




## Australian Red Meat Industry Technical Fact Sheet - Variable Weight Carton Label

The label requirement detailed in this fact sheet only relates to the GS1 System. Other human readable information may be printed on the carton ticket, which may not be bar coded. These requirements have not been included in this document and left to the trading partners, some of which may be for statutory requirements.

### Barcode Symbology

The Barcode symbology used in the Australian Red Meat Industry Standard Variable Weight Carton Label is GS1-128 (previously called UCC/EAN-128). The GS1-128 barcode allows secondary attribute information over and above primary item identification to be represented in the barcode. Application Identifiers (AIs) effectively act as prefixes for this information and define the meaning and structure of the embedded data which follows.

AIs allow you to represent attribute information such as batch numbers, serial numbers, expiry dates and weight in a standard format. This ensures that the attribute information encoded by one company can also be scanned and interpreted by any other company in the supply chain.

<b>BONELESS BEEF</b>	ANY MEAT WORKS Co	<b>32307</b>
<b>*YG* BLADE</b>	LONG FLAT ROAD	
<b>OVER 6.0kg</b>	ANYTOWN NSW	<b>4 PC</b>
<b>IW/VAC</b>	<b>ORIGIN: AUSTRALIA</b>	<b>PRODUCT OF AUSTRALIA</b>
		
(01) 9 932711103176 6 (3101) 000262 (13) 050417 (21) 41457354		
<b>HIGH QUALITY BEEF (EU)</b>		
<b>PKD ON 17-APR-2005 17:26</b>		
<b>BEST BEFORE 29-MAY-2005</b>		
<b>26.2kg 57.8lb</b>	<b>NET WEIGHT</b>	
<b>Batch: 4487 S/N 41457354</b>	<b>KEEP REFRIGERATED EST. NO.9999</b>	

## Minimum bar code information required represented by Application Identifiers (AIs)

AI	Example Data & Format	Attribute Information
(01)	<b>99327111031766</b> n14- 14 digits numeric (fixed length)	<b>Global Trade Item Number</b> Item Identification. (Primary identification of the product carton) 9 indicates that it is a variable measure (weight) product 93271110 - GS1 Company Prefix. (7, 8 or 9 digits in length depending on the GS1 prefix allocated) 3176 – Company product code or AUSMEAT code. (3, 4 or 5 digits in length) 6 – Check digit
(310n)	<b>000262</b> n6 - 6 digits numeric (fixed length)	<b>Net Weight - Kilograms</b> In this example as n = 1, start at the very right of the measurement data field and count to the left 1 place. The net weight is 26.2kg. (n indicates that the position of the decimal point is n places to the left of the end of the number e.g. 3101 ) NB: Weight information is mandatory if the item is a variable weight trade item.
(13)	<b>050417</b> n6 - 6 digits numeric (fixed length)	<b>Packaging Date (YYMMDD)</b> In this example the packaging date is 17 <sup>th</sup> April 2005.
(21)	<b>41457354</b> an...20 – alpha numeric up to 20 characters (variable length)	<b>Serial Number</b> In this example an 8 digit numeric only serial number has been allocated. NB: If a generic product is produced by more than one manufacturer and bar coded with a customer's item identification number, then possible duplication of serial numbers could exist.

### Concatenation

Concatenation (stringing AIs together) is an effective means for presenting multiple element strings in a single GS1-128 barcode and should be used to conserve space and optimise scanning operations.

### Maximum Length

When concatenating AIs the maximum number of characters in the GS1-128 barcode symbol must not exceed 48. This includes Function Code 1 (FNC1) when used as a field separator, but excludes auxiliary characters and the Symbol Check Character (Modulo 103).

The length of the GS1-128 barcode symbol must never exceed 165mm, including the Quiet Zones (light margins).

## Magnification

The size of the GS1-128 barcode symbol depends on:

- The X-dimension (single bar width) chosen
- The number of characters encoded
- The number of non-numeric characters in the data

For the meat industry it was determined that it would be primarily a hand scanning requirement which has an allowable magnification range of 25% - 100% (X-dimension 0.25mm – 1.02mm).

For GS1-128 barcode symbols that are to be scanned in a General Distribution Environment (primarily automated scanning), the allowable magnification range is 48.7% - 100% (X-dimension 0.50mm – 1.02mm).

## Height of Bars

In the meat industry the minimum bar height is 13mm. For scanning in a General Distribution (automated scanning) environment, the minimum bar height for a GS1-128 barcode symbol is 32mm.

## Human Readable Interpretation

Print the human readable interpretation either above or below the symbol bars. Make sure the Application Identifiers (AIs) are clearly recognisable by placing them in brackets in the human readable interpretation only.

## Bar Code Symbol Placement

The bar code symbols on units not intended for retail POS should be upright (i.e. in picket fence orientation) and placed on the sides of the unit. Each item shall have at least one bar code symbol, and two are highly recommended. The bar code symbols should be kept away from any vertical edges so that they are less likely to be accidentally damaged in transit.

All attempts should be made to maintain 100% scannability at all times.

The bar code symbol can be positioned anywhere along the face of the carton ensuring that the following GS1 recommendations are followed:

The lower edge of the vertical bars are exactly 32mm from the lower edge of the base of the carton

No part of the bar code symbol including Quiet Zones (Light Margins) is closer than 19mm to any vertical edge

## Further Information

For further technical information please refer to the **GS1 Australia User Manual - Numbering and Bar Coding** by visiting the information library at [www.gs1au.org](http://www.gs1au.org) or contact GS1 Australia on 1300 366 033.