

***Industries for the Blind, Inc.***

**Case and Pallet Bar Coding Specification**

**for**

**Industries for the Blind, Inc. Suppliers**

**Prepared by:  
APEX Systems Integrators (USA) Inc.  
On behalf of  
Industries for the Blind, Inc.  
Version 1.  
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## REVISION LOG

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## **1. GENERAL**

### **1.1 Overview**

Industries for the Blind, Inc. (IB) implemented a new warehouse management solution in their warehouse in July, 2008. For the new warehouse management solution (WMS) to be effective, all incoming cases and pallets from suppliers will require a barcode.

This document provides the detailed requirements for barcoding that each supplier will need to provide on their cases and pallets. Each supplier must comply with these new requirements on or before July 31, 2008.

Incoming shipments will be subject to quality assurance checks of both case and pallet barcodes. Suppliers not adhering to the barcode program requirements will be subject to penalties.

It is Industries for the Blind, Inc.'s intention to monitor industry direction as well as emerging standards in this area and correspond to both. The marketplace is moving to 2D barcodes yet the first implementation at IB will require linear barcodes. It is recommended that suppliers purchase barcode equipment that is capable of producing both linear and 2D labels.

Therefore, information contained in this document is subject to change. The reader is cautioned to regularly check the IB website <http://www.ibmilw.com/supplier-requirements/> for updates to this document.

### **1.2 References**

The following references were used throughout this document:

GS1 General Specifications, Version 8.0, Issue 1, Jan-2008.

GS1 Bar Code Verification For Linear Symbols, February 2007- Version 4.1 or latest version.

### 1.3 Terms

Term	Definition
Bar Code Verification	The scientific verification of a bar code symbol based on ISO standards and calibrated bar code verifiers, with the appropriate light source angle and aperture size for the X dimension of that bar code symbol.
Batch / Lot	The batch or lot number associates an item with information the manufacturer considers relevant for traceability of the trade item. The data may refer to the trade item itself or to items contained.
Company Number	A component of the GS1 Company Prefix. GS1 Member Organizations assign GS1 Company Prefixes to entities that administer the allocation of GS1 System identification numbers. These entities may be, for example, commercial companies, not for profit organizations, governmental agencies, and business units within organizations. Criteria to qualify for the assignment of a GS1 Company Prefix are set by the GS1 Member Organizations.
Expiry	Expiration Date
GS1 Company Prefix	Part of the GS1 identification number consisting of a GS1 Prefix and company number as assigned by the local GS1 country.
GTIN-14	The 14-digit GS1 Identification Key composed of an Indicator digit (1-9), GS1 Company Prefix, Item Reference, and Check Digit used to identify trade items. Formerly EAN128.
Serial Reference	A component of the Serial Shipping Container Code (SSCC) assigned by the owner of the GS1 Company Prefix to create a unique SSCC.
Serial Shipping Container Code	The GS1 Identification Key used to identify logistics units. The key is comprised of an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit.
Shipping Container/Logistic Unit	A shipping container can be a carton, pallet or any other inbound container. It is defined with GS1-128 label
Standard trade item grouping	A standard composition for a trade item(s) that is not intended for Point-of-Sale scanning. They are identified with a unique GTIN-14, GTIN-13, or GTIN-12.
Supplier	The party that produces, provides, or furnishes an item or service.
Trade item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Variable container	Is a container (i.e. pallet) that contains multiple cases of one or more SKU's.
X-dimension	The specified width of the narrow element, space or bar in a bar code symbol

## 1.4 GS1 Acronyms

Acronyms	Abbreviations for
AI	Application Identifier
EAN	EAN International, now called GS1
EDI	Electronic Data Interchange (X12/EDIFACT)
GTIN	Global Trade Item Number, formerly SCC-14 (UPC shipping container code)
MDF	Master Data File
NSN	National Stock Number – is a 13-digit numeric code identifying all the “standardized material items of supply” as they have been recognized by the United States Government.
SKU	Stock Keeping Unit
UPC	Universal Product Code

## 2. CASE AND PALLET BARCODING REQUIREMENTS

### 2.1 Overview

The implementation of the new WMS system requires all inbound product ordered by IB is to be labeled with a barcode. Suppliers are required to provide barcodes on each shipping container. A shipping container can be a carton, pallet or any other inbound container. Refer to Figure One for an overview of a typical supply chain.

In accordance with the North American industry standards all inbound shipments must conform to the current GS1 specifications. In this document we have summarized the key requirements. If further information is required, please refer to the latest version of the GS1 general specification. The contact information for GS1 US is:

Princeton Pike Corporate Center  
1009 Lenox Drive  
Suite 202  
New Jersey 08648 Lawrenceville

Phone: 1 609 620 0200

Fax: 1 609 620 1200

Web site: <http://www.gs1us.org>

Email: [info@gs1us.org](mailto:info@gs1us.org)

If you required additional information or have questions about the IB Supplier barcode requirements please contact:

Tom Hui  
Quality Assurance Manager  
Industries for the Blind, Inc.  
445 S. Curtis Road  
West Allis, WI 53214

Phone: 1 414 778 3087

Fax: 1 414 778 3041

Website: <http://www.ibmilw.com>

Email: [Tom.Hui@ibmilw.com](mailto:Tom.Hui@ibmilw.com)

All labels provided on cases and pallets must adhere to the following:

1. Barcodes must be 128 symbology. Code 39, Interleaved 2 of 5 etc. symbologies will not be accepted.
2. Each supplier must use the GS1 company prefix assigned to them by GS1 USA. If the Supplier does not have a GS1 company prefix they must contact GS1 USA to obtain one. GS1 USA contact information can be found in section 2.1.
3. Each supplier item must use the GS1 unique product code(s) assigned to them by GS1 USA. If their product(s) do not have a GS1 product code they must contact GS1 USA to obtain one. A unique product code is required for each SKU. GS1 USA contact information can be found in section 2.1.

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4. All labels must contain both human readable data and barcode(s) as outlined in this specification. Deviations will not be accepted.
5. All labels must be white media with black ink.
6. For each product sold to IB, an initial case and pallet barcode label sample must be submitted to IB for prior approval. Samples must be actual labels not pdf or photo files.

Supplier samples are to be sent to: Industries for the Blind, Inc.  
445 S. Curtis Road  
West Allis, WI 53214  
Attn: Tom Hui, Quality Assurance Manager

7. All products shipped on a non-mixed pallet must have the SAME product, use by date, and lot code.
8. All cases of the same SKU shipped on a mixed pallet must have the SAME lot code.
9. Barcodes must be upright using the picket fence orientation.
10. Labels can be produced using direct thermal or thermal transfer printing. Thermal transfer printing is preferred.



Figure 1: Overview Of A Typical Supply Chain



## 2.2 Containers and Variable Containers

### 2.2.1 Containers (GS1-128)

A standard container uses a GS1-128 (Shipping Container Code). Since all the units in each container share the same Universal Product Code (UPC), the container code is based on the UPC and includes some additional information about the packaging. The same GS1-128 is used on all like containers with the addition of the following application identifiers; lot code, use by date.

In general, the indicator of a GTIN Shipping Container Code shows the packaging *level* (inner pack, carton or pallet) and, indirectly, indicates the *quantity* of items contained within (an inner pack may contain 12 items, a small carton may contain 24 items, a large carton may contain 48). In this document we refer to containers as cases.

### 2.2.2 Variable Containers (SSCC-18)

The contents of a shipping container are considered to be “variable” when the units in the shipping container vary in some respect — different GTINs, color, size, weight, quantity, freshness, etc. The following are examples of “variable” containers:

1. a carton containing a mix of products packed to order
2. a pallet loaded with a variety of products

A variable container uses an SSCC-18 (Serial Shipping Container Code). There is no correlation between the SSCC-18 and GTINs of the units inside. The information linking these numbers will be sent to IB via the appropriate EDI transaction set (refer to section 4.0 ). Instead, the Serial Shipping Container Code uses a unique number that identifies just one container. The Serial Shipping Container Code must not be repeated on another container for at least one year or while the original container is still in use

## 2.3 GS1 Application Identifiers

The following application identifiers (AI) are approved for Supplier case and pallet labels.

Application Identifier	Data Content	Format	Additional Information	Human Readable/Example
00	SSCC (Serial Shipping Container Code)	n2+n18		SSCC
01	Global Trade Item Number (GTIN)	n2+n14		GTIN
10	Batch or Lot Number	n2+X..20	(FNC1) required at the end of the data string	BATCH/LOT
17	Expiration Date (YYMMDD)	n2+n6	If only year and month are available, DD must be filled with two zeroes.	USE BY or EXPIRY
37	Trade Item Count	n2+n6	Integer only	COUNT

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Application Identifier	Data Content	Format	Additional Information	Human Readable/Example
400	Customer's Purchase Order Number	n3+x..30	(FNC1)	ORDER NUMBER
410	Ship to – deliver to Global Location Number	n3+n13		SHIP TO LOC
421	Deliver to postal code with three digit ISO country code	N3+n3+an..9		SHIP TO POST
7001	NATO Stock Number (NSN)	n4+n13	Pursuant to the NATO standardization agreement, the NATO stock number is used by all treaty countries. In the USA, it contains the 13 digit USA NSN plus 4 additional digits to represent the application identifier code 7001. N <sub>1</sub> to N <sub>4</sub> – NATO supply classification N <sub>5</sub> N <sub>6</sub> – assigning country USA 00 and 01 N <sub>7</sub> to N <sub>13</sub> – sequential number on a case of pallet label must be processed with the GTIN: (FNC1) required at the end of the data string	NSN

## **2.4 GS1-128 Container Label**

Depicted in Figures 2 and 3 are two GS1-128 (formerly known as SCC-14) container labels that must be present on all inbound Supplier shipping containers. A barcode label is required for each different shipping container. Two sizes are acceptable; 4" by 6" and 3" by 5". The Supplier shall provide one label per case and utilize the largest container label possible per shipping carton size,

### 2.4.1 GS1-128 Container Label Example – 4” by 6”



Figure 2.

### 2.4.2 GS1-128 Container Label Example – 3” by 5”

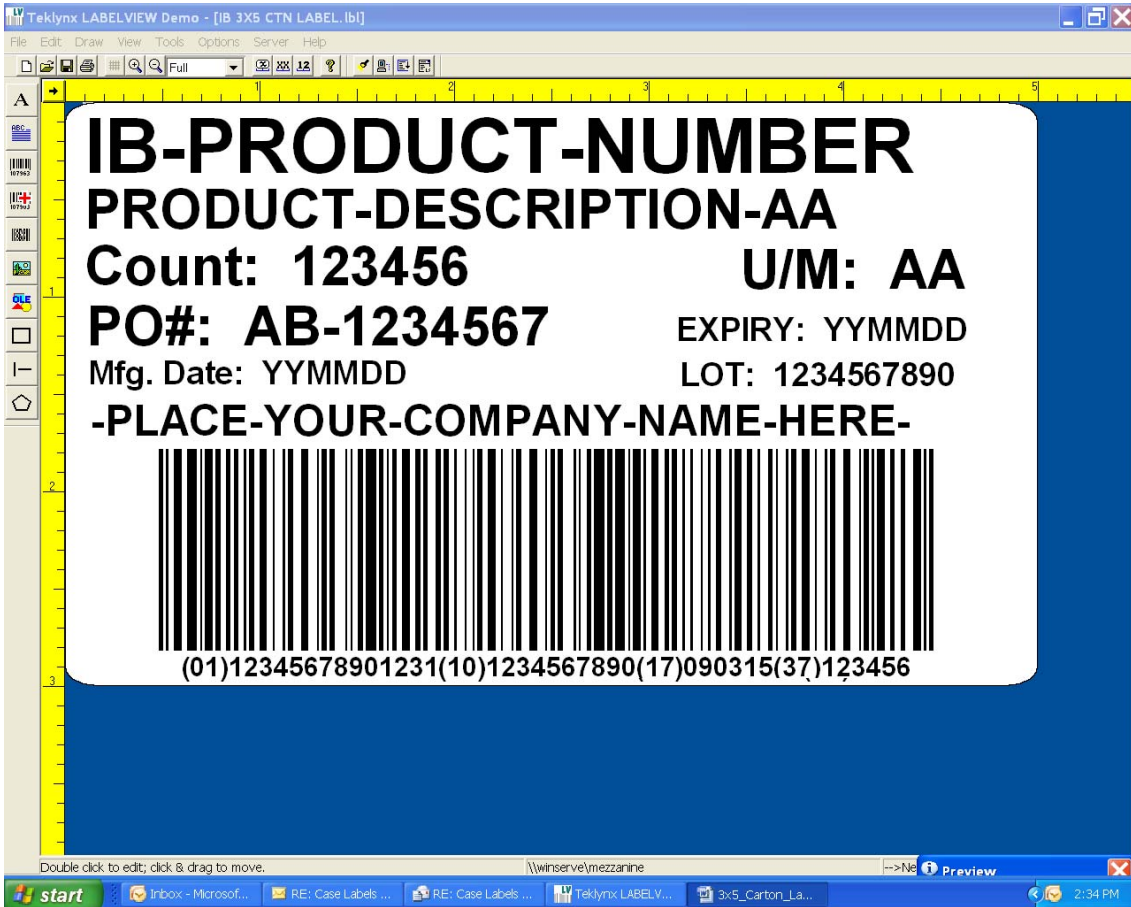


Figure 3: 3” by 5” GS1-128 Label

### 2.4.3 GS1-128 Container Label Information Content

The shipping container code will be 14 digits long and is based on the UPC of the items inside the container. The information content will be:

- Packaging indicator
- GS1 company prefix of the Supplier
- Item number as indicated on the IB purchase order
- Check digit
- Lot code
- Expiration date
- Count

Several situations affect the content of UPC's and GS1-128's:

A consumer unit is assigned a UPC number by the owner or controller for a particular brand. Consequently, private label products and branded products will have different manufacturer ID's.

A GS1-128 will represent information for a group of consumer units with identical product numbers, whereas as a UPC will represent information for a single consumer unit.

A single consumer unit (i.e. a case of pop), with a particular UPC, may also consist of smaller consumer units (i.e. a single pop can), with a different UPC.

Consumer units that consist of different quantities of smaller consumer units will have different UPC's as well (i.e. a 12 pack of pop will have a different UPC than a 24 pack of pop).

The following example details the breakdown of the barcode example provided in Figures 2 and 3:

(01)123456789012343(10)1234567890(17)090315(37)123456

indicates that GS1-128 is the type of data structure, which follows.  
Format: n2 + n14

01                    Application identifier

Position	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Char	PI	M1	M2	M3	M4	M5	M6	M7	I1	I2	I3	I4	I5	C

PI –

If PI is 0 – indicates that the case is different from the items inside the case.

If PI is 1-8 – indicates different case packs of identical unit UPC's

If PI is 9 – indicates that the product count inside varies from container to container even though they have the same UPC's. Must use AI 30 for this type of packaging. Not intended to be use as point-of-sale.

M1-M7                    GS1 Company Prefix Of The Supplier

**Each supplier must use the GS1 company prefix assigned to them by GS1 USA. If the Supplier does not have a GS1 company prefix they must contact GS1 USA to obtained one. GS1 USA contact information can be found in section 2.1. M2 to M7 is the same data found in the product UPC code.**



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11-15 Item Number As Provided On The IB Purchase Order

***Each supplier item must use the GS1 unique product code(s) assigned to them by GS1 USA. If their product(s) do not have a GS1 product code they must contact GS1 USA to obtain one. A unique product code is required for each SKU. GS1 USA contact information can be found in section 2.1.***

C Check Digit

1 is a modulo 10 check character

Note: the packaging indicator is included in this calculation. To determine how this digit is calculated, refer to the GS1 specification.

In addition to the GTIN, the following application identifiers must be provided.

(10) indicates the Lot ID, alphanumeric, AAAAAAAAAA

(17) indicates the Expiry date follows with the format (YYMMDD)

Format: n2 + n6

To indicate year and month, the day must be filled with "00".

"090315" indicates a Use By Date of March 15, 2009. The use by/expiration date (AI 17) states the date by which a product must be used or consumed. It can be a statement of public safety, such as with pharmaceutical applications.

If there is no expiration date, use "000000".

(37) is item the integer count.

## **2.4.4 GS1-128 Container Label Design Guidelines**

### **2.4.4.1 Symbol Height**

4" by 6" - The GS1-128 Bar Code Symbol shall have a minimum height of the bars (dark bars) in the symbol of 1.25 inches (32 millimetres).

3" by 5" - The GS1-128 Bar Code Symbol shall have a minimum height of the bars (dark bars) in the symbol of 1.25 inches (32 millimetres).

### **2.4.4.2 Maximum Symbol Length**

Two parameters have to be taken into consideration for defining the maximum length of a GS1-128 Bar Code Symbol: the physical length, which depends on the number of characters encoded and the module width (or X-dimension) used, and the number of data characters encoded excluding the auxiliary characters.

The maximum length of any GS1-128 Bar Code Symbol must be within the following limits:

The physical length, including Quiet Zones, cannot exceed 6.0 inches.

The maximum number of encoded data characters is 48, including the Application Identifier(s) and Function 1 Symbol Character (FNC1) when used as a Separator Character, but excluding the auxiliary characters and the Symbol Check Character.

### **2.4.4.3 Label Dimension**

The default size of the label shall be 4" by 6". If the container dimensions do not allow for the default label size then the alternate size shall be 3" by 5".

### **2.4.4.4 X Dimension**

The X dimension or narrow bar width, will be between .010 and .040 inches.

### **2.4.4.5 Symbol Length**

The symbol length on a 4" by 6" label will be between 4 and 5 1/4 inches.

The symbol length on a 3" by 5" label will be between 3 and 4 1/4 inches.

#### **2.4.4.6 Quiet Zones**

The quiet zones will be at least .25 inches in width.

#### **2.4.4.7 Human Readable Interpretation**

The Human Readable Interpretation of the data in the bar code symbol must be shown below the symbol. Start, Stop, shift, and function characters, as well as the Symbol Check Character, are not shown in the human readable format.

The GS1-128, the human readable data will also include:

1. Product Number
2. Product Description
3. Count
4. Unit of Measure
5. IB Purchase Order Number
6. Expiry
7. Manufacturing Date
8. Lot Code
9. Supplier Name
10. GS-128 interpretation

The precise location of the Human Readable Interpretation and the font used to represent the characters are specified below. The Quiet Zones must not be violated.

#### **2.4.4.8 Product Number**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

4" by 6":

- Size: 36pt., 17 characters long by 1 line
- Position: ¼ inch from left side of the label, 3 1/2 inches from the bottom side of the label.

3" by 5":

- Size: 28pt., 17 characters long by 1 line
- Position: 1/8 inch from left side of the label, 2 5/8 inches from the bottom side of the label.

#### **2.4.4.9 Product Description**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

4" by 6":

- Size: 26pt., 22 characters long by 1 line
- Position: ¼ inch from left side of the label, 3 3/16 inches from the bottom side of the label.

3" by 5":

- Size: 20pt., 22 characters long by 1 line
- Position: ¼ inch from left side of the label, 2 3/8 inches from the bottom side of the label.

#### **2.4.4.10 Count**

General:

- Font: arial bold
- Language: English
- Type: Numeric, Integer

4" by 6":

- Size: 24pt., 6 digits long by 1 line
- Position: ¼ inch from left side of the label, 2 11/16 inches from the bottom side of the label.

3" by 5":

- Size: 20pt., 6 digits long by 1 line
- Position: 1/8 inch from left side of the label, 2 1/16 inches from the bottom side of the label.

#### **2.4.4.11 Unit of Measure**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

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UOM Code	Description
BG	Bag
BX	Box
CS	Case
DZ	Dozen
EA	Each
GL	Gallon
GR	Gross
HD	Hundred
KT	Kit
LB	Pound
MX	Thousand
OZ	Ounces
PD	Pad
PG	Package
PK	Package
PR	Pair
PT	Pint
RL	Roll
RM	Ream
RO	Roll
SE	Set
ST	Set
TU	Tube

4" by 6":

- Size: 24pt., 2 characters long by 1 line
- Position: ¼ inch from left side of the label, 2 11/16 inches from the bottom side of the label.

3" by 5":

- Size: 20pt., 2 characters long by 1 line
- Position: 4¼ inches from left side of the label, 2 1/16 inches from the bottom side of the label.

#### **2.4.4.12 IB Purchase Order Number**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

4" by 6":

- Size: 24pt., 10 characters long by 1 line
- Position: ¼ inch from left side of the label, 2 5/16 inches from the bottom side of the label.

3" by 5":

- Size: 20pt., 10 characters long by 1 line
- Position: 1/8 inch from left side of the label, 1 3/4 inches from the bottom side of the label.

#### **2.4.4.13 Expiry**

General:

- Font: arial bold
- Language: English
- Type: Numeric

4" by 6":

- Size: 14pt., 6 characters long by 1 line
- Position: ¼ inch from left side of the label, 2 3/8 inches from the bottom side of the label.

3" by 5":

- Size: 12pt., 6 characters long by 1 line
- Position: 1/8 inch from left side of the label, 1 3/4 inches from the bottom side of the label.

#### **2.4.4.14 Manufacturing Date**

General:

- Font: arial bold
- Language: English
- Type: Numeric

4" by 6":

- Size: 14pt., 8 digits long by 1 line
- Position: ¼ inch from left side of the label, 2 1/6 inches from the bottom side of the label.

3" by 5":

- Size: 12pt., 8 digits long by 1 line
- Position: 1/8 inch from left side of the label, 1 9/16 inches from the bottom side of the label.

#### **2.4.4.15 Lot Code**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

4" by 6":

- Size: 14pt., 10 characters long by 1 line
- Position: 4¼ inch from left side of the label, 2 1/8 inches from the bottom side of the label.

3" by 5":

- Size: 12pt., 10 characters long by 1 line
- Position: 3 5/8 inch from left side of the label, 1 9/16 inches from the bottom side of the label.

#### **2.4.4.16 Supplier Name**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

4" by 6":

- Size: 18pt., 30 characters long by 1 line
- Position: ¼ inch from left side of the label, 1 3/4 inches from the bottom side of the label.

3" by 5":

- Size: 16pt., 30 characters long by 1 line
- Position: 1/8 inch from left side of the label, 1 1/4 inches from the bottom side of the label.

#### **2.4.4.17 GS1-128 Interpretation**

General:

- Font: arial bold
- Language: English
- Type: varies

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4" by 6":

- Size: 10pt., provide human readable interpretation of the GS1-128 barcode
- Position: ¼ inch from left side of the label, 1/16 inches from the bottom side of the label.

The Human Readable Interpretation of the data in the bar code symbol must be shown below the symbol. Start, Stop, shift, and function characters, as well as the Symbol Check Character, are not shown in the human readable format.

3" by 5":

- Same as above

### **2.5 Variable Container Label (SSCC-18)**

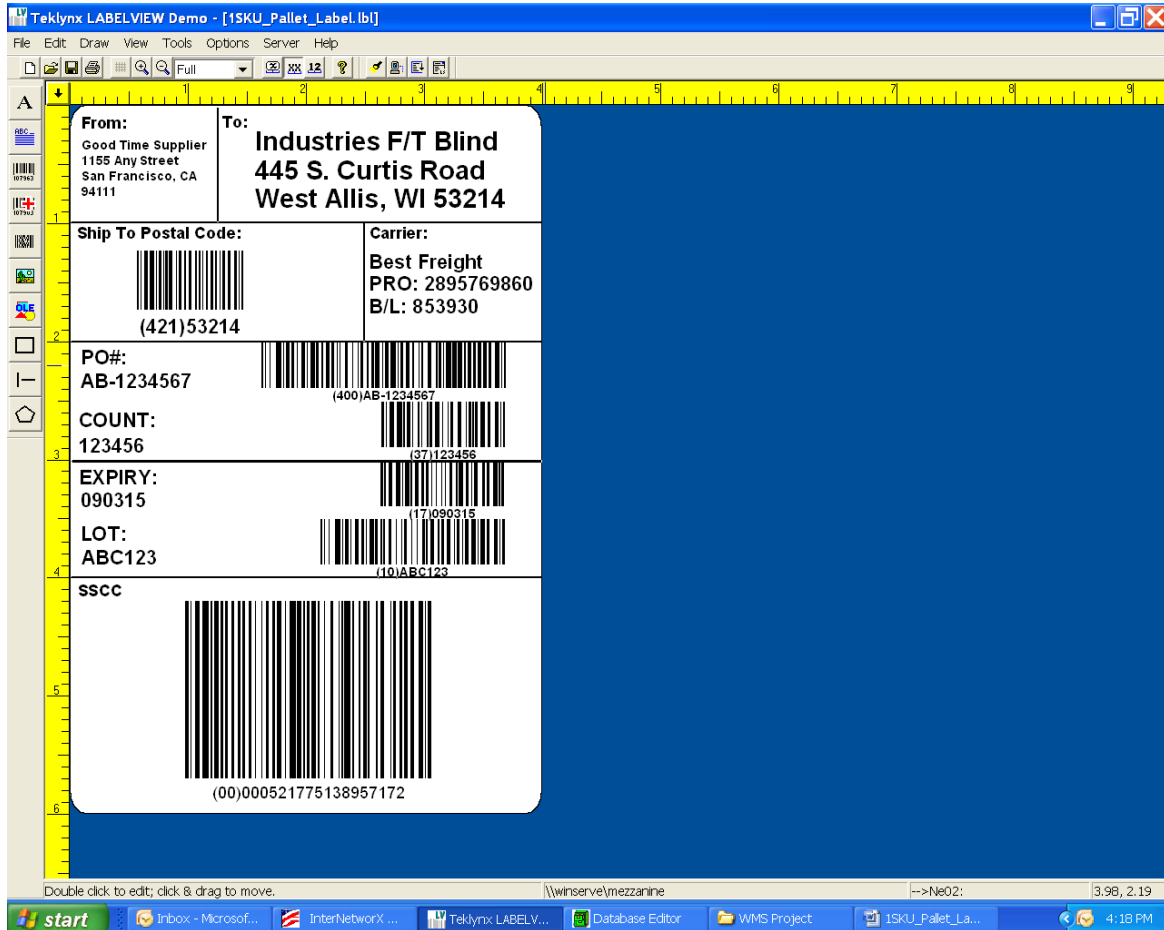
Depicted in Figure 4 is a variable container label for a full pallet – single SKU.

Depicted in Figure 5 is a variable container label for a full pallet – mixed SKU.



### 2.5.1 Pallet Label Example – 4” by 6” – Full Pallet – Single SKU

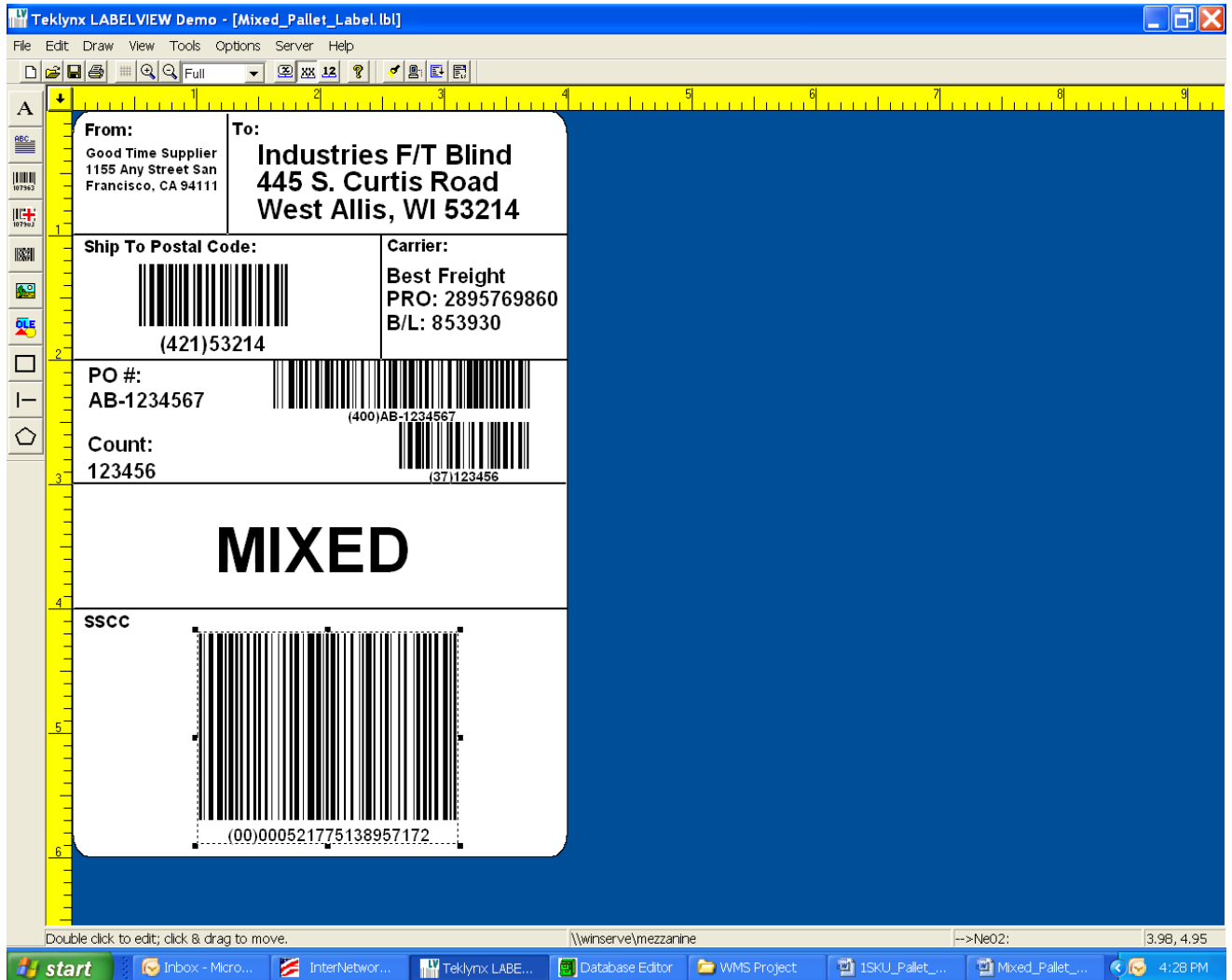
Figure 4.



Zone	Description	Example
A	From	
B	To	
C	Ship to	
D	Carrier	
E	IB purchase order number	
F	Pallet case count	
G	Expiry	
H	Lot	
I	Serial shipping container code (SSCC)	

## 2.5.2 Pallet Label Example – 4” by 6” – Full Pallet – MIXED SKU’s

Figure 5.



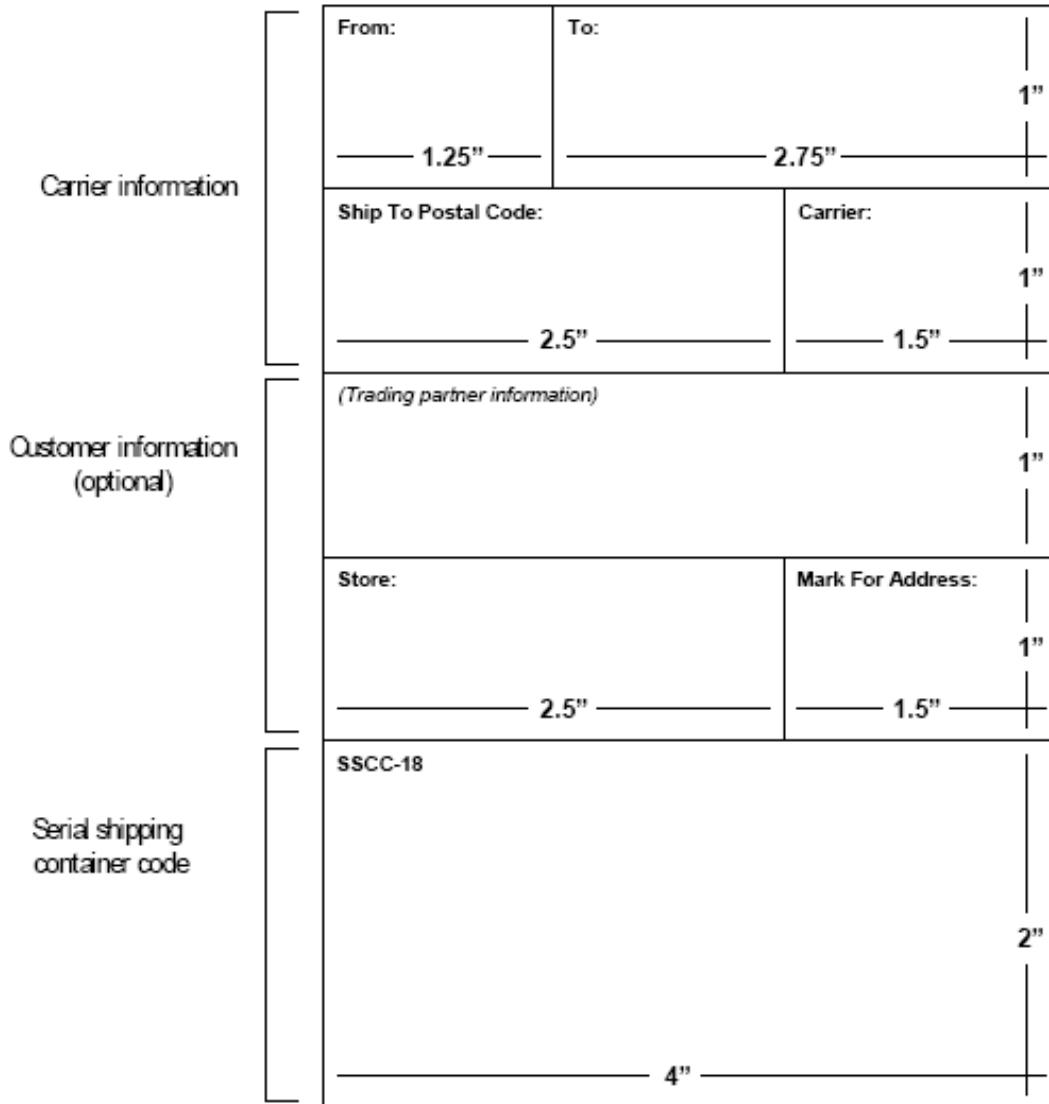
Zone	Description
A	From
B	To
C	Ship to
D	Carrier
E	IB purchase order number
F	Pallet case count
G/H	Fixed text - MIXED
I	Serial shipping container code (SSCC)

### 2.5.3 Variable Container Label Layout

**Figure 6.**

The Layout of the GS1 US Common Label

The illustration shows the dimensions for the complete label format. Dimensions may vary by  $\pm .2"$ . Some areas of the label are optional, and some variations on the layout are permitted to accommodate different sized packages.



## 2.5.4 SSCC-18 Variable Container Label Information Content

The SSCC container code will be 18 digits long and is based on a unique pallet number. The information content will be:

SSCC-18 AI – application identifier (00)  
Unique number  
Check digit

## 2.5.5 Variable Container (SSCC-18) Label Design Guidelines

### 2.5.5.1 Symbol Height

The GS1-128 Bar Code Symbol shall have a minimum height of the bars (dark bars) in the symbol of 1.25 inches (32 millimetres).

### 2.5.5.2 Maximum Symbol Length

Two parameters have to be taken into consideration for defining the maximum length of a GS1-128 Bar Code Symbol: the physical length, which depends on the number of characters encoded and the module width (or X-dimension) used, and the number of data characters encoded excluding the auxiliary characters.

The maximum length of any GS1-128 Bar Code Symbol must be within the following limits:

**The physical length, including Quiet Zones, cannot exceed 165 millimetres (4.0 inches).**

The maximum number of encoded data characters is 48, including the Application Identifier(s) and Function 1 Symbol Character (FNC1) when used as a Separator Character, but excluding the auxiliary characters and the Symbol Check Character.

### 2.5.5.3 Label Dimension

The default size of the label shall be 4" by 6". If the container dimensions do not allow for the default label size then the alternate size shall be 3" by 5".

### 2.5.5.4 X Dimension

The X dimension or narrow bar width, will be between .010 and .040 inches.

### **2.5.5.5 Symbol Length**

The symbol length will be 2 7/8 inches.

### **2.5.5.6 Quiet Zones**

The quiet zones will be at least .25 inches in width.

## **2.5.6 Human Readable Interpretation and Additional Barcodes**

The SSCC-18, the human readable data will also include:

1. From address information
2. To address information
3. Ship to postal code
4. Carrier information
5. IB Purchase Order Number
6. Count
7. Expiry Date (single SKU pallets only); MIXED (mixed SKU pallets only)
8. Lot Code (single SKU pallets only)
9. SSCC

### **2.5.6.1 From Address Information**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

Single SKU Pallets:

- Supplier name - size: 8pt., 18 characters of text long by 1 line
- Supplier address - size: 8pt., 18 characters of text long by 1 line
- Supplier city - size: 8pt., 18 characters of text long by 1 line
- Supplier zip code - size: 8pt., 5 numeric long by 1 line
- Position: 1/8 inch from left side of the label, 5 1/4 inches from the bottom side of the label.

Mixed SKU Pallets:

- Same as above

### **2.5.6.2 To Address Information**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

Single SKU Pallets:

- Customer name - size: 16pt., 18 characters of text long by 1 line
- Customer address - size: 16pt., 18 characters of text long by 1 line
- Customer city - size: 16pt., 18 characters of text long by 1 line
- Customer country - size: 16pt., 18 characters of text long by 1 line
- Position: 1¼ inch from left side of the label, 5 1/8 inches from the bottom side of the label, equally spaced.

Mixed SKU Pallets:

- Same as above

### **2.5.6.3 Ship To Post**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

Single SKU Pallets:

- Customer zip code - size: 12pt., 5 numeric long by 1 line
- Position: 1/2 inch from left side of the label, 4 1/4 inches from the bottom side of the label.

Mixed SKU Pallets:

- Same as above

### **2.5.6.4 Carrier Information**

General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

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### Single SKU Pallets:

- Carrier name - size: 12pt., 12 characters of text long by 1 line
- Shipment PRO information - size: 12pt., 12 numeric long by 1 line
- Shipment B/L - size: 12pt., 12 numeric long by 1 line
- Position: 2 1/2 inch from left side of the label, 5 1/8 inches from the bottom side of the label. Equally spaced.

### Mixed SKU Pallets:

- Same as above

## 2.5.6.5 IB Purchase Order Information

### General:

- Font: arial bold
- Language: English
- Type: Alphanumeric

### Single SKU Pallets:

- Size: 8pt., 10 characters long by 1 line
- Position: 1/8 inch from left side of the label, 3 3/4 inches from the bottom side of the label.

### Mixed SKU Pallets:

- Same as above

### Barcode details:

The IB purchase order information must be provided in the following barcode format:

Symbology: UCC/EAN128  
AI: 400  
X-Dimension: 12 mils  
Quiet zones: 1/4" min  
Symbol height: 3/8"

## 2.5.6.6 Count

### General:

- Font: arial bold
- Language: English
- Type: Alphanumeric
- Case count on pallet

## INDUSTRIES FOR THE BLIND, INC.

### Single SKU Pallets:

- Size: 8pt., 6 characters long by 1 line
- Position: 1/8 inch from left side of the label, 3 1/4 inches from the bottom side of the label.

### Mixed SKU Pallets:

- Same as above

### Barcode details:

The count information must be provided in the following barcode format:

Symbology: UCC/EAN128

AI: 37

X-Dimension: 12 mils

Quiet zones: 1/4" min

Symbol height: 3/8"

## 2.5.6.7 Expiry Date

### General:

- Font: arial bold
- Language: English
- Type: varies
- Date that the product must be used by

### Single SKU Pallets:

- Size: 8pt., 6 characters long by 1 line
- Position: 1/8 inch from left side of the label, 2 3/4 inches from the bottom side of the label.

### Barcode details:

The expiry information must be provided in the following barcode format:

Symbology: UCC/EAN128

AI: 17

X-Dimension: 12 mils

Quiet zones: 1/4" min

Symbol height: 3/8"

### Mixed SKU Pallets:

- Size: 36pt., fixed text 5 characters long by 1 line, text must be: MIXED in capital letters
- Position: 1 1/8 inch from left side of the label, 2 1/4 inches from the bottom side of the label.



### **2.5.6.8 Lot Code**

General:

- Font: arial bold
- Language: English
- Type: varies
- Lot code for all product on the pallet

Single SKU Pallets:

- Size: 10pt., 6 characters long by 1 line
- Position: 1/8 inch from left side of the label, 2 1/8 inches from the bottom side of the label.

Barcode details:

The lot code information must be provided in the following barcode format:

Symbology: UCC/EAN128  
AI: 10  
X-Dimension: 12 mils  
Quiet zones: 1/4" min  
Symbol height: 3/8"

Mixed SKU Pallets:

- None

### **2.5.6.9 SSCC-18 Interpretation**

General:

- Font: arial bold
- Language: English
- Type: varies

Single SKU Pallets:

- Size: 10pt., provide human readable interpretation of the SSCC barcode
- Position: 1 3/8 inch from left side of the label, 1/8 inch from the bottom side of the label.

The Human Readable Interpretation of the data in the bar code symbol must be shown below the symbol. Start, Stop, shift, and function characters, as well as the Symbol Check Character, are not shown in the human readable format.

Mixed SKU Pallets:

- Same as above

## **2.6 Overview – Label Placement Guidelines**

### **2.6.1 Symbol Place Guidelines**

This section includes guidelines for the placement of labels on cases and pallets. It gives the general principles that apply, mandatory rules, and recommendations for symbol placement on specific packaging and container types. Consistency of symbol placement is critical to successful scanning. With manual scanning, variation of symbol placement makes it difficult for warehouse workers to predict where the symbol is located, and this reduces efficiency. Respecting the guidance in this section will result in the consistency and predictability required by IB.

### **2.6.2 Number of Symbols**

Bar code symbols representing different Global Trade Item Numbers (GTINs) must never be visible on any one item. One label is required on each case, two labels are required on each pallet.

### **2.6.3 Scanning Obstacles to Avoid**

Anything that will obscure or damage a bar code symbol will reduce scanning performance and should be avoided. For example:

1. Never position the bar code symbol on the item in an area with inadequate space.
2. Do not let the other graphics encroach on the space for the bar code.
3. Never place bar code symbols, including Quiet Zones, on perforations, die-cuts, seams, ridges, edges, tight curves, folds, flaps, overlaps, and rough textures.
4. Never put staples through a bar code symbol or its Quiet Zones.
5. Never fold a symbol around a corner.
6. Never place a symbol under a package flap.
7. Barcodes should be kept away from any vertical edges so that the bar codes are less likely to be accidentally damaged in transit.

### **2.6.4 Symbol Placement on Pallets**

All types of pallets, both mixed and non-mixed pallets containing individual trade items and single trade items, (such as a refrigerator or washing machine) must have two SSCC-18 pallet labels applied to each pallet.

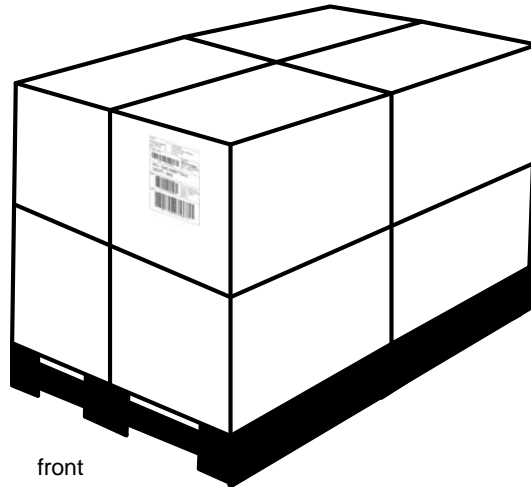
For pallet less than 16 inches (400 millimetres) high, the bar code symbol should be placed as high as possible while protecting the bar code.

The symbol including, its Quiet Zones, should be at least 50 millimetres (2.0 inches) from any vertical edge to avoid damage.

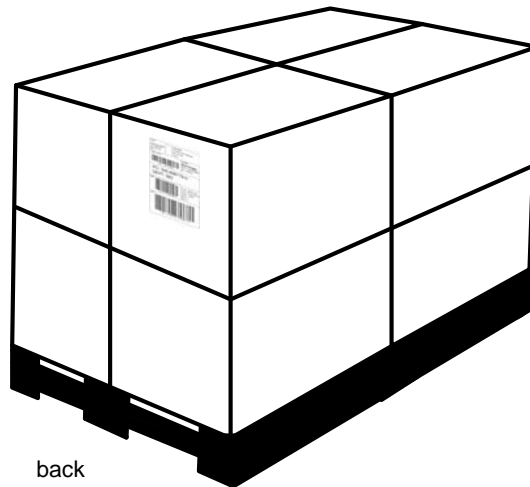
### 2.6.4.1 Pallet – Label Two Sides, Front and Back

Each pallet shall have two 4” by 6” labels. One label shall be on the front of the pallet and the second label shall be on the back. Refer to Figure 7. Two Identical Bar Code Symbols

Two identical labels per pallet.



front



back

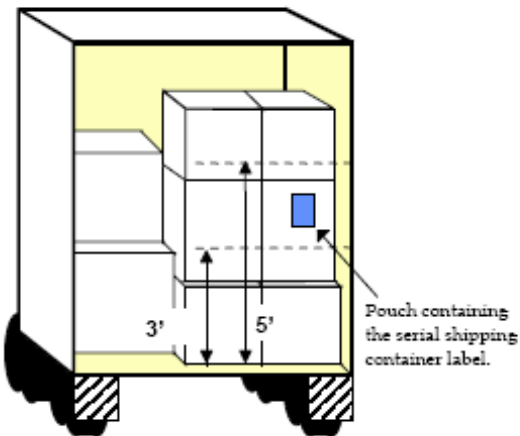
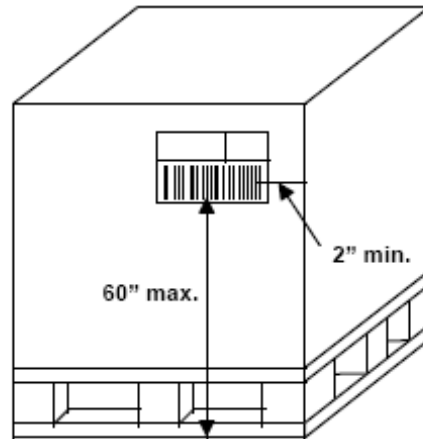
## 2.6.4.2 GS1 US Common Label Placement on a Shipping Container

### Placing the GS1 US Common Label on a Shipping Container

#### Pallets

- Each full unit load—one or more packages held together by a pallet, strapping, shrink wrap, etc.—will have at least one shipping container bar code.
- The bar code should be placed on the upper 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.



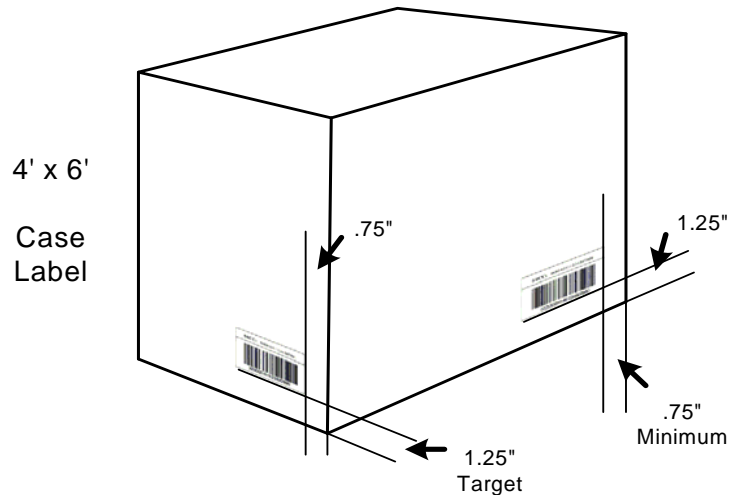
#### Truckloads

- A serial shipping container bar code for a truckload is placed in a pouch and attached to the container closest to the rear of the trailer.
- The pouch should be placed so that it is visible when the trailer doors are open, in an area 3' to 5' above the trailer floor and within 50° of the right side of the trailer.

## 2.6.5 Label Placement on Containers, Cartons and Outer Cases

For cartons and outer cases, symbol placement will vary slightly in practice, however the target placement for the bottom of the bar code symbol is 1.25 inches (32 millimetres) from the natural base of the item. The symbol including, its Quiet Zones, should be at least 0.75 inches (19 millimetres) from any vertical edge to avoid damage.

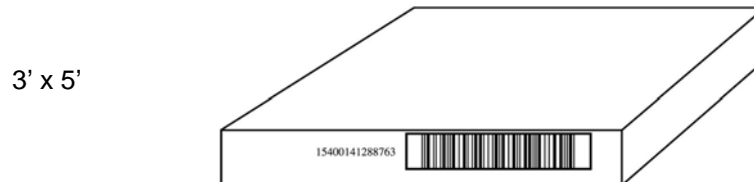
**Figure 8. Symbol Placement on Cartons and Outer Cases**



### 2.6.5.1 Symbol Location on Shallow Trays and Cases

If the height of a case or tray is less than 50 millimetres (2.0 inches), making it impossible to print a full height bar code with the Human Readable Interpretation below the bars, or if the construction of the unit is such that the full symbol height cannot be accommodated, the following options should be considered in this order of preference:

1. Place the Human Readable Interpretation to the left of the symbol, outside the compulsory Quiet Zones.



**Figure 9. Human Readable Text to Left of Symbol**

2. When the height of the unit is less than 32 millimetres, the symbol may be placed on the top of the package. The symbol should be placed with the bars perpendicular to the shortest side, no closer than 19 millimetres (0.75 inch) from any edge.

**Figure 10.**



Sometimes two bar code symbols are used on variable measure units. If it is necessary to remove the Human Readable Interpretation from beneath the unit, the human readable characters of the main symbols should be placed to the left of the bars of the main symbol. The Human Readable Interpretation of the Add-On Symbol should be placed to the right of the bars of the Add-On Symbol.

### **3. IB SUPPLIER BAR CODE QUALITY ASSURANCE PROGRAM**

In this section, we provide some summary details with respect to the quality expectations of incoming supplier case and pallet barcodes. For a detailed summary of barcode verification please refer to the GS1 Bar Code Verification For Linear Symbols, latest version, specification. It is the responsibility of the 'originator' of the bar code (i.e. Supplier) to ensure that it meets the quality requirements outlined in the verification specification.

Essential features that will have a major impact on the acceptance of a bar code include:

1. Barcode grade (A, B,C or D)
2. Symbol Location
3. Conformance to the numbering system
4. Symbol X dimension and height
5. Layout of human readable interpretation
6. In line with intended application guidelines (correct symbols)
7. Number of symbolsCode Content
8. Code Symbology
9. Readability-an overall evaluation
10. Bar growth-tolerances on bar width
11. Quiet Zone-Clear area before and after the code
12. Reflectivity
13. Contrast of printed code

All incoming case and pallet barcodes will be sampled to ensure adherence to IB quality standards.

Non-conformance to these standards will result in penalties as outlined in the IB Supplier agreement.

Each Supplier is required to submit a copy of their case and pallet barcode label quality assurance program to:

Industries for the Blind, Inc.  
445 S. Curtis Road  
West Allis, WI 53214  
Attn: Tom Hui, Quality Assurance Manager

## **4. ELECTRONIC DATA INTERCHANGE – ADVANCED SHIPMENT NOTICE**

Effective January 1, 2009 all inbound supplier shipments to IB will require an ASN, EDI transaction sent to IB at least 48 hours before shipment arrives at facility. Suppliers that can provide an ASN today are strongly encouraged to do so.

An Advanced Shipment Notice (ASN) is an EDI formatted electronic notification of pending deliveries; an electronic packing list. In the EDI X12 system, it is known as the EDI 856 document. The ASN can be used to list the contents of a shipment of goods as well as additional information relating to the shipment, such as order information, product description, physical characteristics, type of packaging, marking, carrier information, and configuration of goods within the transportation equipment. The ASN enables the sender to describe the contents and configuration of a shipment in various levels of detail and provides an ordered flexibility to convey information <sup>[1]</sup>.

Although an ASN provides information similar to the Bill of Lading, its function is very different. While the Bill of Lading is meant to accompany a load on its path, the goal of the ASN is to provide information to the destination's receiving operations well in advance of delivery. Modern receiving operations rarely have time to break down a shipping unit (carton or pallet) and identify its components, depending instead on quick scans of barcodes on shipping labels. An ASN can provide a list of all the barcoded ID numbers of the shipping units and the contents of each. The time required to receive the load, then, is greatly reduced.

IB will provide a 997 Functional Acknowledgement back after receipt of the supplier 856 Advance Shipping Notice. The 997 Functional Acknowledgement back to the supplier indicates that a successfully Advance Shipping Notice has been received.

IB uses EasyLink Services International Corporation VAN network for their inbound and outbound EDI transaction processing. The Supplier is requested to contact EasyLink Services International Corporation to arrange setup of their inbound ASN's for IB purchase orders. They can be reached at 1-800-787-4037.



## 5. SOLUTION CENTER (PRINTERS, SOFTWARE AND MEDIA)

Suppliers can purchase a turnkey barcode solutions and consulting services for case and pallet labeling from Apex Systems Integrators (USA) Inc.

### USA

10 South Riverside Plaza  
Suite 1800  
Chicago, Illinois 60606

Phone: 1 888 273 9744 x228

### Canada

APEX Corporate Building  
3170 Harvester Road  
Burlington, ON, L7N 3W8

Phone: 1 888 273 9744 x228

Fax: 1 905 631 9424

Web site: <http://www.APEXsi.com>

Email: [info@APEXsi.com](mailto:info@APEXsi.com)

Contact: Don Dalicandro - 1 888 273 9744 x228

## INDUSTRIES FOR THE BLIND, INC.

Working with Industries for the Blind, Inc., the following turnkey solutions can be purchased by IB suppliers. Additional barcode solution configurations and services are available. Please contact Apex Systems Integrators (USA) Inc. directly.

### **Option 1: Bar-coding Solution In a Box – Single Printer**

This kit includes:

1. Stand alone barcode printer for manual print and apply applications – quantity one.
2. One software license for the PC application for creating barcode case and pallet labels
3. Cable to connect the printer to a computer.
4. APEX template kit for case and pallet labels. This kit includes the required barcode label layouts to meet the Industries for the Blind, Inc. specification for case and pallets
5. One case, four label rolls (4" by 6") per case.
6. Up to eight (8) hours of technical phone support for setup and training.

Kit cost:           \$ 4,900.00 US

Notes:

1. Pricing net of applicable taxes, shipping and handling.
2. Barcode software requires a desktop computer with Windows NT4, 2000 or 2003 server operating system. Computer not included and sold separately.
3. Warranty provided by the manufacturer.
4. Barcode printer is capable of printing 2D barcodes.
5. Pricing valid to December 31, 2008.

**Option 2: Bar-coding Solution In a Box – Two Printers, Networked  
(LAN Configuration)**

This kit includes:

1. Ethernet equipped, barcode printer for manual print and apply applications – quantity two.
2. One software network license for up to five printers for the PC application for creating barcode case and pallet labels
3. APEX template kit for case and pallet labels. This kit includes the required barcode label layouts to meet the Industries for the Blind, Inc. specification for case and pallets
4. Two cases, four label rolls (4" by 6") per case.
5. Up to sixteen (16) hours of technical phone support for setup and training.

Kit cost:           \$ 9,400.00 US

Notes:

1. Pricing net of applicable taxes, shipping and handling.
2. Barcode software requires a desktop computer with Windows NT4, 2000 or 2003 server operating system. Computer not included and sold separately.
3. Network installation not included.
4. Warranty provided by the manufacturer.
5. Barcode printer is capable of printing 2D barcodes.
6. Pricing valid to December 31, 2008.

**Printer Media – Labels and Ribbons**

4" by 6" label roll – quantity one: \$ 29.50

4" by 6" label rolls – quantity 1,000: call for pricing, volume discounts apply.

4" by 6" label rolls – quantity 10,000: call for pricing, volume discounts apply.

4" by 6" label rolls – quantity 100,000: call for pricing, volume discounts apply.

3" by 5" label roll – quantity one: \$ 29.50

3" by 5" label rolls – quantity 1,000: call for pricing, volume discounts apply.

3" by 5" label roll – quantity 10,000: call for pricing, volume discounts apply.

3" by 5" label roll – quantity 100,000: call for pricing, volume discounts apply.

If printer media is purchased and used exclusively, then you will receive free printer header replacements for the life of the printer.

Notes:

1. Pricing net of applicable taxes, shipping and handling.
2. Pricing valid to December 31, 2008.