Integrated Guideline Part 4a:
Labelling of Consumer Units
Supply Chain Management for Fresh Fruit and Vegetables

in collaboration with
FrugiCom
Foundation Platform Fresh Chain Information
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**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.fruisco.com](http://www.fruisco.com).

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<td>Klaus Förderer</td>
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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 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 identification, which can be achieved by using the GS1 standards, these demands can be fulfilled by small, medium and large size companies.

This guideline is based on the “GS1 Fresh Fruit & Vegetable Labelling Consumer Units Guideline” provided by GS1 Global Office. In addition to the global document the GS1 in Europe Fruit & Vegetable Group added target-market specific information for Europe as well as legal labelling requirements in the European Union.

### 1.1. Purpose and Scope of this Guideline

Increasingly there is an 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 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.

This document is focusing on legal and business requirements for Europe. 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 consumer unit (each). Labelling of trade unit (case) and logistic unit (pallet) levels will be addressed in future versions. 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

Out of scope are labels with Restricted Circulation Numbers (RCN) that are only unique in a certain closed environment, geographic region or company.

1 Restricted Circulation Numbers can be used to identify variable measure units for Point-of-Sale (POS) but are subject to national GS1 specifications. For more details contact your local GS1 organisation.
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) text, to permit 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 and regulations such as nutritional information. And the content may include other elements such as artwork and other Non-HRI text.

The primary purpose of the GS1 Implementation Guideline “Fresh Fruit and Vegetable Labelling Consumer Units” is to provide detailed guidance on how to implement the GS1 labelling standards for fresh fruit and vegetables. This guideline addresses labelling of consumer units (each) in Section 3.

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 bar code and Non-HRI Text is all other text on package, label or item.

Below is an example of HRI:

![Barcode Example](image)

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

For the European Union as target market legal guidance is provided in the annex.

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

![Note Icon](image)

There are also remarks included as an aid to users in identifying where mandatory and/or optional requirements for labelling might apply. These are identified using the Remark icon.

![Remark Icon](image)

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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS1 Application Identifier</td>
<td>The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.</td>
</tr>
<tr>
<td>Consumer Unit (Each)</td>
<td>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.</td>
</tr>
<tr>
<td>Each</td>
<td>An individual fruit or vegetable (e.g. an apple, a pineapple or a pepper).</td>
</tr>
<tr>
<td>Fixed Measure Trade Item</td>
<td>A consumer unit (Each) always sold in the same pre-defined measure such as size, weight, contents (e.g. a punnet with 6 round tomatoes).</td>
</tr>
<tr>
<td>Global Trade Item Number (GTIN)</td>
<td>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.</td>
</tr>
<tr>
<td>Human Readable</td>
<td>Human readable text located below a barcode symbol representing the characters encoded in the barcode.</td>
</tr>
<tr>
<td>Non-HRI Text</td>
<td>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, etc.)</td>
</tr>
<tr>
<td>IFPS PLU Rules</td>
<td>International Federation of Produce standards’ rules on the use of the PLU.</td>
</tr>
<tr>
<td>Logistic Unit (Pallet)</td>
<td>This term is used in this guideline for the labelling of fresh fruit and vegetables for transportation and storage in the produce supply chain.</td>
</tr>
<tr>
<td>Loose</td>
<td>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.</td>
</tr>
<tr>
<td>IFPS PLU (Price Look Up)</td>
<td>An IFPS PLU number on the label in human readable text used to identify the consumer unit.</td>
</tr>
<tr>
<td>Restricted Circulation Number (RCN)</td>
<td>Signifies a GS1 identification number used for special applications in restricted environments, defined by the local GS1 Member Organization (e.g. restricted within a country, company, industry). They are allocated by GS1 for either internal use by companies or to GS1 Member Organisations for assignment based on business needs in their country (e.g. variable measure product identification).</td>
</tr>
<tr>
<td>Trade Item</td>
<td>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.</td>
</tr>
<tr>
<td>Trade Unit (Case)</td>
<td>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, RPCs, cartons, cases, bins and totes. These items can be trade items and/or logistic units.</td>
</tr>
<tr>
<td>Variable Measure Trade Item</td>
<td>A Consumer Unit (Each) which may be traded without pre-defined measure, such as size or weight.</td>
</tr>
</tbody>
</table>
1.5. Legal and Regulatory Requirements

This guideline does not cater to all legal aspects in different countries and regions. Examples where legal and regulatory requirements might apply to the labelling of fresh fruit and vegetables are identified using the Remarks icon; however, 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.

Remark (GS1 in Europe): 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. All parties in the process should be able to process these variants of the GTIN.

<table>
<thead>
<tr>
<th>GTIN</th>
<th>GTIN format</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTIN-8</td>
<td>N7 + C</td>
</tr>
<tr>
<td>GTIN-12</td>
<td>N11 + C</td>
</tr>
<tr>
<td>GTIN-13</td>
<td>N12 + C</td>
</tr>
<tr>
<td>GTIN-14</td>
<td>N13 + C</td>
</tr>
</tbody>
</table>

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.
Supply Chain Management for Fresh Fruit and Vegetables – Integrated Guideline Part 4a: Labelling of Consumer Units

2.2. GS1 Barcodes

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

2.2.1. Point-Of-Sale

At the Point-Of-Sale (POS) the following barcode symbols are relevant:

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Date of Change</th>
<th>Summary of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAN-8 symbol</td>
<td>GTIN-8</td>
<td>• Used for point-of-sale identification of pre-packaged, fixed weight/count trade items</td>
</tr>
<tr>
<td>UPC-A symbol</td>
<td>GTIN-12</td>
<td>• Used for point-of-sale identification of pre-packaged, fixed weight/count trade items</td>
</tr>
<tr>
<td>EAN-13 symbol</td>
<td>GTIN-13</td>
<td>• Used for point-of-sale identification of pre-packaged, fixed weight/count, trade item</td>
</tr>
<tr>
<td>GS1 DataBar Stacked Omnidirectional symbol</td>
<td>Encodes a 14-digit data string with GTIN-12, GTIN-8, or GTIN-13</td>
<td>• Used for point-of-sale identification of loose trade items</td>
</tr>
<tr>
<td>GS1 DataBar Expanded symbol (stacked omnidirectional)</td>
<td>Encodes a 14-digit data string with GTIN-12, GTIN-8, or GTIN-13</td>
<td>• GS1 DataBar Expanded and GS1 DataBar Expanded Stacked can encode additional information such as net weight and Best Before Date</td>
</tr>
</tbody>
</table>

Remark:

Please note

• Systems always need to cater for 14-digit GTINs.

• 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 weight) can be encoded in different data carriers according to the application.

• When GTINs are encoded in a data carrier that must encode a fixed-length data string of 14-digits, the 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.

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 relevant for consumer units in this implementation guideline. For a complete list of GS1 Application Identifiers and their full specification refer to the GS1 General Specifications - section 3

Remark:

AI 13 Packaging Date or AI 15 Best Before Date may be used depending on target market requirements
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<table>
<thead>
<tr>
<th>AI</th>
<th>Data Content</th>
<th>Format (*)</th>
<th>FNC1 Required</th>
<th>Data Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Global Trade Item Number (GTIN)</td>
<td>N2+N14</td>
<td>FNC1</td>
<td>GTIN</td>
</tr>
<tr>
<td>10</td>
<td>Batch or Lot Number</td>
<td>N2+X..20</td>
<td>(FNC1)</td>
<td>BATCH/LOT</td>
</tr>
<tr>
<td>310 (***)</td>
<td>Net weight, kilograms (Variable Measure Trade Item)</td>
<td>N4+N6</td>
<td></td>
<td>NET WEIGHT (kg)</td>
</tr>
</tbody>
</table>

**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 GS1 General Specifications
- N3 3 numeric digits, fixed length
- N..3 up to 3 numeric digits
- X..3 up to 3 characters in Figure 7.11-1 in GS1 General Specifications

(***): The fourth digit of this GS1 Application Identifier indicates the implied decimal point position.

Example:
- 3100 Net weight in kg without a decimal point
- 3102 Net weight in kg with two decimal points

(****): 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.

Remark (GS1 in Europe): The AIs listed above are the most relevant ones for consumer units. Other AIs may be used on a bilateral basis, e.g. price.

Label Example
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 DataBar Stacked Omnidirectional) it knows that a GTIN with 14 digits, purely numeric, follows.

![Label Example](image)

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.

**Note:** Please note that there are certain rules to be observed. They can be taken from the GS1 General Specifications.

**Note:** For a complete list of AIs refer to the GS1 General Specification, Section 3.0.

2.4. Label Placement Principles

Consistency of symbol placement is critical to successful scanning. With manual scanning (e.g. at POS), variation of symbol placement makes it difficult for the scanning operator to predict where the symbol is located, and this reduces efficiency.

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. Respecting the guidance in this section 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. More placement guidelines will be shown in Section 3.0.

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 see to it 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.

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.
3. Consumer Unit (Each)

The chapter Consumer Unit (Each) refers to trade item labelling for Point-of-Sale (POS) and includes several ways of presenting fruit and vegetables at POS. The labelling may vary with the presentation at POS. The trade items should be labelled according to existing standards and requirements at POS, regulatory requirements as well as possible additional scenarios. The identification key, design and content of the labels may vary depending on the situation.

Most loose fruit & vegetable trade items have a label/sticker on it with a price look up number (PLU). This PLU is key entered manually or a label/sticker with an EAN/UPC which encodes a GTIN can be scanned automatically. Both identification numbers support the billing process at the POS.

The way consumer units are packaged and presented at POS varies. Examples of different forms of consumer units are:

**Pre-packed:**
- A labelled product package that is intended for the consumer. For retail this item will be scanned at the point of sale.

**Loose (by weight or by piece):**
- Fruit and vegetables which are presented to the consumer in a display such as boxes or cases, to be picked by the consumer and weighed or counted at the POS. Depending on the size and nature of the item they may carry a label.

**Pre-portioned:**
- An unlabelled product package that protects the fruit article (e.g. strawberry, blackberry, etc.) and is sold and presented as a whole.
- Labelling of a pre-portioned consumer unit generally does not require a label by legal or regulatory requirements. However, it may be labelled (e.g. with a GTIN) by the supplier/packer for POS.

According to legal requirements a closed pre-packed consumer product will always have a label. It should carry a GTIN encoded in a barcode to make it possible to scan at the point of sale.

Unpacked/loose fruit and vegetables are offered to the consumer from a crate or carton. According to legal requirements there is no obligation to put a label on single units. The consumer picks them in the wanted quantity. They are sold by each or by weight. The decision to label is at the discretion of the retailer, in some cases based on legal aspects. The supplier may assign a separate identification number (GTIN or PLU) and label it.

**Remark (GS1 in Europe):** According to EU 543/2011 European target markets require trade items to be labelled with Country of Origin Labelling.

**Remark:** Trade items with a protection package and no label are handled as retailer internal process. In terms of labelling there is a difference between pre-packed and loose articles on the European target market.

According to regulation EU 1169/2011 a pre-packed consumer product always has a label with clearly defined information. It should carry a GTIN identification number encoded in a barcode to make it possible to scan this article at the point of sale.

Loose fruit and vegetables and pre portioned consumer units with protection only are covered by regulation EU 1169/2011 and there is no legal obligation to label. An example would be a pumpkin; the consumer picks them in the wanted quantity. They are sold by each or by weight. The decision to label is at the discretion of the retailer.

Pre-portioned consumer units with no label are handled as retailer internal process and is out-of-scope. According to law there is no obligation to put a label on these trade items. The supplier may assign a separate identification number (GTIN or PLU) and label it.

The following diagrams provide guidance on determining the packaging levels and labelling. If additional guidance is required for a specific application, please contact your local Member Organisation.
3.1. General Label Considerations for Consumer Items

Trade items are read at the POS. It is a general requirement to do this fast and efficiently to support smooth processes. The trade item needs a unique identification number. This can be a PLU number or a barcode with a GTIN or, where applicable, both. The GTIN is always encoded in an EAN/UPC or GS1 DataBar Omnidirectional barcode to allow for automatic scanning. Accurate data and barcode quality should be observed.

3.1.1. Using IFPS PLU Numbers

Price Look Up numbers (PLUs) are not used on any bagged product that is always sold as fixed weight (i.e. not weighed in the store for pricing).

• Example: It is not allowed to use both a GTIN in barcode and PLU code(s) together on a 1-pound bag of carrots. That bag of carrots is never sold in variable weight form: the cashier would never weigh it on the scale and determine its price based on a price per pound/kilogram. It is always sold just as is: a 1 pound bag of carrots and should carry the appropriate barcode.

PLUs may be used with a corresponding GTIN in a barcode if the product can be sold either “by each/per unit” or weighed for pricing.

• Background: Countries using the PLU consider it the human readable equivalent of the GS1 DataBar Stacked Omnidirectional as the tiny sticker does not allow for the GTIN to be printed in HRI.

Some retailers have indicated their preference for a barcode whenever possible on variable weight produce. This may vary from retailer to retailer and should be considered when preparing coding for product.

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3.1.2. Using Barcodes

Choosing a GS1 barcode:

• If only a GTIN is to be encoded use an EAN/UPC Symbol.

• In case of smaller items use a GS1 DataBar Stacked Omnidirectional.

If a GTIN and additional data such as net weight are to be encoded use GS1 DataBar Expanded or GS1 DataBar Expanded Stacked.

• Note: This guideline only uses weight in examples below because this information is crucial in some scenarios.

3.1.3. GS1 DataBar Symbology

Characteristics of the GS1 DataBar

The GS1 DataBar has the following characteristics:

• Fully compatible with currently installed scanner technology

• Linear symbology

• Omnidirectional scanning capability, except in conjunction with “stacked” or “limited” formats

• Space-saving symbology, therefore suitable for extremely small products

• Additional information can be encoded in GS1 DataBar Expanded and GS1 DataBar Expanded Stacked using the Application Identifier System

• Availability of a range of application-specific symbols provides optimal versatility

• Worldwide symbology protection (ISO/IEC 24724)

Note: GS1 DataBar symbols encode a 14-digit numeric string. When encoding GTIN-12 or GTIN-13 in GS1 DataBar symbols, zero-fill with two or one zeros to the left of the GTIN.

Note: For more information on GS1 DataBar please see Annex

Example Sizes of GS1 DataBar Symbols

The size of GS1 DataBar symbols depends on the number of stacked lines, the size of the X-dimension, and how much data is encoded. The minimum X-dimension is 0,264, maximum is 0,66. For more details on creation of GS1 DataBar refer to GS1 General Specifications, chapter 5.6 “Linear barcodes – GS1 DataBar”.

Note: Indicated symbol dimensions are based on an X-dimension of 0,264mm

3.1.4. Structure of the label

While used on a private label (retailer brand) the requirements are provided by the retailer, while for regular brands and non-branded items the structure and placement of the label should be in the hands of the supplier/packer to avoid customer-specific requirements or to meet regulatory requirements for placement.

3.1.5. Label Size

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

Common label sizes for consumer units are:

• 40 mm x 47 mm
• 40 mm x 55 mm
• 60 mm x 60 mm
• 68 mm x 45 mm

Due to growing commercial and legal requirements also bigger sizes may apply.
### 3.1.6. Human Readable Interpretation/Human Readable Text

- Below each barcode a human readable interpretation (HRI) must show the content this is often only a GTIN.
- 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, IFPS PLU, etc.

HRI shall appear except in rare circumstances for specific applications where there are extreme space constraints.

If the GS1 AIDC data carrier cannot be read or scanned and the HRI does not appear on the label, package or item, Non-HRI text should be used as backup information.

### 3.2. Specific Label Scenarios for Consumer Units

As consumer units may occur in different forms (fixed weight vs variable weight, pre-packed, loose, etc.) the layout and content of the labels vary accordingly. The paragraphs below provide label details of the most relevant label solutions for:

1. pre-packed consumer unit (fixed weight)
2. pre-packed consumer unit (variable weight)
3. unpacked/loose piece (sold at retailer’s discretion by each or by weight)

#### 3.2.1. Label on Pre-packed Consumer Unit (Fixed Weight)

<table>
<thead>
<tr>
<th>Identification/GS1 Data Carrier</th>
<th>Information on the label</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTIN in EAN/UPC Symbol</td>
<td>Human Readable interpretation below each barcode (HRI)*</td>
</tr>
<tr>
<td>GTIN in GS1 DataBar Symbol (especially for packages of small or round items. Example: mini peppers)</td>
<td>Remark: In the EU regulatory requirements apply to labels used on item (e.g. country of origin). For target market EU, please refer to the annex for further information.</td>
</tr>
</tbody>
</table>

**Notes:** If additional attributes such as lot number or expiry date are needed, GS1 DataBar Expanded or Expanded Stacked symbol can be used. This scenario also applies if a single piece is regarded as pre-packed from a legal perspective, although a single fruit has not a fixed weight.

#### 3.2.2. Label on Pre-packed Consumer Unit (Variable Weight)

<table>
<thead>
<tr>
<th>Identification/GS1 Data Carrier</th>
<th>Information on the label</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTIN + weight in GS1 DataBar Expanded or Expanded Stacked</td>
<td>Human Readable interpretation below each barcode (HRI)*</td>
</tr>
</tbody>
</table>

**Remark:** In the EU regulatory requirements apply to labels used on item (e.g. country of origin). For target market EU, please refer to the annex for further information.

**Note:** In some target markets RCNs are still being used while being phased out. Please refer to your local MO for additional instructions.

#### 3.2.3. Label on Non Pre-packed/Loose Piece

Labelling a non pre-packed/loose piece is not a general requirement, but is done based on business/customer requirements.

<table>
<thead>
<tr>
<th>Identification/GS1 Data Carrier</th>
<th>Information on the label</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTIN in EAN or UPC Symbol</td>
<td>Human Readable interpretation below each barcode (HRI)*</td>
</tr>
<tr>
<td>GTIN in GS1 DataBar (typically Stacked Omnidirectional)</td>
<td>Remark: In the EU regulatory requirements apply to labels used on item (e.g. country of origin). For target market EU, please refer to the annex for further information.</td>
</tr>
<tr>
<td>GTIN plus net weight in GS1 DataBar Expanded</td>
<td>Note: At the retailer’s discretion loose fresh food items can be processed as fixed or variable measure products.</td>
</tr>
</tbody>
</table>

**Notes:** If only an internal PLU is on the label it can only be used on the premises of this one retailer.

If loose produce has been defined to be sold by the each, the trade item can be identified like a fixed measure item, i.e. with a GTIN only.

The retailer decides how to handle variable measure fresh food trade items sold at POS.

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*Extract From “GS1 AIDC Fresh Foods Sold at Point-of-Sale Implementation Guide” (2011)*

The Figure below is an extract from the GS1 AIDC Fresh Foods Sold at Point-of-Sale Implementation Guide and provides additional guidance for loose items.
4.7.3. Loose Produce Items

Loose Produce trade items are trade items which are identified with a GTIN. At the retailer’s direction, loose produce can be sold as fixed or variable measure products.

If this product is to be identified as variable measure, see variable measure Section 4.6.

- When a loose produce item is further processed in-store and repackaged, it may be sold by the retailer as a fixed measure trade item, then it is treated as a Fixed Measure Trade Item and follows – Loose Produce Trade Items Scanned at Point-of-Sale of the GS1 General Specifications Section 2.
- However, if loose produce is sold as a variable measure trade item, then it is treated as Variable Measure Trade Item and follows – Variable Measure Fresh Food Trade Items Scanned at Point-of-Sale Using GTIN of the GS1 General Specifications Section 2.

For loose produce you can use GS1 DataBar Stacked Omnidirectional to encode GTIN only.

### Additional Label Examples

![Figure 3-7. Extract from GS1 AIDC Fresh Foods Sold at Point-of-Sale Implementation Guide](image)

**Note:** HRI shall appear except in rare circumstances for specific applications where there are extreme space constraints. If the GS1 AIDC data carrier cannot be read or scanned and the HRI does not appear on the label, package, or item, Non-HRI text should be used as backup information.

![Figure 3-10. GTIN in EAN-13 symbol with HRI below the symbol](image)

**Note:** Label size compels the use of a heavily truncated under-sized symbol. Best practice would be to use GS1 DataBar in this situation.

3.2.4. Pre-portioned Consumer Unit

Although it is stated in the introduction of this chapter that pre-portioned consumer units do not have a label they may occur labelled. In this case the recommendation under 3.2.3 may be applied.

3.2.5. How to Manage Non-POS Product That May Go to POS

A brand owner is the responsible party for identification of their trade items using GS1 standards. They should identify and segment inventories with different GTINs according to GTIN Allocation Rules and commercial agreements. This does not mean that a trade item intended by the brand owner for use at POS or not at POS will never be used by a downstream trading partner in a manner not intended. This exception cannot be managed by GS1 standards compliance, but only by bilateral commercial agreements.

3.3. 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. The GS1 General Specification provides specifications for barcode size and quality.

3.4. 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 provides specifications for label placement.

**Principles:**
- At least one barcode is needed on a trade item intended for the Point-of-Sale.
- Only one barcode should be on a label.
- More than one label on an item should be avoided.
- If more than one label is placed every label should contain the same GTIN.
- Anything that will obscure or damage a barcode will reduce scanning performance.
- If the barcode height is below the recommended height it is not omnidirectional readable and has an impact on reading performance.

**Practices:**
- Never position the barcode on the item in an area with inadequate space. Do not let the other graphics encroach on the space for the barcode.
- Never place barcodes, including Quiet Zones, on perforations, die-cuts, seams, ridges, edges, tight curves, folds, flaps, overlaps, and rough textures.
- Never put staples through a barcode or its Quiet Zones.
- Never fold a symbol around a corner.
- Never place a symbol under a package flap.
- Barcodes used for production control purposes should be obstructed wherever possible before entering general distribution.

**Examples:**
- Figure 3-11: Example Scanning issue due to bad contrast (see barcode located on side panel).
- Figure 3-12: Example Scanning issue due to bad placement.
- Figure 3-13: Example Scanning issue due to lack of height.
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

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

IFPS Produce PLU “A Users’ Guide”
www.ifpsglobal.com and/or www.plucodes.com

5. Annex

5.1. Cross Reference of Terms

<table>
<thead>
<tr>
<th>Produce Sector Term</th>
<th>Guideline Term</th>
<th>GS1 Glossary Term</th>
<th>GS1 Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each Base Unit</td>
<td>Saleable Unit</td>
<td>Consumer Unit</td>
<td>Trade Item</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Each) Unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Item</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre packed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre proportioned</td>
<td></td>
</tr>
<tr>
<td>Case</td>
<td></td>
<td>Trade Unit</td>
<td>Trade Item</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Case)</td>
<td></td>
</tr>
<tr>
<td>Bin</td>
<td></td>
<td>Trade Item Grouping</td>
<td>A standard composition of trade item(s) that are not intended for point-of-sale scanning.</td>
</tr>
<tr>
<td>Tote</td>
<td></td>
<td>Logistic Unit</td>
<td>Logistic Unit</td>
</tr>
<tr>
<td>Pallet</td>
<td></td>
<td>(Pallet)</td>
<td></td>
</tr>
<tr>
<td>Non-Standard Mixed Case</td>
<td></td>
<td>Logistic Unit (Pallet)</td>
<td>An item of any composition established for transport and/or storage that needs to be managed through the supply chain.</td>
</tr>
</tbody>
</table>

5.2. Glossary – GS1 Terms & Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>automatic identification and data capture (AIDC)</td>
<td>A technology used to automatically capture data. AIDC technologies include barcodes, smart cards, biometrics and RFID.</td>
</tr>
<tr>
<td>barcode</td>
<td>A symbol that encodes data into a machine readable pattern of adjacent, varying width, parallel, rectangular dark bars and pale-spaces.</td>
</tr>
<tr>
<td>barcode verification</td>
<td>The assessment of the printed quality of a barcode based on ISO/IEC standards using ISO/EC compliant barcode verifiers.</td>
</tr>
<tr>
<td>batch/lot</td>
<td>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.</td>
</tr>
<tr>
<td>brand owner</td>
<td>The party that is responsible for allocating GS1 identification keys. The administrator of a GS1 Company Prefix.</td>
</tr>
<tr>
<td>check digit</td>
<td>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.)</td>
</tr>
<tr>
<td>customer</td>
<td>The party that receives, buys, or consumes an item or service.</td>
</tr>
<tr>
<td>data character</td>
<td>A letter, digit, or other symbol represented in the data field(s) of an element string.</td>
</tr>
<tr>
<td>data field</td>
<td>A field that contains a GS1 Identification Key, an RCN, or attribute information.</td>
</tr>
</tbody>
</table>
**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 ADC 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 a GS1 Company Prefixes. See also U.P.C Company Prefix.

**GS1 DataBar Expanded barcode**  
A barcode that encodes any GS1 Identification Key plus attribute data, such as weight and “best before” date, in a linear symbol that can be scanned omnidirectionally by suitably programmed point-of-sale scanners.

**GS1 DataBar Expanded Stacked barcode**  
A barcode that is a variation of the GS1 DataBar Expanded barcode that is stacked in multiple rows and is used when the normal symbol would be too wide for the application.

**GS1 DataBar Omnidirectional barcode**  
A barcode that encodes a GTIN. It is designed to be read by omnidirectional scanners.

**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 DataBar Retail POS family**  
The members of the GS1 DataBar symbology family designed to be read in segments by omnidirectional scanners at retail POS: GS1 DataBar Omnidirectional; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked.

**GS1 DataBar Stacked barcode**  
A barcode that is a variation of the GS1 DataBar Truncated barcode that is stacked in two rows and is used when the GS1 DataBar Truncated barcode would be too wide for the application.

**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 identification key**  
A unique identifier for a class of objects (e.g. a trade item) or an instance of an object (e.g. a logistic unit).

**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 ADC 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 ADC 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.
### 5.3. GS1 DataBar

The GS1 DataBar family consists of 7 different variants, only 4 of them are applicable for POS.

**Choose the right GS1 DataBar symbol and size:**

1. **Check the space dedicated to the barcode on the label and the data to be encoded.**
   - GTIN only: GS1 DataBar Omnidirectional. If less space GS1 DataBar Stacked Omnidirectional.
   - GTIN plus weight: GS1 DataBar Expanded. If less space GS1 DataBar Expanded Stacked

2. **Choose the X-dimension.** This should be between 0.264 mm and 0.660 mm, for loose produce it may be 0.203 mm and then lead to slower scanning performance. For more details refer to the GS1 General Specification Chapter 5, Symbol Specification Table 1.

**Data transmitted by the scanner**

The GS1 DataBar family symbols are designed and intended to be used with symbology identifiers and also specified in the ISO standard. GS1 DataBar family symbols are normally transmitted using symbology identifier prefix [“Je”]. For example, a GS1 DataBar Symbol encoding AI (01) Element String produces the transmitted data string “je01014012345600000016”.

**GS1 DataBar Expanded Symbols** encode the application identifiers. All Element Strings of variable length and those of fixed length not stated in the predefined table “3.2.1. GS1 Application Identifiers” shown in General Specifications, chapter 3.2, must be delimited when followed by another Element String in a single barcode. The delimiter is a Function 1 Symbol Character (FNC1). This is transmitted as a «G5» (ASCII 29) unless it is the last character in a symbol in which case it is not transmitted.

**How to use GS1 DataBar**

For more information please reference: [http://www.gs1.org/barcodes/databar](http://www.gs1.org/barcodes/databar)

**For a readiness checklist for suppliers and retailers please refer to the GS1 AIDC Fresh Foods Sold at POS Implementation Guide.**


For symbol specifications for GS1 DataBar Symbols for POS reference GS1 General Specifications, Section 5, Symbol Specification Table 1. The GS1 General Specifications is the core standards document of the GS1 System describing how GS1 barcodes and identification are to be implemented.

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

### 5.4. Legal Requirements for Labels on Fruit & Vegetables in the EU

Apart from the requirements between the business partners, it is necessary to provide on labels for consumer units and 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 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 Consumer Items

<table>
<thead>
<tr>
<th>Prepacked single commodity</th>
<th>Prepacked variety pack (mixes of different species of fresh fruit &amp; vegetables)</th>
<th>Non prepacked, loose</th>
<th>Additional remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Open pack A**

A prepacked open pack is a package for which the content cannot be altered without damaging the package.

**Closed pack B**

A prepacked closed pack is a package for which the content cannot be altered without damaging the package.

A prepacked variety pack consists of components of different species of fruit and vegetables. Mixes of different species of fruit and vegetables in their own net weight (expressed in grams or kilograms) must be given in the store in close proximity to the shell.

The nature of produce is mandatory. Depending on the product, the nature of produce contains the variety or commercial type. The nature of produce for each product in the pack has to be declared.

The EU requires that the text on the label must be written in the national language of each EU member state and be comprehensible for the consumer.

Not applicable for loose items.

Not applicable for loose items.

Not applicable for loose items.

### Minimum Fontsize

Not applicable for open packages.

1.2 mm (if label <80 cm²).

Not applicable for loose items.

Not applicable for loose items.

Minimum Fontsize

### Country of Origin

Not applicable for open packages.

In the store the country of origin and the production location of the product, such as a pre-package according to EU 2011/545, must be displayed in close proximity to the shell.

Some products lose a considerable amount of their weight or volume.

Not applicable for loose items.

Not applicable for loose items.

### Before Date/Expiry Date

Not applicable for open packages.

If not applicable for open pack, the date must be declared 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 the store or the number is mentioned on the label (see column J).

A production batch identification or lot number is mandatory on the consumer package.

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.

Not applicable for loose items.

Not applicable for loose items.

Not applicable for loose items.

### List of Ingredients

Not applicable for open packages.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

### Allergenic declaration

In F&V only applicable for Celey (leaves, stems and roots). This product contains sulfites, is a celery allergic it is an allergen on the label. The label shall contain either an – allergenic declaration in the list of ingredients – or elsewhere on the labelling the literal ‘Contains’ followed by the name of the allergen.

In F&V only applicable for Celey (leaves, stems and roots). This is not compulsory when the name of the allergen is part of the regulated product name.

In F&V only applicable for Celey, Lettuce and Bok Choy. This is not compulsory when the name of the allergen is part of the regulated product name.

As a whole the nature contains the product to be declared as an allergen.

As a whole the nature contains the product to be declared as an allergen.

As a whole the nature contains the product to be declared as an allergen.

### Declaration of nutritional value

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

### Additives including sweeteners

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables.

### Post Harvest treatment

Not applicable for open packages.

Not applicable for loose items.

Not applicable for loose items.

Not applicable for loose items.

### Protective Atmosphere

Not applicable for open packages.

Not applicable for loose items.

The type of gas used for the protective atmosphere should explicitly be allowed in EU 1551/2008.

### Product dependent information requirement

For products for which the specific marketing standards apply, additional information about Quality Class, Variety or Commercial Type and Post-harvest treatment has to be declared either on the product or in close proximity to the shelf (in accordance with the specific UNICEF product standard).

Products with specific marketing standards are: apples, citrus pears and nectarines, pears, strawberries, sweet peppers, taffy fruit, kiwi fruit, lemons, current leaved and broad-leaved endives, grapes, tomatoes. Providing this information is recommended for all other products covered by UNICEF Standards.

### Relevant Regulation (Source)

EU 852/2004; EU 545/2011

Annex V contains the categories of regulated products.

EU 1169/2011

EU 545/2011 art. 5 a 6; EU 1169/2011 art. II part 1, art. 2 3.

EU 545/2011 art. 17.

EU 545/2011 art. 15; EU 545/2011 (trading units).

EU 1169/2011 art. 13 par. 2-3.


EU 545/2011 art. 113/1.

EU 545/2011 art. 17.


EU 1169/2011 art. 17; EU 1169/2011 art. 24 + appendix X.

EU 1169/2011 art. 3.

EU 1169/2011 art. 18- par. 1.

EU 1169/2011 art. 24 + ap.

EU 1169/2011.

EU 1169/2011 art. 10- par. 1 and 2;

EU 1169/2011 art. 20.5; art. VIII par. 19 par. 1 a and e.

EU 1169/2011.

EU 1169/2011.

EU 545/2011 annex I.

EU 545/2004 art. 2 par. 1; definition of processed and unprocessed products EU 1169/2011.

EU 1169/2011.

EU 1169/2011 Annex VII part C contains all categories of additives. Waxes used on fruits and vegetables are permitted additives too. Armons are a suitable 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 for unpreserved fruit and vegetables. A maximum of 10mg/kg of sulfite can be administered to packages of Fruit, e.g. blueberries, lychees and tangerines. Excess of this value must be declared as an allergen.

EU 1335/2008.

EU 1169/2011 Annex VII art. C.

EU 1254/2007 art. 115 L.
Unprocessed Fruit & Vegetables – Label requirements for Trade Packages

**Description**

The label on prepared consumer items is visible from the outside of the trading package.

The label on packaged 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.

All regulations for consumer items and for trading packages apply.

In the trading phase labelling on the packaging 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.

**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.

In several countries such as Belgium, France, The Netherlands and Germany, there is a national requirement that the label on the case must be one of the official languages of that country.

**Nature of produce + specific UNECE product standard**

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 product.

A common and general name must be used. The name describes the nature of the product.

When a product is in a certain state, then must be part of the product description to emphasize the end state. E.g. Dried figs, Peaked and diced mango’s.

EU 1169/2011 art. 17.

**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.

In several countries such as Belgium, France, The Netherlands and Germany, there is a national requirement that the label on the case must be one of the official languages of that country.

**Minimum Fontsize**

Not applicable.

There is no regulation for minimum fontsize on a trading package.

There is no regulation for minimum fontsize on trading packages.

Abbreviations or ISO codes such as UK for Great Britain or DE for Germany are NOT allowed.

EU 543/2011 art. 7 and Annex I, EU 1169/2011 (art. 28); EU 1169/2011 Annex III art. 15.

**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 package.

The full name of the country of origin must be declared on the label.

In case the denomination “Packaged 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. 9.

**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).

In several countries such as Belgium, France, The Netherlands and Germany, there is a national requirement that the label on the case must be one of the official languages of that country.

**Quantity / 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.

Some products loose a considerable amount of their weight or volume. For products which are marketed as single units, or which are sold by number provided that the number of items is clearly visible from outside or the number is mentioned on the label.

EU 1169/2011 – art. 25 art. 3; EU 543/2011 art. 6; EU 1169/2011 Appendix VII art. 10 par. 1.a and e.

**Best Before Date/ Expiry Date**

Not applicable for fresh fruit & vegetables.

Not applicable for fresh fruit & vegetables. Not applicable for fresh fruit & vegetables.

Although it is not mandatory for fresh unprocessed fruit and vegetables the use of Best Before Date or Expiry Date is encouraged.

EU 1169/2011 – art. 24 art. 1.

**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).

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

**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.

A list of ingredients is not required for unprocessed fresh fruit and vegetables for products that contain only 1 ingredient and have the name of that single ingredient in the product name. (Cherry tomatoes contain tomatoes).

EU 1169/2011 art. 18; par. 1 and 2; EU 1169/2011–Annex VII art. 10 par. 1.a and e.

**Allergenic declaration**

Not applicable for open trade packages with clearly visible consumer package labels.

Not applicable for trading packages.

Not applicable for trading packages.

An allergenic declaration in the list of ingredients must be highlighted (for example CAPITAL, bold or italic).

EU 1169/2011.

**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.

Not applicable for fresh fruit & vegetables.

The distinction between prepared and processed product is defined in EU 852/2004, EU 1169/2011 defines information requirements for processed and unprocessed products.

EU 852/2004 art. 2 par. 1; definition of processed and unprocessed products EU 1169/2011.

**Additives including sweeteners**

Not applicable for open trade packages with unprocessed fruit and vegetables.

Not applicable for trading packages with unprocessed fruit and vegetables.

Not applicable for trading packages with unprocessed fruit and vegetables.

Not applicable for trading packages with unprocessed fruit and vegetables.

EU 1169/2011 Annex VII part C contains all categories of additives. Waxes used on fruits are considered additives too. Aroma is a separate category for which EU 1169/2011 gives detailed information. The EU has published a positive list of additives and sweeteners and the quantities may be used. Note that additives must be declared in the list of ingredients, which is not applicable for unprocessed fruit and vegetables. The maximum limit for 10mg/kg of sulfit can be administered to packages of fruit, e.g. blueberries, strawberries and table grapes. Excess of this value must be declared as an allergen!

EU 1169/2011 – art. 18; par. 1 and 2; EU 1169/2011–Annex VII art. 10 par. 1.a and e.

**Post Harvest Treatment**

Not applicable for open trade packages with clearly visible consumer package labels.

Anti-molding agents added in a post-harvest treatment on citrus fruits must be mentioned on the trade package.

Anti-molding agents added in a post-harvest treatment on citrus fruits must be mentioned on the trade package.

The type of gas used for the protective atmosphere should explicitly be allowed.


**Protective atmosphere**

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 to the specific UNECE product standard.

Products with specific marketing standards are: apples, citrus, peaches and nectarines, pears, strawberries, sweet peppers, table fruit, kiwi fruit, lattuco, cured leek 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. 5; EU 1244/2007 annexe 151.2.
<table>
<thead>
<tr>
<th>Fresh Cut, Prepared/Not Processed</th>
<th>Prepared and Processed: Cooked, Dried, Smoked, Transformed incl. addition of additives and mix with other foodstuff</th>
<th>Prepared or Processed - Food and Drink</th>
<th>Additional remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut, Cleaned, Diced, Halved, Peeled, Sliced</td>
<td>Processed fruit and vegetables - Frozen fruit and vegetables; - Fruit and vegetables in vinegar, oil or brine; - Fruit and vegetable preparations - Jam, jellies, marmalades and similar products; - Processed potato products; - Processed products smoked, cooked or otherwise transformed by heating; - Canned or bottled products.</td>
<td>Unregulated</td>
<td>These definitions for processed and unprocessed fruit and vegetables are only applicable for the labelling process. There are other definitions of prepared or processed products in the EU for the other categories of processed products. A processed produce is defined in EU 852/2004. EU 1169/2011 defines information requirements for processed products.</td>
</tr>
</tbody>
</table>

**Description**

Unregulated products: fresh fruit and vegetables; - Peeled, cut and shredded fruit and vegetables; - Frozen fruit and vegetables.

**General**

Each consumer item is clearly labelled with description of the item, net weight and either a best before date or expiry date in one line of sight.

**Nature of produce or Regulated product name**

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 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.

In countries such as the UK, Germany, Switzerland and Austria, the language on the label must be chosen from the set of EU languages.

**Language**

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.

Each consumer item is clearly labelled with description of the item, net weight and either a best before date or expiry date in one line of sight.

The type of gas used for the protective atmosphere should explicitly be allowed in EU 1333/2008.

The EU requires that the text on the label must be in one of the official languages of an EU member state and be comprehensible for the consumer.

**Minimum Fontsize**

1,2 mm (if label <80 cm²). 1,2 mm (if label >80 cm²).

There is no regulation for minimum fontsize on trading packages.

**Country of Origin**

The full名称 of the country of origin of the product must be declared if otherwise it would be misleading for the consumer. A voluntary statement of the origin of the product must be made in such a way that it cannot conflict with the name of the product (Italian tomato sauce made from Spanish tomatoes).

The full name of the country of origin of the product must be declared if otherwise it would be misleading for the consumer. A voluntary statement of the origin of the product must be made in such a way that it cannot conflict with the name of the product (Italian tomato sauce made from Spanish tomatoes).

In case the denomination “Packed for” is used, the labelling shall also include a code mark representing the packer and/or the distributor. The seller shall give all information deemed necessary by the inspection body as to the meaning of this code mark.

**Identification of packer or other relevant parties**

The full name and address of the producer or the trade name and address of either the brandowner or the producer or the trade name and address of the packer must be declared if otherwise it would be misleading for the consumer.

The full name and address of the producer or the trade name and address of either the brandowner or the producer or the trade name and address of the packer must be declared if otherwise it would be misleading for the consumer.

**Quantity: net content**

Net content must be expressed in volume for fluid matter and in weight for solid matter.

Net content must be expressed in volume for fluid matter and in weight for solid matter.

**Best Before Date/Expiry Date**

A best-before-date is required on all processed products. Identification of the expiry date (ultimate consumption date) is compulsory for products that are very perishable from microbiological perspective.

A best-before-date is required on all processed products. Identification of the expiry date (ultimate consumption date) is compulsory for products that are very perishable from microbiological perspective.

**Post Harverst Treatment**

See additives.

See additives.

**Produce including uses**

Allergenic declaration: The allergenic declaration is not required for raw products.

The allergenic declaration is not required for raw products.

**Declaration of nutritional values**

The distinction between prepared and processed produce is defined in EU 852/2004. EU 1169/2011 defines information requirements for processed products.

**Additives**


**Post Harvest Treatment**

See additives.

See additives.

**Produce including uses**

The type of gas used for the protective atmosphere should explicitly be allowed in EU 1169/2011.

The type of gas used for the protective atmosphere should explicitly be allowed in EU 1169/2011.

**Produce dependent on the use**

For products for which the specific marketing standards apply, additional information about Quality Class, Size, Variety or Commercial treatment is mandatory. The distinction between prepared and processed produce is defined in EU 852/2004. EU 1169/2011 defines information requirements for processed products. Additional remarks: A product’s name must be avoided in misleading the consumer. E.g. Dried figs, Peeled and diced mangoes.

Products with specific marketing standards are: apples, citrus, peaches and nectarines, pears, strawberries, sweet peppers, table fruits. Not Applicable. The type of gas used for the protective atmosphere should explicitly be allowed in EU 1169/2011. The type of gas used for the protective atmosphere should explicitly be allowed in EU 1169/2011.

**Relevant Regulation (Source)**

EU 543/2011 art. 5 and 3; EU 1245/2008 art. 135/1.


EU 543/2011 art. 4 and 3; EU 1245/2008 art. 135/1.


EU 543/2011 art. 4 and 3; EU 1245/2008 art. 135/1.
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.