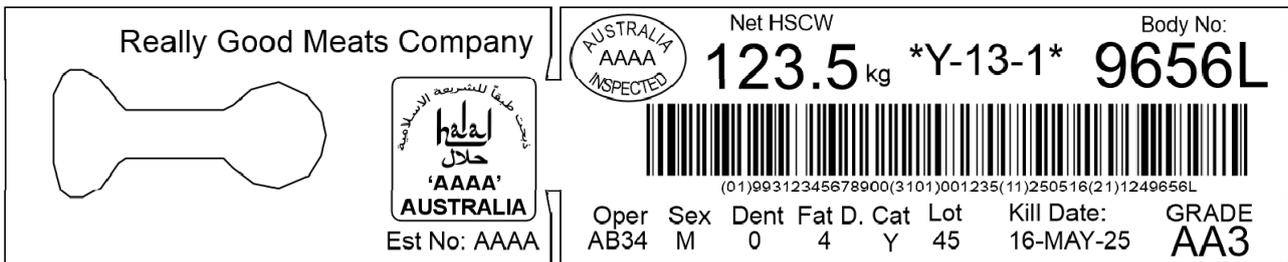




Australian Red Meat Industry

Variable Weight Carcase Label - Technical Fact Sheet



Barcode Symbology

The Barcode symbology used in the Australian Red Meat Industry Standard Variable Weight Carcase Label is GS1-128. 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 weight, slaughter date and serial numbers 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.

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).

Barcode Data including Application Identifiers (AIs)

Attribute Information	Application Identifier (AI)	Data Format	Example
Item Identification (Primary identification of the carcass product)	(01)	14 digit number fixed length	99312345678900 9 - indicates that it is a variable measure (weight) product 93123456 - GS1 Company Identification Prefix 7890 - Company product code or AUSMEAT code 0 - Check digit
Net Weight - Kilograms	(310n) n represents the decimal point indicator, which shows where the decimal point is located.	6 digit number fixed length	001235 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 123.5kg.
Production Date Referred to as the 'Kill' or 'Slaughter' date in the meat industry	(11)	6 digit number fixed length (YYMMDD)	250516 In this example the kill date is 16 th May 2025.
Serial Number	(21)	Alpha or alpha-numeric number up to 20 characters in length	1249656L In this example an 8 digit alpha-numeric serial number has been allocated.

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. The allowable X-dimension range is 0.25mm to 0.495mm (magnifications between 25% and 48.7%).

For GS1-128 barcode symbols that are to be scanned in a General Distribution Environment (primarily automated scanning). The allowable X-dimension range is 0.495mm to 1.02mm (magnifications between 48.7% and 100%).

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.

GS1-128 Symbol Dimensions

Magnification	X-Dimension	Width	Height	Quiet Zones
25%	0.25	34.04	13.00	2.54
30%	0.30	40.84	13.00	3.05
35%	0.36	47.65	13.00	3.56
40%	0.41	54.46	13.00	4.06
45%	0.46	61.26	13.00	4.57
50%	0.51	68.07	32.00	5.08
55%	0.56	74.88	32.00	5.59
60%	0.61	81.68	32.00	6.10
65%	0.66	88.49	32.00	6.60
70%	0.71	95.30	32.00	7.11
75%	0.76	102.11	32.00	7.62
80%	0.81	108.91	32.00	8.13
85%	0.86	115.72	32.00	8.64
90%	0.91	122.53	32.00	9.14
95%	0.97	129.33	32.00	9.65
100%	1.02	136.14	32.00	10.16

Note: In the heading of this table, Width = Width of bar code symbol excluding Quiet Zones (Light Margins), Height = Bar Height, Quiet Zones = Light Margins.

All measurements are in millimetres.

These dimensions are only indicative of a GS1-128 Bar Code Symbol with one Application Identifier and a GTIN-14 without any attribute data, e.g. (01)09312345678907.

Further Information

GS1 Australia in conjunction with meat industry representatives including, MLA, AUS-MEAT, AQIS and AMIC developed a set of numbering and bar-coding guidelines for the Australian Red Meat Industry. A copy of the guidelines or for further assistance on meat industry bar coding please contact GS1 Australia on 1300 227 263 or visiting gs1au.org