



## Produce Traceability Initiative Best Practices for Pallet Labeling

- Q. What is the traceability challenge with labeling produce pallets?**
- A. Currently, the North American produce industry is in its infancy when it comes to implementing standardized GS1 identification and labeling of pallets; yet pallet labeling is a key step in ensuring traceability throughout the supply chain. To address this challenge, it is recommended that the produce industry transition to the use of the GS1 Serial Shipping Container Code (SSCC) and Advanced Ship Notice (ASN\*).
- Q. Is there an interim solution?**
- A. The recommended “bridge” solution is a Hybrid Pallet Label, which encompasses both the standard SSCC and GS1-128 case bar codes that include Global Trade Item Number (GTIN), Lot # and Quantity of each unique composition of cases on the pallet. Thus, all cases on the pallet can be identified by scanning the GS1-128 bar codes on a label affixed to the pallet, while also facilitating the use of the ASN for those early adopters of it.
- Q. How was the solution determined?**
- A. Recognizing the need to migrate from the current reality to standardized pallet identification, the Produce Traceability Initiative’s (PTI) Hybrid Pallet Labeling Sub-Group conducted a pilot test to determine the efficacy of a solution which would bridge the gap to implementation. The pilot test participants included shippers and receivers (retailers), and confirmed this interim pallet identification as a best practice for industry for this important component of the PTI.

### **Best Practices for Standardized Pallet Labeling**

#### **1. Adopt GS1-128 bar codes.**

Use the GS1-128 standardized bar code to convey both the SSCC number (for those using the ASN) as well as the bar codes used to indicate GTIN, Lot/Batch # and Quantity (for those not using the ASN) as detailed below. Your country’s GS1 Member Organization (e.g. GS1 US, GS1 Canada, etc.) can provide technical support in creating and verifying bar codes, including various guidance documents.

#### **2. Use the recommended hybrid pallet label design.**

- At a minimum, the label should include (See the Hybrid Pallet Label Sample on page 4):
  - the SSCC for the pallet displayed vertically on the left hand side of the label; and

- all subsequent GS1-128 bar codes displayed horizontally as in the sample (page 4).
- Each horizontal bar code should contain three pieces of information:
  - the GTIN number for that case (using the Application Identifier (AI) of (01));
  - the Lot/Batch #, using AI (10); and
  - the quantity of cases having the same GTIN and Lot/Batch # using AI (30);
- If you need to print multiple pallet labels due to the amount of GTIN and Lot/Batch # combinations on the pallet, indicate the quantity of pallet labels included on the pallet (e.g. 1 of 3) as in the sample (page 4).

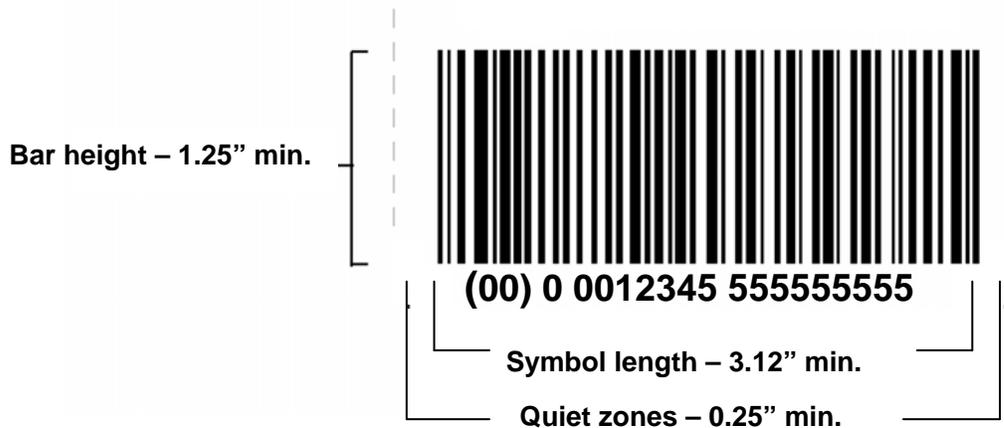
Good practice is to also include the company name, displayed horizontally on the top of the label as in the sample (page 4).

### 3. Use the recommended label size.

The pilot study validated the use of both 4 x 6 inch (thermal) labels and 8 ½ x11 inch (laser) labels for use with the Hybrid Pallet Label. Which label stock is used will be an individual company decision, based on the label stock which best meets the commercial needs of individual companies (e.g., what equipment is already available in an operation) and which best accommodates the number of GS1-128 bar codes required on the label.

### 4. Use the recommended bar code size.

For the purposes of inclusion in the Hybrid Pallet Label, bar code size of the GS1-128 bar codes should adhere to GS1 recommendations, which are shown below using the example of an SSCC.



#### Size:

- The dimensions shown above illustrate the recommended minimum size for the GS1-128 bar code.
- The maximum length is 6.24”, with quiet zones a minimum of 0.25” at either end.
- A minimum bar height of 1.25” is recommended.

**Features:**

- The quiet zones are part of the symbol.
- In the illustration, the broken lines at either end of the symbol indicate the boundaries of the quiet zones. These lines are not actually printed.

**5. Use the recommended size of human-readable information.**

Information such as the GTIN, Lot/Batch # and Quantity of identical cases must always be captured in the bar code and expressed in human-readable form below the bar code. It is recommended that the numbers be no smaller than font size 12 points, and be presented in a font which is clearly legible.

If used, additional human-readable information – such as quantity of pallet labels on the pallet (e.g. 1 of 3) and company name – should follow the same guidance and be printed in bold for clear readability. Larger point sizes for **human-readable information** is possible, and will depend on the size of label used. Always keep in mind that this information **may need to be read by warehouse personnel, so maximum readability is the goal.**

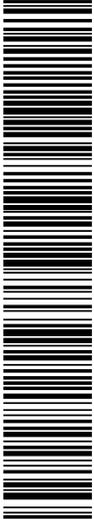
**6. Place labels on two sides of the pallet.**

Labels should be applied on two sides of a pallet (i.e., two sets of labels must be printed and applied to each pallet). If multiple Hybrid Pallet Labels are required to identify all the unique cases on a pallet, the labels should be stacked vertically (i.e. one above the other, not side by side). For further details, please see pages 5 and 6.

If shipping an over-wrapped pallet (e.g., wrapped in plastic), the same guidance as above applies; it is recommended the label be placed on top of the plastic, not underneath. This will ensure a better scan rate of the bar codes.

\* **ASN & Produce:** To derive the benefits from the implementation of the ASN in the supply chain, the SSCC must be used in concert with the ASN, which is an electronic document sent between the shipper and the receiver to facilitate efficient receiving of product. For those companies not currently using the ASN, the Hybrid Pallet Label will ease that transition when that decision is made.

## HYBRID PALLET LABEL SAMPLE

Tag 1 of 4	XYZ FRESH FOODS, INC. SALINAS, CA.
<p>SSCC</p>  <p>(00)1 0614141 000415123 6</p>	 <p>( 01) 10614141000422( 10) 022298ARC( 30) 40</p>  <p>( 01) 10614141000446( 10) 022236ABX( 30) 40</p>  <p>( 01) 10614141006257( 10) 022279BBC( 30) 20</p>  <p>( 01) 10578730002443( 10) XX1234567890ABCDEFGH( 30) 60</p>

### Printing GS1 Bar Codes

For best results, all bar code symbols created using the GS1-128 symbology should be printed on labels rather than directly on the shipping container. The exception is when using non-contact or inkjet technology.

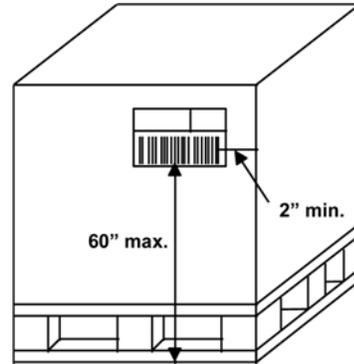
To produce the best scanning results with GS1-128 bar codes, the following is recommended:

- print with black, dark blue or dark green ink (never red ink);
- print on white, non-glossy label stock;
- the minimum acceptable ANSI print quality grade is 1.5 or 'C'.

## Location of the Hybrid Pallet Label

### **On Pallets:**

- Each full unit load – one or more packages held together by a pallet, strapping, shrink wrap, etc. – should include labels on two adjacent sides of the pallet (only one is shown on the graphic to the right simply to display suggested positioning for each side) .
- The bar code should be placed on the upper right half of the load, but the bottom edge of the symbol should not be higher than 60” from the bottom of the unit load.
- The bar code should be right of centre, at least 2” from either edge.
- Note: The placement refers to the shipping container bar code symbol itself, not the label.



**Note:** The recommendation to include labels on two adjacent sides of the pallet is especially helpful when the pallet is turned sideways in the truck or on the rack in the warehouse.

## EXAMPLES OF LABELS FROM THE PILOT PROJECT

### **Thermal – 4 x 6” labels**



**Laser – 8 ½ x 11” labels**

