state, then that must be part of the product name to avoid misleading the end consumer. E.g. Dried figs, Peeled and diced mango's.	EU 1169/2011 art. 17.
The EU requires that the text on the label must be written in one of the official languages of an EU member state and be comprehensible for the consumer.	In several countries such as Belgium, France, The Netherlands and Germany, there is a national requirement that the language on the label must be one of the official languages of that country.	EU 1169/2011 art. 15; EU 543/2011 (trading units).
1,2 mm (if label <80 cm ² then 0,9 mm).		EU 1169/2011 art. 13 par. 2-3.
The full name of the country of origin must be declared on the label. In case the article contains components coming from various countries, the label will contain a list of ingredients detailing the amount and countries of origin for each component.	Abbreviations or ISO codes such as UK for Great Britain or DE for Germany are NOT allowed.	EU 543/2011 art. 7. and Annex 1; EU 1169/2011 (art. 26); EU 1308/2013 art. 113/1.
Mandatory. Full name and address of packer or trader. Alternatively can be identified by the name and the address of a seller (retailer) established within the Union, indicated in close connection with the denomination 'Packed for:' or an equivalent denomination.	In case the denomination "Packed for" is used, the labelling shall also include a code mark representing the packer and/or the dispatcher. The seller shall give all information deemed necessary by the inspection body as to the meaning of this code mark.	EU 543/2011 annex 1 part A; EU 1169/2011 art. 8
The quantity in the package is usually expressed as net weight (in grams or kilograms). Net weight is not compulsory for products which are usually sold by number provided that the number of items is clearly visible from outside or the number is mentioned on the label.	Some products loose a considerable amount of their weight or volume. Prepackages can be marketed either fixed or variable weight; In the first case, the weight must reflect the shrinkage (water loss) throughout the supply-chain. EU 543/2011 prevails above EU 1169/2011.	EU 1169/2011 - art. 23 + appendix X; EU 543/2011 art. 6.
Not applicable for fresh fruit & vegetables.	Although it is not mandatory for fresh unprocessed fruit and vegetables the use of best-before-date is encouraged.	EU 1169/2011 - art. 24 + appendix X.
A production batch identification or lot number is mandatory on the trading package (Crate, Carton, Box).	A clearly defined Best-Before-Date or Production Date can be used as alternative for the lot number. The lot number shall be preceded by the letter 'L' except in cases where it is clearly distinguishable from the other indications on the label.	2011/91/EU art. 3
Not applicable for trading packages.	A list of ingredients is not required for unprepared fresh fruit and vegetables nor for products that contain only 1 ingredient and have the name of that single ingredient in the product name. (Cherrytomato contains tomato)	EU 1169/2011 art. 18- par. 1 and 21. EU 1169/2011 Appendix VII art. 19 par. 1 a and e.
In F&V only applicable for Celery (leaves, stems and roots). This is not compulsory when the name of the allergen is part of the regulated productname. As this always contains the nature of produce an allergenic declaration will never be mandatory in this case.	An allergenic declaration in the list of ingredients must be highlighted (for example CAPITAL, bold or italic). Voluntary declaration of other allergens such as radish is encouraged.	EU 1169/2011.
Not applicable for fresh fruit & vegetables.	The distinction between prepared and processed produce is defined in EU 852/2004. EU 1169/2011 defines information requirements for processed products.	EU 852/2004 art. 2 par. 1: definition of processed and unprocessed products EU 1169/2011.
Not applicable for trading packages with unprepared fruit and vegetables.	EU 1169/2011 Annex VII part C contains all categories of additives. Waxes used on fruits are considered additives too. Aromas are a separate category for which the same applies. The EU has published a positive list of additives and waxes and the quantities that may be used. Note that additives must be declared in the list of ingredients which is not applicable for unprepared fruit and vegetables. A maximum of 10 mg/kg of sulfite can be administered to packages of fruit, e.g. blueberries, lychees and tablegrapes. Excession of this value must be declared as an allergen!	EU 1333-2008; EU 1169/2011 Annex VII part C.
Anti-molding agents added in a post-harvest treatment on citrus fruits must be mentioned on the package.		EU 543/2011 annex I
Not applicable for trading packages.	The type of gas used for the protective atmosphere should explicitly be allowed in EU 1333/2008	EU 1169/2011 Annex III; EU 1333/2008.
	Products with specific marketing standards are: apples, citrus, peaches and nectarines, pears, strawberries, sweet peppers, table fruit, kiwi fruit, lettuces, curled leaved and broad-leaved endives, grapes, tomatoes. Providing this information is recommended for all other products covered by UNECE Standards.	EU 543/2011 annex I and art. 3; EU 1243/2007 art. 113/1.

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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.

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