



**Implementation of GS1  
DataBar for the Global  
Fresh Produce Industry**



*The International Federation for Produce Standards (IFPS), in collaboration with the industry and GS1 organizations, have created this Guide to assist industry with implementation of the GS1 DataBar.*

*The IFPS is comprised of national/multi-national produce associations and other industry stakeholders and acts as a forum to improve the supply chain efficiency of the fresh produce industry through developing, implementing and managing harmonized international standards. For more information visit [www.ifpsglobal.com](http://www.ifpsglobal.com).*

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# 1 What Is the GS1 DataBar?

The GS1 DataBar symbology is a family of barcodes that were designed by the standards organization, [GS1](http://www.gs1.org), to fit information in small, space-constrained areas (e.g., a PLU sticker) and, in other instances, to enable the inclusion of a large set of data on a consumer item (e.g., the GS1 DataBar Expanded and GS1 DataBar Expanded Stacked used for meat). The official name of the barcode used on PLU stickers is the GS1 Stacked Omnidirectional DataBar. This GS1 DataBar barcode encodes a 14-digit Global Trade Item Number (GTIN). It is smaller than the EAN-13 or UPC-A barcodes used on packaged produce. The GTIN, which is company specific is encoded in the GS1 DataBar and uniquely identifies the item and the brand owner of the item. The 14-digit GTIN should be accompanied by the corresponding IFPS PLU code to ensure compliance with buyer requirements in those countries that utilize these codes. A complete database of PLU codes/numbers can be found on [www.ifpsglobal.com](http://www.ifpsglobal.com).

Examples of a GS1 Stacked Omnidirectional DataBar on a PLU sticker are below.



The GS1 DataBar, as designed for use in the global fresh produce industry, is used on PLU stickers that are affixed to loose/bulk items. It is important to understand that it is designed for item-level produce labeling and *NOT* case-level produce. It enables scanning of loose/bulk produce rather than manually keying the 4- or 5-digit PLU code. The PLU code is placed on the sticker as the human readable portion. It is not recommended that the GS1 DataBar be used on fixed weight, fixed count bags but, depending on the target market (e.g., North America), it may be used on random-weight bags (e.g., grapes and cherries). Fixed weight, fixed count packages, including clamshells or punnets or any other packaging material that has enough available real estate should use a GTIN-12/UPC-A barcode (Canada and U.S.) or GTIN-13/EAN-13 barcode. As always, it is important that shippers understand the specific market requirements of their target market.

|  |   |
|--|---|
|  <p>6 14141 99999 6</p> <p>GTIN-12 in UPC-A barcode</p>   |  <p>(01) 0 0614141 99999 6</p> <p>GTIN-12 in GS1 DataBar Stacked<br/>Omnidirectional (14-digit format)</p> |
|  <p>9 312345 000005</p> <p>GTIN-13 in EAN-13 barcode</p> |  <p>(01) 09501101420038</p> <p>GTIN-13 in GS1 DataBar Stacked<br/>Omnidirectional (14-digit format)</p>   |

## 2 Benefits of the GS1 DataBar

The implementation of unique item identification and product labelling, such as using a GTIN in a GS1 DataBar, has many advantages to both retailers and suppliers.

- **Tracks product movement data by grower/shipper**
  - The GTIN that is encoded in the GS1 DataBar enables buyers to identify which company's or brand owner's item is being sold to the consumer instead of only knowing what type of item is being sold.
  - This product movement data by grower/shipper can help the marketing teams at each grower/shipper understand precisely how much of the commodity that moved to consumers was theirs versus their competitor's items.

- **Tracks shrink by grower/shipper**
  - The GTIN encoded in the GS1 DataBar is globally unique and specific to that specific product and the party producing it, so a buyer will be able to track shrink back to a specific grower/shipper.
- **Improves category management**
  - As buyers will have both product movement and shrink by grower/shipper, they will be better able to manage the category, including inventory accuracy, similar to that of packaged goods.
- **Increases checkout speed**
  - The point-of-sale (POS) transaction time is reduced from 4 seconds to key in the 4- or 5-digit PLU Code to 1 second to scan the GS1 DataBar barcode.
- **Differentiates product/brand**
  - Buyers and sellers will have product movement and shrink data to support the item's performance. This includes quality, consumer preference, and actual movement to the consumer. Thus, growers/shippers can brand their products more effectively and accurately. This could allow for brand differentiation and pricing according to brand, rather than pricing by commodity.
- **Ensures accurate pricing at retail and checkout**
  - Human error can lead to negative financial impact when an item is incorrectly identified or when the conventional PLU code is used rather than the organic PLU code. Because each GTIN is assigned to a specific PLU code, keying errors cannot occur at the point of sale (i.e., it will specify the variety and distinguish between a conventional item versus an organic item). When scanned, the corresponding data are detected, and the correct price is charged to the consumer.
  - Removing manual key entry ensures the correct item identification and pricing and alleviates the potential for human error.
- **Improves consumer shopping experience**
  - Consumers will be able to scan their own produce in self-scan environments without having to navigate numerous screens.
- **Assists with traceability**
  - The GS1 DataBar *does not* allow for inclusion of a lot number and cannot accurately trace product to this level. It *does* allow for identification of the brand owner through use of GTIN, which can significantly limit the scope of product implicated in the event of a recall or traceback investigation.
  - If retailers have a frequent shopper program, the retailer can proactively contact the consumer who purchased the product in question.
  - The retailer can stop the sale of an affected produce item by GTIN thereby ensuring that consumers cannot purchase recalled produce.
  - Can confirm consumer purchase through frequent shopper card and/or credit card transaction to assist investigators in traceback.

## 3 Labeling Challenges

- **Incremental costs for PLU code stickers**
  - There may be a difference in cost due to equipment changes/upgrades, new labels, printing changes/artwork, and upgrades to data management systems.
- **Consistent read rates at point of sale**
  - When trying to read barcodes through plastic bags containing loose/bulk produce, clear bags function best. Some bags with many graphics on the bag could inhibit the read rate of the GS1 DataBar stickers inside the bag.
- **Increase of item numbers to manage versus PLU codes**
  - As each GTIN is unique by grower/shipper, a retailer's POS system will have to store multiple GTINs rather than a single PLU code for all growers of that commodity.
- **Additional verification needed**
  - It is important to verify that the GTIN matches its corresponding PLU code to ensure accurate data synchronization to avoid mismatched information, which may result in scanning, pricing, and inventory errors.

## 4 Steps to Implementation

The following steps are in chronological order and should be implemented in this sequence to avoid duplication of efforts and ensure an efficient implementation.

**Note:** For some countries (e.g., Chile and Mexico), the GS1 Member Organization (MO) assigns the full GTIN instead of or in addition to GS1 Company Prefixes. Therefore, Steps 1 and 2 do not pertain to them.

### Step 1: Obtain Your GS1 Company Prefix

A GS1 Company Prefix is a number obtained from a GS1 MO that gives your company the ability to create GTINs and other identifiers that can be linked back to your specific company. This distinguished your products from those of any other company around the world.

In order to license a GS1 Company Prefix, an application is made through the GS1 MO. Go to [www.gs1.org](http://www.gs1.org) to locate the correct MO for your area.

Any company that is a brand owner must obtain their own GS1 Company Prefix, including:

- Growers/shippers who wish to maintain their own brand
- Buyers requiring private labeled product
- Growers/shippers who do business with those buyers requesting company-specific identification through GTIN

The GS1 Company Prefix (or, in some cases, the entire GTIN) is licensed by GS1 and may expire annually, so the company might be required to maintain its subscription for the prefix or GTIN in order to use it.

## Step 2: Create GTINs for Your Items

The number encoded in the GS1 DataBar is called a Global Trade Item Number, commonly known as a GTIN. It includes a GS1 Company Prefix that is globally unique and links the item to the brand owner of the item.

GTINs can be 8, 12, 13, or 14 digits long. When used in a GS1 DataBar, the GTIN will be zero filler on the left to create the 14-digit number required by the barcode type. The below image shows that GS1 DataBar requires a 14-digit format to ensure any type of GTIN can be encoded into the barcode.

| GTIN® Storage | Global Trade Item Number® (GTIN) Field |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                 |
|---------------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| -             | N <sub>1</sub>                         | N <sub>2</sub> | N <sub>3</sub> | N <sub>4</sub> | N <sub>5</sub> | N <sub>6</sub> | N <sub>7</sub> | N <sub>8</sub> | N <sub>9</sub> | N <sub>10</sub> | N <sub>11</sub> | N <sub>12</sub> | N <sub>13</sub> | N <sub>14</sub> |
| GTIN-8        | 0                                      | 0              | 0              | 0              | 0              | 0              | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> | D <sub>4</sub>  | D <sub>5</sub>  | D <sub>6</sub>  | D <sub>7</sub>  | D <sub>8</sub>  |
| GTIN-12       | 0                                      | 0              | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> | D <sub>4</sub> | D <sub>5</sub> | D <sub>6</sub> | D <sub>7</sub> | D <sub>8</sub>  | D <sub>9</sub>  | D <sub>10</sub> | D <sub>11</sub> | D <sub>12</sub> |
| GTIN-13       | 0                                      | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> | D <sub>4</sub> | D <sub>5</sub> | D <sub>6</sub> | D <sub>7</sub> | D <sub>8</sub> | D <sub>9</sub>  | D <sub>10</sub> | D <sub>11</sub> | D <sub>12</sub> | D <sub>13</sub> |
| GTIN-14       | D <sub>1</sub>                         | D <sub>2</sub> | D <sub>3</sub> | D <sub>4</sub> | D <sub>5</sub> | D <sub>6</sub> | D <sub>7</sub> | D <sub>8</sub> | D <sub>9</sub> | D <sub>10</sub> | D <sub>11</sub> | D <sub>12</sub> | D <sub>13</sub> | D <sub>14</sub> |

- **GTIN-8** is very rare and only to be used on small packages. GTIN-8s are issued in their entirety and not part of a GS1 Company Prefix licensed to a company.
- **GTIN-12** is most commonly used in North America and is based off of a *U.P.C. Company Prefix*. The U.P.C. Company Prefix is derived from the GS1 Company Prefix for specific use in creating GTIN-12s. GTIN-12s will have two (2) filler zeros when used in the GS1 DataBar.
  - Please note, not all GS1 Company Prefixes can be used to create GTIN-12s. Only GS1 Company Prefixes beginning with a zero will have an accompanying U.P.C. Company Prefix, as shown in the U.S. and Canada section on page 12.
- **GTIN-13** is primarily used outside of North America and is created based on a GS1 Company Prefix. A GTIN-13 will have one (1) filler zero when used in the GS1 DataBar.

For use in the GS1 DataBar, the GTIN is a 14-digit number based upon GS1 standard practices that are used to identify a loose/bulk produce item.

The GTIN for the GS1 DataBar has four major components:

### 1. Filler Zero

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

## 2. GS1 Company Prefix

The GS1 Company Prefix is allocated to you as a brand owner. The length of the GS1 Company Prefix can vary depending upon your location and GS1 MO. The longer the GS1 Company Prefix is, the fewer GTINs can be created due to the reduced number of digits in the item reference number. For GTIN-12s, a U.P.C. Company Prefix will be used to create the identifier.

| If your GS1 Company Prefix is... | If your U.P.C. Company Prefix is... | Then you can identify this many products... |
|----------------------------------|-------------------------------------|---|
| 7-digits                         | 6-digits                            | 100,000                                     |
| 8-digits                         | 7-digits                            | 10,000                                      |
| 9-digits                         | 8-digits                            | 1,000                                       |
| 10-digits                        | 9-digits                            | 100   |
| 11-digits                        | 10-digits                           | 10  |

*Note:* U.P.C. Company prefix is applicable to U.S. and Canada only.

## 3. Item Reference Number

The number assigned by the owner of the GS1 Company Prefix that uniquely identifies the item being numbered. It is recommended that the Item Reference Number be allocated sequentially as it is purely for identification purposes only; there should be no intelligence built into the individual digits. The length of this Item Reference Number will vary depending on the size of your GS1 Company Prefix.

*Important note:* Duplicating the item reference number for use in both 12-digit (U.P.C.-A) and 14-digit GTINs is **not** recommended. It is advised to assign a unique item reference number for each retail unit.

## 4. Check Digit

This is the last number of the GTIN. The Check Digit is calculated by following a simple formula and exists as a 'security check' for the scanner. Without the correct Check Digit, the barcode will not scan. To calculate the Check Digit, access the Check Digit Calculator available via GS1 websites which will automatically calculate the check digit.

It is recommended that companies assign GTINs for their items use the same granularity that is used when assigning PLU codes: Commodity, Variety, Size Group. This will allow for an easy transition from PLU codes to GTINs used in the GS1 DataBar. As an example, if you are currently using 4 PLU codes, then you will create 4 GTINs. Very simply put, there will be a one-to-one relationship of PLU codes to GTINs.

For more information on what changes to your product would require a new GTIN, please visit the [GS1 GTIN Management website](#).

### **Step 3: Communicate GTINs to Your Buyers**

As a supplier, there are multiple ways that you can communicate your GTINs for your items to your retail customers. How you choose to communicate your GTINs is up to you and your retail customer.

It is crucial that the GTINs and data associated with the GTIN (e.g., PLU code) are provided to your retail customers and loaded into their master data system for point of sale before the stickered item arrives instore. Otherwise, when scanned, the item reads as 'Not on File' and prevents the item from being identified and sold as intended.

If the item is to be exported, you will need to ensure that a global PLU code is used and not a National Retailer Assigned PLU code.

Refer to the Regional Requirement section of this document for country-specific information.

### **Step 4: Create Your GS1 DataBar Sticker**

Contact your label supplier at the beginning of your decision-making process in the transition to GS1 DataBar. They can provide assistance and advice on how to most effectively transition equipment and label inventories.

*Note:* It is important that you and your label provider consider the regulations of all applicable countries (e.g., U.S. FDA regulations for stickers that come in contact with food).

- **Determine what label size to use**
  - The smallest sized label a GS1 DataBar code fits on is a CP 3.0-23 non-tab or Tab-Lift®, which is an oval shape 21 X 17 mm (0.83 X 0.67 inches).
  - If a CP 2.5-size label (or smaller) is currently being utilized, a change to the CP 3.0-23 or larger is necessary.
  - A larger size may be necessary to accommodate branding, graphics, and the GS1 DataBar barcode, etc.
- **Assess machinery and cassette needs**
  - Cassettes are label-size-specific.
  - Labeling applicators may be modified to run more than one size label, and your vendor's technical service can adjust the applicators to run the new label size.
  - Cassettes will be changed to run the new size.
- **Label artwork**
  - Generated based on artwork objectives and the list of GTINs provided by the packer/shipper.
- **Printing specifications**
  - The minimum X-dimension for loose produce is 0.203 mm (0.008 inch). The minimum height for this X-dimension is 19.285 mm (0.76 inch) for the GS1 DataBar Stacked Omnidirectional.

- The maximum X-dimension is 0.660 mm (0.0260 inch). The minimum height for the maximum X-dimension is 30.36 mm (1.195 inch).
- Print the PLU code on the label (*The GS1 DataBar Stacked Omnidirectional barcode sticker has limited real estate, it is unlikely that the human readable 14 digits encoded in the barcode will be printed or, if printed, that they will be a size that is easily read, even if the scan fails. Including the human readable PLU code enables cashier entry if the scan fails and accommodates both those retailers using the GS1 DataBar in their systems and those who have not yet made this transition.*)
- Minimum ISO Symbol Grade 1.5
  - ISO grades are determined through a process called *verification*. Barcode verifiers grade GS1 DataBars based on standardised parameters to determine if they will work at expected throughout the supply chain. Barcode verifications services are offered by solution providers and some GS1 Member Organisations.

Although ISO/IEC technical specification for GS1 DataBar states that quiet zones (light space to the left and right of the barcode) are not required, some vendors have recommended the following based on their experience printing GS1 DataBar on labels.

The background behind the barcode is white, and the barcode is black.

- **Formatting your label**

- Label graphics may be affected as the barcode, depending on the size of the label, can comprise up to 65% of the label. Below are some examples of barcoded labels illustrating the same information on different size labels:



- |               |               |               |               |
|---------------|---------------|---------------|---------------|
| • GS1 DataBar | • GS1 DataBar | • GS1 DataBar | • GS1 DataBar |
| • PLU         | • PLU         | • PLU         | • PLU         |
| • Variety     | • Variety     | • Variety     | • Variety     |
| • COO         | • Brand/Logo  | • Brand/Logo  | • Brand/Logo  |
|               | • COO         | • COO         | • COO         |

**Note:** Country of Origin (COO) is the country in which the goods have been grown.

## 5 Regional Requirements

Many countries utilizing the GS1 Stacked Omnidirectional DataBar barcode contributed to this document and have provided information below which is specific to their country. This list is not comprehensive and users and countries not included here should contact their [GS1 Member Organization \(MO\)](#) to determine any specifics unique to their country.

### United States and Canada

GS1 issues GS1 Company Prefixes via a certificate.

**GS1 Company Prefix for loose produce** →

**U.P.C. Company Prefix for packaged produce** ←

GS1 U.S. and Canada company prefixes vary in length from 6-10 . The length is determined by the number of products.

| U.P.C. Company Prefix                               | 10<br>(N N N N N N N N N N) | 9<br>(N N N N N N N N N) | 8<br>(N N N N N N N N) | 7<br>(N N N N N N N) | 6<br>(N N N N N N) |
|---|-----------------------------|--------------------------|------------------------|----------------------|--------------------|
| <b>GTIN-12 (U.P.C.)</b><br>Global Trade Item Number | <b>10</b>                   | <b>100</b>               | <b>1,000</b>           | <b>10,000</b>        | <b>100,000</b>     |

To communicate your GTINs to your retailers, it is recommended to use the [DataBar Online](#) tool created by PMA to communicate which GTINs apply to a single PLU code. It will allow sellers of produce to communicate their GTINs to their buyers. Additionally, it will allow buyers to download the information into their POS systems to scan the GS1 DataBar on loose/bulk items.

Remember, using the DataBar Online tool will only allow you to communicate the GTIN on the *item*, not the GTIN used with the *case*.

DataBar Online will give minimal information regarding the GTIN used with the GS1 DataBar shown on your items. It will simply indicate which GTIN is equated to which PLU code, nothing more. If it is necessary to communicate more information on the GTIN itself, the decision is made between the buyer and the seller.

## Australia

To build your GTINs, follow the steps below.

### Filler Zero

Use zero ('0') to fill the first space for the 14-digit GTIN format.

### GS1 Company Prefix

The GS1 Company Prefix is allocated to you as a member company. The length of the Company Prefix could vary from 7 to 9 digits.

| GS1 Company Prefix                               | 11<br>(NNNNNNNNNN) | 10<br>(NNNNNNNNNN) | 9<br>(NNNNNNNNN) | 8<br>(NNNNNNNN) | 7<br>(NNNNNNN) |
|--|--------------------|--------------------|------------------|-----------------|----------------|
| <b>GTIN-13 (EAN)</b><br>Global Trade item Number | <b>10</b>          | <b>100</b>         | <b>1,000</b>     | <b>10,000</b>   | <b>100,000</b> |


### Item Reference Number

This is a non-significant number that is allocated by the member company. It is recommended that the item reference be allocated sequentially as it is purely for identification purposes and the individual digits in the number do not relate to anything. Each retail unit should be numbered to the lowest level of identification, for example: variety, size, organic, conventionally grown, etc.

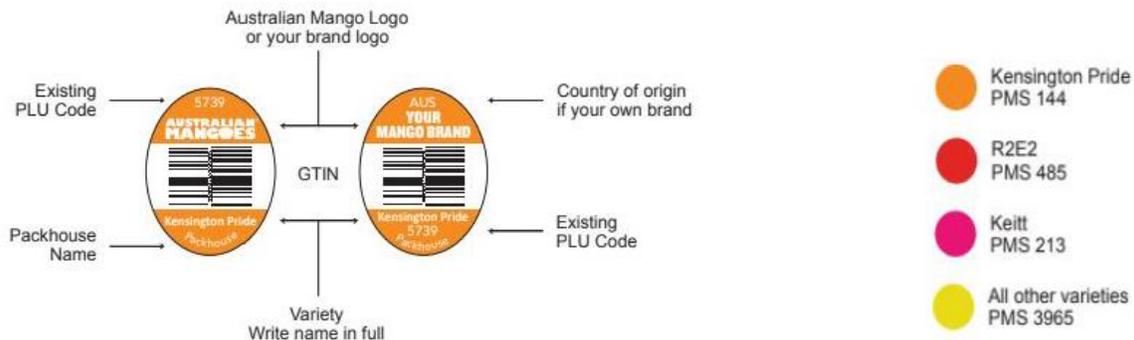
### Check Digit

This is the last number of the GTIN. The Check Digit is calculated by following a simple formula and exists as a 'security check' for the scanner. Without the correct Check Digit, the barcode will not scan. Check digit calculators are available on each GS1 country website.

Items to be incorporated into each label are as follows:

- Product description variety written in full
- Grower or packhouse specific GTIN represented into GS1 DataBar
- Name of Packhouse
- Industry standard PLU code (*this is a convenient back-up for retailers who currently do not have GS1 DataBar scanners*)
- Country of origin (if possible and particularly if it is your brand)

- Association logo or your brand logo
- PMS color coding if applicable



The GS1 Barcode verification report is used to communicate your GTINs to your retailers. Please ensure that you give this report to your trading partners or your agent.

## GS1 Australia Barcode Check Service

### Artwork Drafts

Barcode testing can be done on laser prints, bromides, mock-ups, and colour proofs. This assessment is beneficial to check the barcode size, quiet zones (light margins), and use of the GS1 number.

All artwork drafts are only issued with an interim report. All other assessments, including ISO verification, can only be carried out on samples of printed labels.

GS1 Australia accepts digital files for interim barcode reports (ISO grades/print quality standards are not assessed/reported). Files must be in PDF format with the barcode at actual size. To have your digital files tested please email them to [technical@gs1au.org](mailto:technical@gs1au.org).

### Interim Reports

*Note:* ISO grades/print quality standards are not assessed/reported.

Interim reports will be charged at the normal rate or deducted from the complimentary quota given to GS1 Australia members.

Interim reports are generally accepted by most major retailers to initiate the buying process.

As a general rule, there is a 6-week window from the date you submit the interim report to the retailer, until you need to supply them with a full report.

To obtain a full report, submit two (2) labels once printed.

Required paperwork to accompany your items:

A covering letter and a completed Barcode Check Request form must accompany any item submitted for testing.

The following information must be included:

- Who the report(s) should be addressed to
- All contact information

- If the labels are to be collected - this information must be specified otherwise samples are disposed of seven days after testing
- If you are not the company responsible for the product, for example if a printer submits a product on behalf of a member, a letter from the member with their contact details and acceptance of any charges must be included.

GS1 Australia Barcode Check service also requires a list of the GTINs and descriptions to accompany this letter as a PLU code label does not have enough real estate to include the human readable GTIN (i.e., (01) 09312345670000). Providing the list of GTINs and the descriptions is important so it can be determined whether or not the GTIN has been encoded correctly and validated to ensure the representation is as it should be.

The following example shows the information that should be included in the description:

- **GTIN:** 09312345670000 (must have the leading zero at the front)
- **PLU Code:** 1234
- **Description:** White Peach, Medium, conventional or organic etc.
- **Brand**
- **Packhouse and Location:** GS1 Packhouse Shepparton

Please be aware that the GS1 Barcode Check service does NOT validate the PLU code that has been assigned to the produce item. For information on the PLU codes please refer to [www.ifpsglobal.com](http://www.ifpsglobal.com) or contact [GS1 Australia](#).

### ***Turnaround Time***

GS1 Australia aims to deliver Barcode Check reports in 2–4 working days.

Lead-times can vary depending on external demands outside of our control or visibility.

### **About the Testing Equipment**

GS1 Australia's barcode testing service uses ISO accredited verification equipment to assess the compliance to GS1 standards based on ISO/IEC15416.

Should a dispute arise over any failed results from GS1's equipment, an internationally recognized and independent arbitrator can be utilized to gain an impartial ruling on the accuracy of the verification equipment. The cost of this will be incurred upfront by the barcode testing customer but will be reimbursed should the arbitrator's assessment confirm a passing ISO grade

### ***Testing Locations:***

GS1 Australia  
**Melbourne** Testing Department

8 Nexus Court  
Mulgrave, VIC 3170  
GS1 Australia

**Sydney** Testing Department  
Building 4B, 2-4 Lord Street  
Botany, NSW 2019

Once label artwork is approved by GS1 Australia, an order may be placed.

Once the design is approved by GS1 Australia, the printing lead-time of GS1 DataBar bar-coded produce labels should not be any different than your historical experience with non-GS1 DataBar labels.

### **Fee Schedule**

GS1 members are entitled to two free verification reports per financial year. After this there is a fee. For the latest fee schedule, please see the [GS1 Australia website](#).

For any enquiries or for more information please contact GS1 Australia Customer Service or the Barcode Check Service on 1300 BARCODE (1300 227 263) or [www.gs1au.org](http://www.gs1au.org)

## **Mexico**

### **Knowledge Center**

The Central Offices are where most of GS1 Mexico's activities are carried out. In these facilities there are Experience Spaces, specially designed for training personnel of associated companies that acquire the different standards that we have at their disposal. For this reason, our central offices, located in the state of Mexico, are also known as the GS1 Mexico Knowledge Center.

### **Communicate GTINs to Your Buyers**

You will need to share your PLU codes and the GTINs encoded in the DataBar with your buyers.

Each provider may have their own base format for the purchasing products and may be comprised of the following data:

- Product
- Variety
- Size
- PLU Code
- GTIN code
- Photographs (Optional)

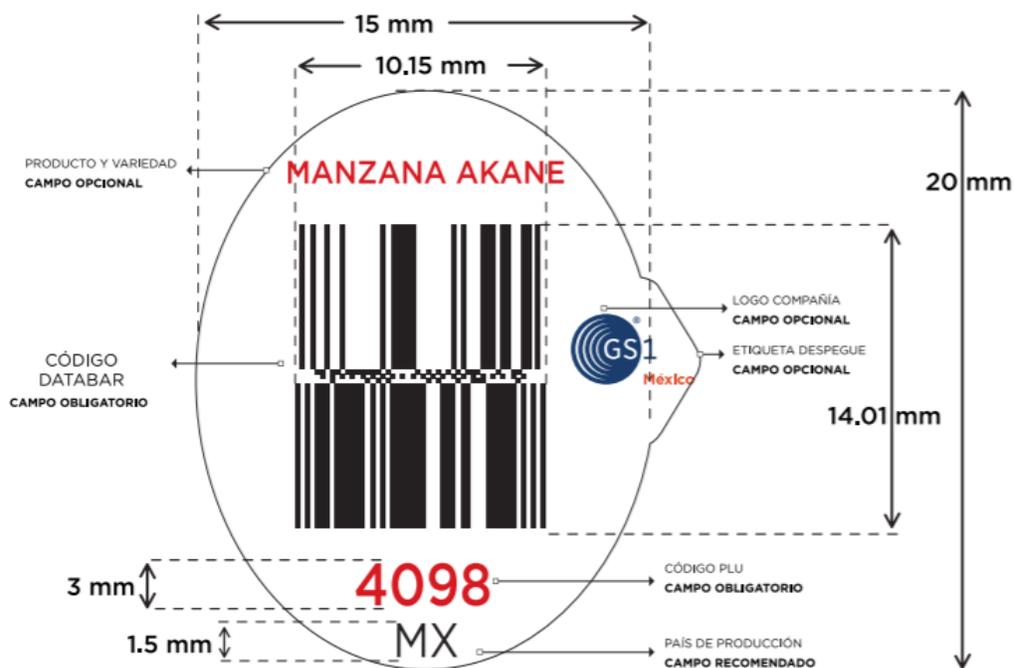
GS1 Mexico maintains an electronic catalog that allows associates to share this information between suppliers and retailers through of a platform known as GDSN (Global Data Synchronization Network) For more information, you can contact GS1 Mexico at [www.gs1mexico.org](http://www.gs1mexico.org).

### **Free Barcode Image Generator**

The [free barcode image generator](#) creates images of all your codes. Generating a label with the barcode is simple No software installation is required.

1. Generate the barcode
2. Download
3. Print the label
4. Place the label on the product

## Recommended dimensions and optional and mandatory information of the code for México



Globally standardized information is available here:

[https://www.gs1.org/docs/freshfood/GS1\\_Fresh\\_Fruit\\_Vegetable\\_Labeling\\_Guideline.pdf](https://www.gs1.org/docs/freshfood/GS1_Fresh_Fruit_Vegetable_Labeling_Guideline.pdf)

### SECODAT

GS1 México also offers a Data Checking Service in which a team of Data Quality specialists verify that the information on their products is consistent and complies with the specifications defined by the standard.

The service also contemplates that the team collects all that information by the GS1 Associate, as well as the photographs of its products. We call this process 'maquila of data and information of products'.

### Regional implementation guides for producers and retails

GS1 México, ANTAD (National Association of Self-Service and Departmental Stores) and PMA developed two guides for local producers and retailers in Spanish. Free copies are available in the following links.

Guide for producers

<https://www.ifpsglobal.com/Portals/22/IFPS%20Documents/IFPS%20Mexico/Gu%C3%ADa%20de%20Implementaci%C3%B3n%20-%20Productor%20V2.1.pdf>

Guide for retailers

<https://www.pma.com/~media/pma-files/supply-chain-standards/guia-de-implementacin--minorista-v22.pdf?la=es-mx>

### Contact

If you would like more information about membership and how to become a GS1 Mexico Associate, please contact the following telephone numbers: 5249 5249 from the Federal District and the metropolitan area, to 01 (800) 504-5400 from any other state of the Republic; or email [info@gs1mexico.org](mailto:info@gs1mexico.org).

## 6 Additional Guidance for Effective Use of DataBar

### Select a Labeling Process

The labeling process is one of the most important to consider after the sticker design and printing. Three different categories exist to accomplish this activity:

#### Manual

Manual labeling can be performed at the time of packaging. For some packers, this is the preferred method since it does not involve additional equipment costs and can be implemented quickly.



#### Semiautomatic

Semiautomatic labeling is a combination that uses the manual process assisted by labeling guns to further simplify the labeling process.



## Automatic

Automatic labeling is an integrated system that mechanically applies the label. These systems require less labor than manual or semiautomatic labeling processes.



Choosing the best system for your company will be part of the implementation process. Some companies that offer labels also include various labeling technologies within their services. Discuss the options with your solution provider to understand which technology best suits your process.

## Develop a Training Program

Developing and maintaining a training program will allow your labeling levels to achieve 100% effectiveness and ensure the continuity of the project benefits. For this reason, the following steps are recommended:

1. Create Standard Operating Procedures (SOPs) for the labeling process to establish the location of the label, the design of the label, and ensure the proper PLU code and GTIN are used. This will ensure consistency in the required information within your company regardless of employee rotation.

Ensure the SOP addresses the following:

- Label requests to the supplier
  - Validation of labeling processes
  - Validate scanability of labels through barcode verification
2. Train all new employees on SOP and provide refresher SOP training for existing employees once a year.

# 7 Frequently Asked Questions

## Who is GS1?

GS1® is a neutral, not-for-profit, global organization that develops and maintains the most widely used supply chain standards system in the world. GS1 Standards improve the efficiency, safety, and visibility of supply chains across multiple sectors. With local Member Organizations in over 110 countries, GS1 engages with communities of trading partners, industry organizations, governments, and technology providers to understand and respond to their business needs

through the adoption and implementation of global standards. GS1 is driven by over a million user companies, which execute more than six billion transactions daily in 150 countries using GS1 Standards.

### **What is a PLU code?**

A PLU (Price Look-Up) code is a 4- or 5-digit number, which is used by retailers to identify loose/bulk produce. It makes checkout and inventory control easier, faster, and more accurate. It ensures that consumers pay the correct price by removing the need for cashiers to identify the product (e.g., whether it is conventionally or organically grown). *If the item is to be exported, a global PLU code needs to be used and not the National Retailer Assigned PLU codes.*

**Note:** Valid 4-digit PLUs always begin with 3 or 4; Valid 5-digit PLUs always begin with 9.

### **Who is the IFPS?**

The International Federation for Produce Standards (IFPS) is composed of national produce association from around the globe.

The long-term objective of the federation is to improve the supply chain efficiency of the fresh produce industry through developing, implementing, and managing harmonized international standards.

### **What is a GTIN?**

A GTIN (Global Trade Item Number) is used to identify items, packages, and cases of produce. A GTIN can be used to identify any items or service that will be priced, ordered, or invoiced throughout the supply chain. For use in the GS1 DataBar, the GTIN is a 14-digit number based on GS1 standard practices that is used to identify a loose/bulk produce item.

### **Who is responsible for creating GTINs?**

The brand owner of the item is responsible for creating the GTINs for the GS1 DataBar. The brand owner is the party that owns the specifications of the item being identified, regardless of where or who is manufacturing the product.

### **Whose GTINs are used for private labeled product?**

The brand owner that owns the private label may provide GTINs for use to the party producing the item.

### **What attributes of the item should be considered when creating GTINs for my items?**

It is recommended that you assign GTINs that are encoded in the GS1 DataBar at the same granularity as your PLU codes are assigned (e.g., commodity, variety, size group).

### **Can I use the generic company prefix '033383' obtained from PMA as my company prefix for the GTIN?**

No, the prefix '033383', used in both the U.S. and Canada, is for pre-packed items only, not for loose/bulk items. It is not a company specific prefix and thus cannot be used. A company specific prefix is needed to ensure a link is established between the brand owner and the item, thereby differentiating one brand owner's product from another.

## **Can the PLU code be used for the item reference within my GTIN?**

It is recommended to create your own numbering system that works best with your database, data retrieval, and/or inventory system. No intelligence should be considered when assigning item reference numbers to your items. Regardless of the numbering system used, the PLU code must always be included in human readable format on the PLU code sticker.

## **How do I calculate the Check Digit?**

Access the [Check Digit Calculator](#) which will then automatically calculate the check digit. Each GTIN will need a calculated check digit.

## **Will the GS1 DataBar replace the EAN-13 or UPC-A? What about the PLU?**

When coding an item, if you are already using a EAN-13 or UPC-A on the item, there is no need to replace it. For those items that have a PLU sticker, the GS1 DataBar will be the barcode that is printed on the sticker with the PLU code shown in human readable form as a backup. Since there is not enough room for the 14-digit number to show underneath the barcode in the event the GS1 DataBar does not scan, the PLU code will remain.

## **Why are retailers using GS1 DataBar to mark loose produce?**

Retailers using a barcode on loose produce will yield benefits, including improved category management, increased check-out accuracy, a reduction in shrink, improved self-checkout experience, and some measure of traceability.

## **Is the produce industry the only fresh food sector that is changing how a product is marked (identified)?**

No, many categories in the fresh food industry are also beginning to use the GS1 DataBar to mark goods for the same reasons as mentioned above. These categories include meat and poultry, seafood, dairy, deli, and bakery. The GS1 DataBar Expanded/GS1 DataBar Expanded Stacked barcode used for other categories, however, is a different symbology. Contact [GS1](#) for more information.

## **Are all retailers able to scan and store the GS1 DataBar?**

Scanners from 2002 through the present are GS1 DataBar capable. They are generally installed at the retailer's location with the functionality not yet '*turned-on*'. Contact the equipment vendor to enable this functionality. Note that some POS (point-of-sale) systems need to be modified to process and store a 14-digit number if not already capable.

## **What will happen if the scanner is not capable of scanning GS1 DataBar? Will they reject the scan?**

Yes, they will essentially get a 'not on file' read.

## **Is there a link between GS1 DataBar and traceability?**

The GS1 DataBar accomplishes the same thing the company specific UPC accomplishes. It tells you what the product is and its brand owner. It will not give you lot or batch information. The GTIN inside the GS1 DataBar links the item to the grower/shipper.

## When scanning the GS1 DataBar, are some plastic produce bags better than others?

When there is a need to put an item into a bag, using clear, transparent bags provide a more reliable scan of the GS1 DataBar, reducing errors.

## How do I find a company to make my GS1 DataBar labels?

A list of label manufacturers is available [here](#). However, you are not restricted to this list.

## Will barcoding affect my label lead-time?

Printing of GS1 DataBar labels is not expected to increase delivery times. The requirement for higher data integrity may affect label production quality control (QC) and through-put. Check with your label manufacturer on specific turnaround times.

## Can I print my GS1 DataBar barcode in different colors?

While most of today's barcode scanners have advanced technology, using other colors for barcodes aside from the normal black bar on a white background is highly discouraged. It is also not recommended to use high gloss label stock or metallic colors. Though they may work when you test them with your scanner, other scanners may not be able to pick up the color variations, especially lower end CCD and laser scanners. It is best to stick with the standard black on white barcode label. Colors may be used elsewhere on the sticker.



## How do I communicate my GS1 DataBar GTINs to my retailers?

There are many means of communicating your data to your retailers. It is suggested to contact your retailer to identify the preferred means to provide the data.

## What is a GS1 Company Prefix?

A GS1 Company Prefix is a number obtained from a GS1 MO that gives your company the ability to create GTINs and other identifiers that can be linked back to your specific company. This distinguished your products from those of any other company around the world.

## Why do I need to use a GS1 DataBar to encode a GTIN??

Many categories in the global, fresh food industry use the GS1 DataBar to mark goods. These categories include meat and poultry, seafood, dairy, deli, and bakery. Retailers using a GS1 DataBar on loose fresh produce yield benefits including unique identification in the supply chain, improved category management, increased check-out accuracy, a reduction in shrink, and increased speed and experience at self-checkout.

## Who needs to obtain a GS1 Company Prefix?

Any company that is a brand owner must obtain their own GS1 Company Prefix, including:

- Growers/Shippers who wish to maintain their own brand
- Buyers requiring private labeled product
- Growers/Shippers who do business with those buyers requesting company specific identification through GTIN

## Where do I go to get my GS1 Company Prefix?

An application is made through the GS1 MO in the country in which your company is registered in order to license a GS1 Company Prefix. Go to [www.gs1.org](http://www.gs1.org) to locate the correct MO.

## How long will it take to get a GS1 Company Prefix?

After you have completed the application for your GS1 Company Prefix on GS1's website and they have received payment, you may receive your GS1 Company Prefix immediately or, generally, within one to two business days. The time to receive your GS1 Company Prefix will vary between GS1 MOs. The GS1 prefix will be located on a company prefix certificate/letter.

## How much does it cost to get my GS1 Company Prefix?

This will vary company by company, and country by country. Every GS1 MO has a different pricing model.

## What determines the length of my GS1 Company Prefix?

As countries' requirements vary, this should be discussed with your GS1 MO. The length of the GS1 Company Prefix will vary depending on the number of items your company has. Be sure to consider future growth when determining the number of items you might need.

# 8 Resources

[GS1 Fresh Foods Labeling Consumer Units Guidelines](#)

[GS1 General Specifications](#) - The foundational GS1 standard that defines how identification keys, data attributes and barcodes must be used in business applications.

- 2.1.3.6 Fixed measure fresh food trade items scanned at retail POS
- 2.1.12.1 Variable measure fresh food trade items scanned at retail POS using GTIN
- 5.10.3.1 Symbol specification table 1 - Trade items scanned in general retail POS and not general distribution

[Find your GS1 Member Organisation \(MO\)](#)

[An Introduction to the Global Trade Identification Number \(GTIN\)](#)

[GS1 Fruit and Vegetable GTIN Assignment Guide](#)

[GTIN Management Guidance for Fresh Foods](#)