



Australia

# Bar Code User Guide



# Bar Code Basics

- This user guide is an overview of how GS1 Bar Codes work and how to apply them in your business. Further detailed information can be found in the GS1 Australia User Manuals [www.gs1au.org](http://www.gs1au.org)
- The GS1 System which includes bar code numbers, is administered in Australia by GS1 Australia, a not-for-profit organisation.
- GS1 Australia is the only organisation authorised by GS1 Global to allocate and administer bar code numbers in Australia. Australian businesses should exercise the greatest caution if they wish to engage any other organisation claiming otherwise.
- If you produce a product that you want to sell to retailers or in the healthcare system you will need to uniquely identify your product with a GS1 Bar Code that contains a number called a GTIN (Global Trade Item Number)
- Your customers want suppliers to have GTINs (bar code numbers) on their products so they can scan the bar codes to electronically keep track of sales, orders and pricing information.
- The price, description and any other details about your product are not stored in the bar code; it is simply a “unique look-up number”. In the retailers’ computer system the number represented by the bar code will have price information stored under it.
- Each product that has the same characteristics (size, shape, colour, weight, etc) will have the same GTIN (bar code number). If a product has different characteristics it must have a different GTIN so it can be distinguished from other products.

**Bar code numbers displayed in this publication are EXAMPLES ONLY.**



# Step One

## Retail Items (also referred to as Point of Sale and Consumer Items)

List your retail item/s and create a retail bar code number GTIN (Global Trade Item Number). Retail items commonly use a GTIN-13.

ITEM	PACKAGING	GTIN-13
Coloured Hair Conditioner	Bottle of 250ml	9312345670000

931234567 000 0

### GS1 COMPANY PREFIX

The first nine or seven digits are allocated by GS1 Australia to the member company

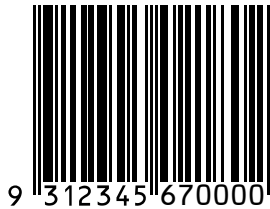
### ITEM REFERENCE

The next three or five digits are allocated to a specific product by the member company

### CHECK DIGIT

Checks the validity of the entire number by using the Check Digit Calculator

Bar code your retail item/s with an EAN-13 Bar Code representing the GTIN-13.



## Check Digit Calculator

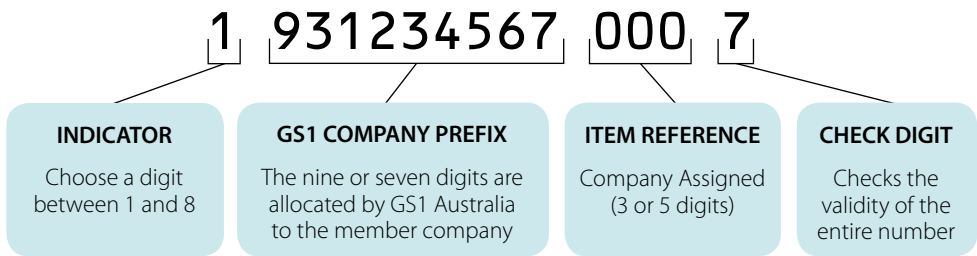
Before printing your bar code, make sure the Check Digit has been correctly calculated. The Check Digit, the last number of the bar code, is calculated by following a simple formula and exists as a 'security check' for the scanner. Without the correct Check Digit the scanner will not accept the bar code.

To assist you with the Check Digit Calculator please call our Help Desk on 1300 366 033 or visit [www.gs1au.org](http://www.gs1au.org)

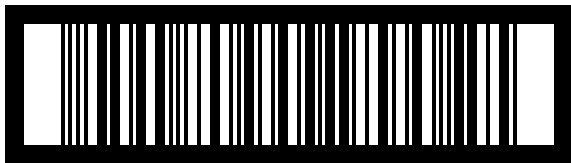
## Non-Retail Items (Inners and Cartons)

List your inners and/or cartons and create a GTIN (bar code number). Non-retail items commonly use a GTIN-14.

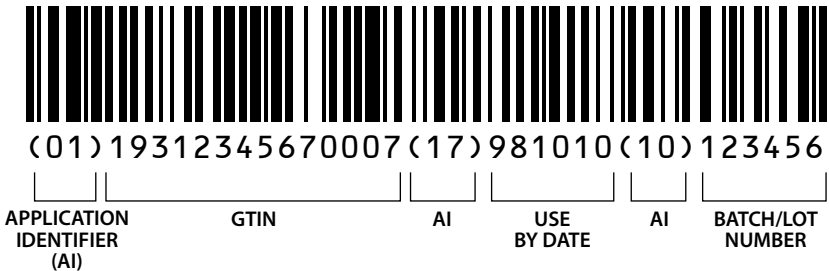
ITEM	PACKAGING	GTIN-14
Coloured Hair Conditioner	Box of 24 Bottles of 250ml	19312345670007



Bar code your items with either ITF-14 or GS1-128 Bar Codes, representing the GTIN. For additional information, such as use-by dates & batch numbers a GS1-128 Bar Code needs to be used.

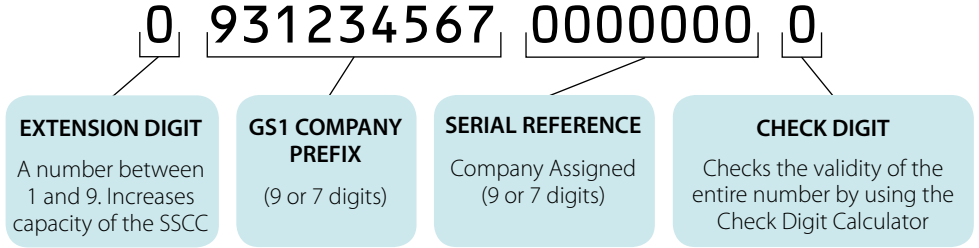


19312345670007

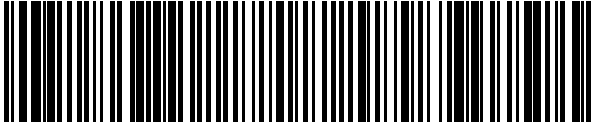
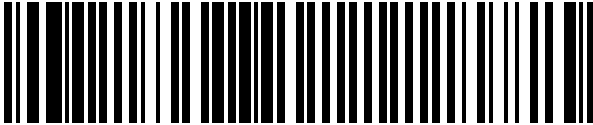


## Pallets (Logistic Units)

If you or your trading partners need to identify at pallet level then create a unique Serial Shipping Container Code (SSCC) for each pallet.



Pallets (and any other unit used as a logistic unit) should be bar coded with a GS1-128 Bar Code, displayed on a GS1 Logistics Label.

COMPANY NAME	
<b>SSCC</b> 09312345670000000	
<b>CONTENT</b> 19312345670007	<b>COUNT</b> 20 BOXES
<b>USE BY (DD/MM/YY)</b> 11/12/09	<b>BATCH</b> 246813
 (02)19312345670007(37)20(17)091211(10)246813	
 (00)09312345670000000	

# Step Two

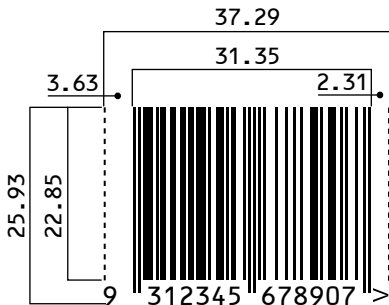
## Bar Code Specifications

Physical requirements such as size, height, colour and location are very important. Bar codes that do not comply cause inefficiency in the supply chain as they do not scan reliably.

### Size

There are specific ranges for all bar codes. If the bar code is not the right size, the scanner simply cannot read the bars and register the number. Make sure your bar codes fit the size requirements for its magnification before placing it on your product. The GS1 Bar Code Symbol Size Gauge can help give you an indication of the space required for your bar code.

EAN-13 BAR CODE (All measurements are in millimetres) (QZ - Quiet Zone)					
MAGNIFICATION	X-DIMENSION	WIDTH	HEIGHT	LEFT QZ	RIGHT QZ
80%	0.26	25.08	18.28	2.90	1.85
100%	0.33	31.35	22.85	3.63	2.31



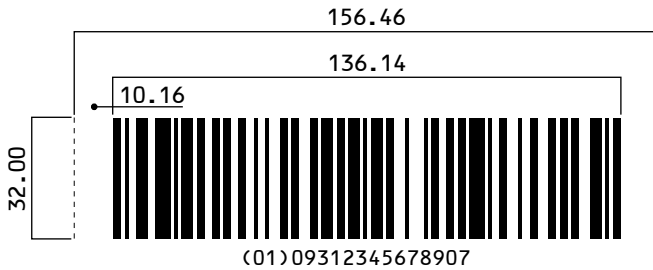
Example of a nominal size  
(100%) EAN-13 Bar Code Symbol  
(Diagram is not to scale)

ITF-14 BAR CODE (All measurements are in millimetres)				
MAGNIFICATION	X-DIMENSION	WIDTH	HEIGHT	QUIET ZONES
62.5%	0.64	76.52	32.00	6.35
100%	1.02	122.43	32.00	10.16



Example of a 100% ITF-14 Bar Code Symbol (Diagram is not to scale)

GS1-128 BAR CODE		(All measurements are in millimetres)		
MAGNIFICATION	X-DIMENSION	WIDTH	HEIGHT	QUIET ZONES
50%	0.51	68.07	32.00	5.08
100%	1.02	136.14	32.00	10.16



Example of a 100% GS1-128 Bar Code Symbol (Diagram is not to scale)

## Height

Cutting the bar code height to fit in with package design is not recommended due to the scanning problems it causes.



## Colour

It is vital that the colour of the bar code and its background are recognisable by a scanner. A dark bar code on a light background is essential for scannability. Refer to the bar code colour chart for examples of both scannable and non-scannable bar codes.



## Location

The location of the bar code on your product must be taken into consideration in your overall product design. GS1 Australia have a set of recommendations, however, the product must be considered in its final form before the bar code can be applied. Seams, seals, additional labels, corners, overlapping materials etc can infringe on a bar code and make it illegible to the scanner. Pallets (and any other logistic units) also have location requirements, for more information refer to the GS1 Australia User Manuals.



## Quiet Zones

To read a bar code correctly, a scanner must be able to clearly read where the bar code starts and finishes. Areas to the left and right of the bar code must be kept clear of obstructions that may cause scanning difficulties.





## Step Three

### Printing the bar code

Once your bar code has the correct size, height, colour and location, it is then just as important to ensure the bar code is not smudged or blurred. The bar code must show crisp, clear, well defined bars. Imperfections in the bar code will confuse the scanner and will make your bar codes illegible.

Lists of companies able to print bar codes for you or that can supply the equipment or software to print bar codes are shown in the Solution Providers Directory on the GS1 Australia website at [www.gs1au.org](http://www.gs1au.org)



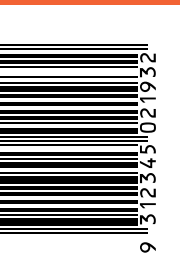
## Step Four

### Bar Code Quality Testing

Many major retailers will require you to show evidence of a GS1 Bar Code Verification Report for your bar codes. Without evidence of a successful test your product may be rejected or you may be required to re-label it before acceptance. Whichever sector you supply, a verification test is a wise precaution to ensure that your customers will not be disappointed with your product when they receive it.

### Customer Help Desk

To assist you through the process and to answer any of your questions, the GS1 Australia Help Desk is available between 8:30am and 5:30pm AEST Monday - Friday (excluding public holidays) on 1 300 366 033. Alternatively, visit our [website www.gs1au.org](http://www.gs1au.org)



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