



# Barcode Basics

Decode the Barcode: All you need to know

Hello!

So you want to sell your products through retailers? To do that you know you need barcodes, but which ones?

I've found that understanding barcodes is a powerful way to make your business more efficient, transparent and of course, to sell more products.

I know it's a complex topic, so I've made it easy.

In my **Barcode Basics** I explain the barcode types, numbering structure, plus where, how and the cost to buy barcodes. Since it's important your barcodes scan seamlessly, I have also included the **Top 10 Barcode Scanning Issues**. Finally, I address all the frequently asked questions.

Avoid barcode confusion and read this before making a mad dash to search the internet for hours.

Creative Director at Evolve Brand Design

## Barcodes In The Real World



### Retailers

Major retailers in Australia require barcodes for products for retail sale. Some retailers (Coles, Woolworths and Metcash (IGA Stores)) **will not accept secondhand barcodes** (even if they are unique and legitimate). They require you, the producer, to have a certificate from GS1.

Internationally, **GS1 barcodes work like a dream with online retailers like Amazon, eBay and Alibaba.**

### Amazon

Each item you send to an Amazon fulfilment centre requires a barcode. Amazon requires GS1 authorised barcodes when using their service, Fulfilment by Amazon (FBA). All sellers are required to register with a GS1 supplier who has the authority to issue legitimate Global Trade Item Numbers (GTINs). Amazon requires GS1 barcodes as of July 2018.

GS1 Australia is the only officially licensed barcode provider with authority to supply GTINs for the Amazon marketplace in Australia.

### Alibaba.com

GS1 Barcodes are preferred by Alibaba.com. To assist with product tracking and delivery Alibaba Group, GS1 and GS1 China announced that they will work together to standardise product information in October 2016.

### eBay

As of June 29 2019, eBay requires product identifiers for almost all categories. GS1 barcodes and GTINs are preferred. This is a good thing. They help your visibility in search engine results. Google and Bing both love GTIN's so they can improve your SEO. Without them be prepared for eBay not to like or list your products.

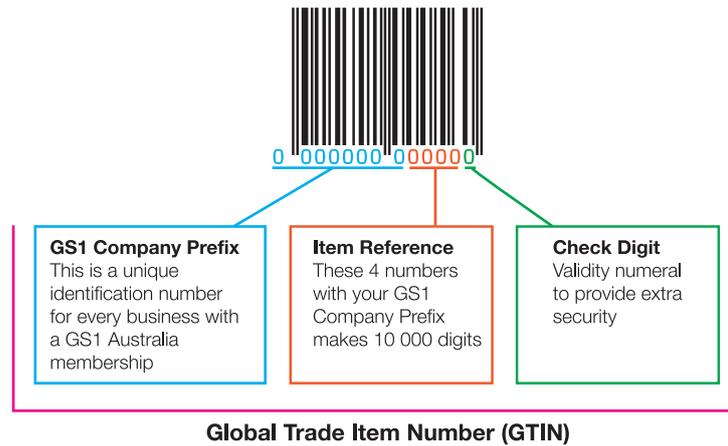
### Google Shopping

Google Shopping now requires all new products sold in Australia to have a 'product identifier' (GTIN). The GTIN must be valid and correctly assigned in accordance with GS1 Standards. Check out the Google Merchant Help Centre for more information.

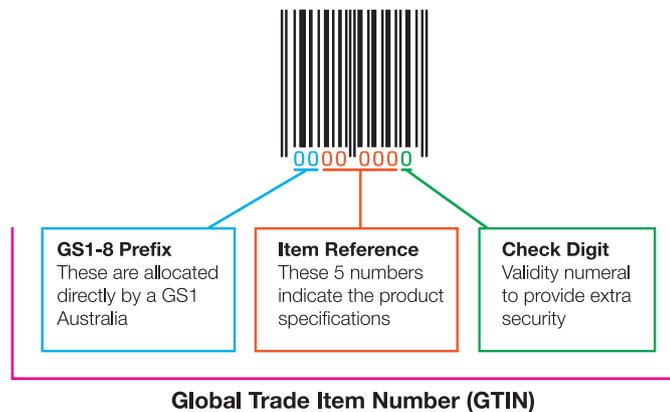
## Decoding The Barcode

Together the GS1 Company Prefix, the Item Reference and the Check Digit are called a Global Trade Item Number (GTIN).

In Australia the GTIN (product identifier) is represented as an EAN-13 or EAN-8.



An EAN-13 is made of 13 digits and encodes a GTIN-13. A GTIN-13 is the most common product identifier in the Australian retail industry.



An EAN-8 is made of 8 digits and encodes a GTIN-8. A GTIN-13 can be used for small point-of-sale items with size constraints. For example on Chewing Gum or Lipstick.

**HOT TIP:**  
*Similar to GTIN is **GLIN**. This is the acronym for Global Location Item Number.*

## The Simple Facts

**The question you need to ask is  
'what type of barcode do I need?'**

- A. GS1 Authorised**
- B. GS1 Certified**
- C. Not GS1 at all**

**This is your big decision.**



**'So what is GS1?'**

*– I hear you ask.*

Well, **GS1 (Global Standards One)** is the international governing body that manages the numbering systems for commerce. The GS1 Standards are used globally to identify point-of-sale product data and track products through supply chains.

In addition to point-of-sale (retail level), barcodes are used to track inventory, inner packs, outer cartons, cases and pallets (at a non-retail level). Infact, **the entire supply chain efficiency is dependent on barcodes**. They are useful for warehouse storage, distribution/ logistics, not just product identification at point-of-sale.

Barcodes can link a product to a location. Track the item as first in first out (FIFO). GS1 barcodes can automate your batch numbers and use by dates. They can also send an automatic notification to specific retailers if your product needs to be recalled.



GS1 support best practice Supply Chain Principles by uniquely identifying, accurately capturing and automatically sharing product information, their location and much more.

Implementing a barcode system is a reliable way to find and track everything in your business.  
***Tracking gives you the power to tweak your systems and profit margins.***

## Barcode Types

It's hard to tell, by looking at a barcode, what type it is.

Where you buy your barcodes from will indicate what type it is.

Barcodes can be purchased via three main avenues - GS1 Australia, GS1 certified businesses and GS1 non-certified businesses.

### GS1 Australia

**GS1 Australia** is the only company authorised to distribute GS1 numbers in Australia. A GS1 Australia membership is the best way to ensure the legitimacy of your barcodes. Membership gives you:

- A unique identification number, called GS1 Company Prefix, that forms part of all your barcodes
- Part of a network of GS1 organisations ensuring worldwide scalability
- A genuine GS1 Barcode Verification Report
- Real time global traceability
- GS1 Australia offer phone support and online training if you need it - free.

NOTE: Purchasing barcode numbers through GS1 Australia means **you** allocate digits for your products. There is a method of allocation. Instructions are provided with your membership.

### GS1 Certified

These suppliers sell barcodes that come from the official global database which seems good. And many of these sellers say they issue unique barcode numbers, that are GS1 certified.

However, it's important to know that 'GS1 authorised' barcodes are not the same as 'GS1 certified'.

Some suppliers:

- **Barcodes Australia**
- **Barcode1**
- **Australian Barcodes**

NOTE: These barcodes are supplied 'ready-made', meaning you don't need to allocate the numbers.

### Not GS1 Certified

GS1 is the world standard but is not required for your own warehouse tracking and some retailers.

So you may not need a GS1 Certified barcode system. Be aware though, these may be secondhand or not unique barcodes.

Some suppliers:

- **Oz Barcodes**
- **Buy Barcodes Cheap**

NOTE: These barcodes are supplied 'ready-made', meaning you don't need to allocate the numbers.

#### HOT TIP:

*Barcodes can be sourced in a range of formats like any image ie: JPEG, TIF or PNG. This is a BAD idea. Always source barcodes in a vector format - AI or PDF will give you the safest reproduction.*

## The Costs

As with most things in life 'you get what you pay for'.

With GS1 Australia you pay more for the security of knowing you have truly unique barcodes that have never been used before.

### GS1 Australia

GS1 Australia costs vary based on your needs. The membership cost starts at \$250 for 10 products.

However this is very limited use.

An annual license renewal fee can range from \$50 to \$2100.

Review your possible cost and be sure to include future needs.

*Try to have only one company pre x.*

See the [pricing schedule](#) to help calculate your costs.

### GS1 Certified

Depending on your retailer the costs vary.

Or you can buy single barcodes for about \$75.

You can expect approximately:

- \$250 for 10 – \$370 for 10
- \$420 for 30 – \$630 for 30
- \$450 for 100 – \$825 for 100

No membership. No annual or ongoing costs. This is a one off payment.

### Not GS1 Certified

Depending on your retailer the costs vary.

Or you can buy single barcodes for about \$25.

You can expect approximately:

- \$150 for 10
- \$200 for 25
- \$300 for 100

No membership. No annual or ongoing costs. This is a one off payment.

#### HOT TIP:

*Printing the wrong type of barcode will mean you (the producer) are liable for the cost of replacing stock, reprinting and repackaging all products.*

*The cost can be enormous and frankly may not be worth the risk.*

## How GS1 Australia Works

1. Producers purchase a GS1 Australia membership.
2. The business will be assigned a GS1 Company Prefix, which is licensed to you – forever.
3. Then you will be able to create identification numbers for your products.
4. GS1 doesn't provide the actual barcode artwork. You need to get that from a third party barcode generator. Don't worry, it's easy.

### Steps To Get GS1 Australia Barcodes

#### Step 1

Count your products that need barcodes. Remember to include all variants (every single SKU - Stock Keeping Unit), outer cartons, shipping pallets etc. For more information and to use the [barcode estimator](#) go to the official website.

#### Step 2

Become a member of GS1. Once you fill out the [application form](#) and pay, you'll be given a GS1 Company Prefix. Choose your membership level. The level you need is based on how many barcodes your business requires. View the pricing guide for more information.

#### Step 3

You'll receive instructions to start allocating your unique barcode digits to products.

#### Step 4

Create your barcode digits. There are three options:

- A. Provide the printer with your digits. They will create the barcode for you using their professional software.
- B. You can engage a third party to generate the barcode – GS1 Australia recommends [Barcodes 4 U](#) or [Peacock Brothers](#).
- C. Generate it through yourself with software such as [Fusion 5](#) and [Bartender Software Australia](#).

**HOT TIP:**

*I think going with option A is the quickest and easiest. Over the past 15 years I have had many clients go with this option and there has never been a problem.*

## Practical Application

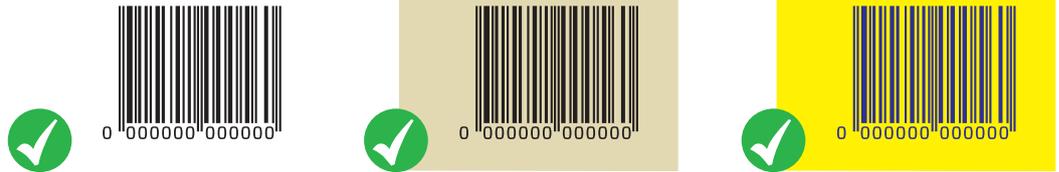
### Barcode Colours

**HOT TIP:**

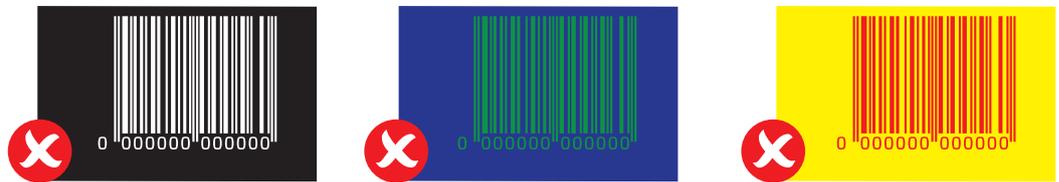
Don't try to be tricky with your barcode just print black on white and know you are safe.

High contrast is critical to enable the scanner to register.

Ideally the barcode will be black on a white background. You may use a light background with a dark colour barcode (not red or orange). A light background is cream, yellow and very light colours.



Low contrast barcodes look like this:



White barcode on a black background

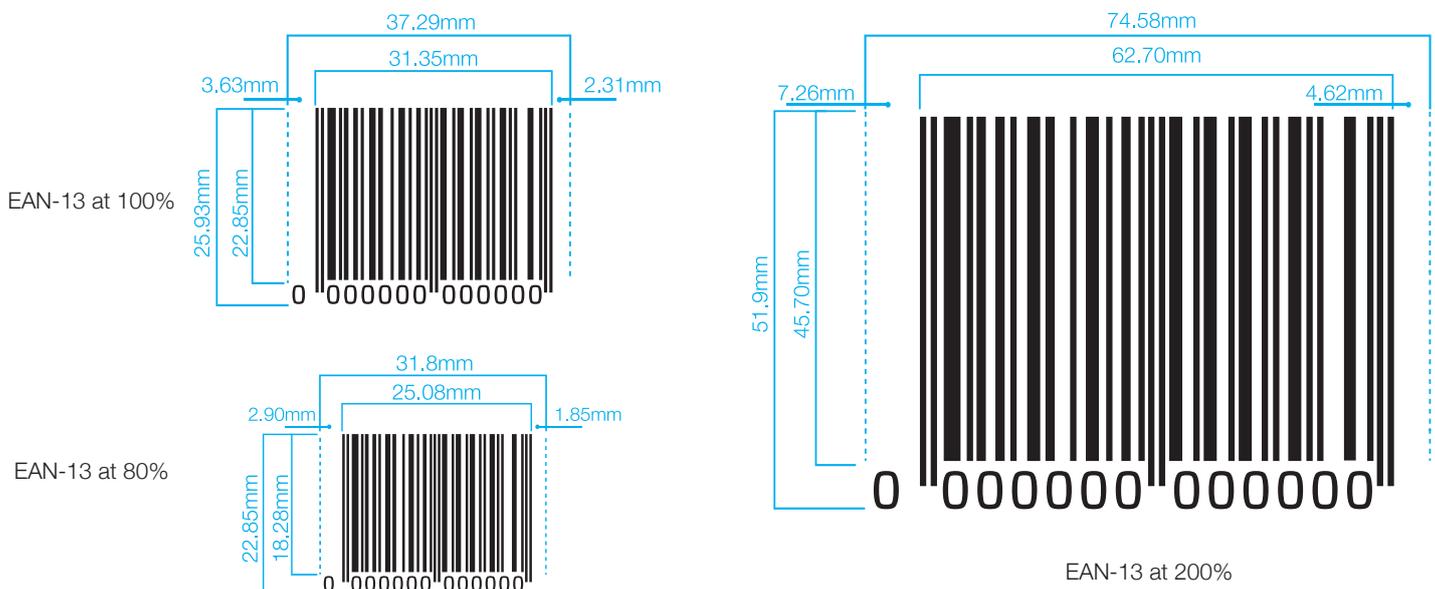
Low contrast colours like green and blue.

Red or orange barcode on yellow background

### Barcode Size

Barcodes are supplied to you at 100%.

This is an internationally recognised size standard. GS1 recommends barcodes are printed no smaller than 80% and no bigger than 200%, of the original size. Do not reduce the height of the bars. There is a fixed relationship between the bar width and height to enable omni-directional scanning – this is a laser beam that can read the bars at different angles.



## Practical Application (cont)

### Quiet Zones

**It is important to respect the quiet zones.**

The quiet zones are the areas to the left and right of the the barcode. The scanner reads this area to determine the start and finish of the barcode. Keep graphics, text and blocks of colour away from the quiet zones. Violating the quiet zone area can render the barcode unreadable.



### Barcode Position

**Barcodes can be placed in a Fence or Ladder Orientation.**

Retailers prefer barcodes to be positioned in lower right side on the back of the package. They will accept barcodes on the bottom of the package. However, it is not preferred as there is a possibility of damaging the barcode by scratching the ink during transport or with movement on shelf.

On curved surfaces, the bars can be distorted. For this reason a 'ladder orientation' is preferred.



### Barcode Testing

Barcode Testing is vital to ensure you don't incur unwanted costs. Many barcode problems are invisible to the naked eye. Some retailers will require evidence of a GS1 Barcode Check. Be sure to test your label or packaging proofs prior to approving the print run. Here is the [Barcode Testing Checklist](#).

**GS1 Australia Customer Support phone number is 1300 227 263 or check the website: [www.gs1au.org](http://www.gs1au.org) for general queries.**

## Top 10 Barcode Scanning Issues:

**1** Contains an incorrect digit.  
*Be sure to check the printers' proofs*

**2** The printed quality is bad. A laser printer is not good enough. The ink may scuff or the barcode prints fuzzy.



**3** The quiet Zone is violated by other elements like text or symbols.



**4** The height or width of the bars is incorrect.



**5** The size of the barcode (including the quiet zone) has been reduced below 80%.

**6** Surface is too porous (like egg cartons) or reflective (like a silver background).



**7** Distortion due to the location on the packaging – on a curved structure a vertical placement is better.



**8** Colour contrast is too low. Kraft (natural) paper board is very problematic. Always print black bars and ideally with a white box underneath.



**9** The bars or quiet zone have been distorted due to shrink wrap.



**10** The designer has tried to make the barcode into a fancy drawing.





**Ok so I probably haven't  
answered ALL your questions  
– this is such a big topic.  
But these are questions  
clients often ask about barcodes....**

## FAQ's

### **Do I need a barcode?**

No not necessarily. If you have products you intend to sell at the farmers markets or small retailers you don't need a barcode. Barcodes are simply way to replace manual entry to record product data.

### **Can I buy my GS1 barcodes on eBay?**

Yes. However they will not be from GS1 Australia and you will not be able to provide retailers with a genuine GS1 Barcode Verification Report.

### **Why use GS1 Barcodes?**

There are cheaper barcodes than GS1. However, they can be 'recycled' barcodes. This means someone else already owns them. Sometimes they have been dormant for years and other times they are active. Purchasing barcodes other than GS1 is a risk.

### **What's wrong with the cheaper barcodes that are not GS1 Certified?**

The barcode may not include the unique company prefix which major retailers require. Purchasing cheap barcodes or a 'one off' may be ok until a retailer requires proof that your barcodes have a GS1 Barcode Check. It depends on the retailer.

### **What's the difference between GS1 Australia and GS1 barcode numbers?**

GS1 Australia is a not-for-profit organisation and the only one licensed in Australia with the authority to allocate GS1 Company Prefix numbers.

### **What's the main benefit of a GS1 Australia membership?**

You can be sure you will never be assigned a barcode digits that someone else owns.

### **Will my GS1 Australia Barcode work in China or USA?**

GS1 Australia issues barcodes that work in any supply chain, anywhere in the world.

That's it - you're done!

Now that you can decode the barcode. You know the importance of GS1. You know what GTIN is. You know how to get a barcode, the cost and the mistakes to avoid that cause common scanning issues.

I hope you can embrace the barcode!

If you want to learn more from me, feel free to head to my website [www.evolvebranddesign.com](http://www.evolvebranddesign.com)



*Renee*

Princess of Packaging at Evolve Brand Design



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