

# Packaging Identification Standard

The attached document provides the Amtex Inc. supplier packaging identification standard for all raw materials to be received. Many references have been made to the Automotive Industry Action Group (AIAG) documents: AIAG-B-1 (Bar Code Symbology Standard for 3 of 9 Bar Codes) and AIAG-B-3 (Shipping/Parts Identification Label Standard). As with the AIAG standards, the word "shall" indicates a requirement and the word "should" indicates a recommendation.

#### 1.0. LABEL SIZE AND MATERIALS

A label size of 4.0 to 5.0 inches high by 6.0 inches wide is preferred in order to accommodate the data and its size requirements as shown in exhibit A. Also acceptable, however, are any label sizes currently within the limitations of the AIAG.

The label paper shall be white in color with black OCR-type ink used for character and barcode printing.

The label material and adhesion type shall be any substrate that will meet the AIAG scanning requirements and will adhere to the package and appear wrinkle free.

#### 2.0. LABEL LOCATION

Where applicable, 2 identical labels shall be affixed onto adjacent corners of the package as near to the top as possible. Wrap around label types are allowed so long as the quiet zones are within AIAG specifications. AIAG-B-3 contains examples of label locations on various shipping packs.

#### 3.0. DATA AREA CHARACTERISTICS

Part number, quantity, supplier code and serial number fields shall be placed on the label in both human readable and barcode forms. Additional data may be placed on the label according to suppliers' individual needs, or requirements between the Supplier and Amtex.

Each field shall be separated by thin lines and contain a title that describes the field (maximum of .10 inches high). Outer border lines are not needed.

Data identifier codes may be used for all bar coded data. This code shall be in the first position following the bar code start symbol and shall not be included in the human readable data line. This code shall be shown under the title for that field (maximum of .10 inches high). The following codes may be used:

- P Part number
- Q Quantity
- V Supplier Code
- S Serial Number
- A Purchase Order Number
- T Lot Number

#### **3.1. PART NUMBER**

The human readable part number shall be the Amtex assigned part number in bold and a minimum of 0.5 inches high. Field size shall be a maximum of 13 alphanumeric characters, containing no special characters or imbedded spaces. Leading and trailing zeroes shall not be suppressed, while all leading and trailing spaces shall be suppressed.

The part number bar coded symbol shall appear directly below the human readable lines and be a minimum of 0.5 inches high. Data to be bar coded shall consist of all human readable plus the data identifier prefix (P).

#### 3.2. QUANTITY

The human readable quantity data shall be in bold and a minimum of 0.5 inches high. Maximum field size shall be 7 whole numeric positions plus a decimal point and 2 decimal positions if required. Leading zeroes and trailing zeroes to the right of the decimal point should be suppressed while whole quantity amounts should not print a decimal point. A 2 character unit of measure abbreviation shall be printed whenever a unit other than pieces is used. AIAG-B-3 contains a list of standard abbreviations.

The quantity bar coded symbol shall appear directly below the human readable lines and be a minimum of 0.5 inches high. Data to be bar coded shall be all human readable with the exception of the unit of measure abbreviation. The bar coded data shall be prefixed with the data identifier (Q).

#### **3.3. PURCHASE ORDER NO.**

The human readable purchase order number shall be in bold and a minimum of 0.2 inches high. Field size shall be a maximum of 9 alpha/numeric positions, and leading zeroes may be suppressed.

The purchase order number bar coded symbol shall appear directly below the human readable lines and be a minimum of 0.5 inches high. Data to be bar coded shall consist of all human readable plus the data identifier prefix (A).

#### **3.4.** SERIAL NUMBER

The human readable serial number data shall be a unique number assigned by the supplier that shall not be repeated within any calendar year. It is to be bold and preferably 1.0 inches high in order to provide maximum visibility within warehouse storage. If, due to other AIAG applications and label sizes, it is not possible to comply with this size, then the AIAG minimum size of 0.2 inches high shall be acceptable. Field size shall be a maximum of 8 numeric positions where leading zeroes should be suppressed.

The serial number bar coded symbol shall appear directly below the human readable lines and be a minimum of 0.5 inches high. Data to be bar coded shall consist of all human readable plus the data identifier prefix (S).

#### 3.5. SUPPLIER NAME AND ADDRESS

The supplier's name, city, state, and zip code should be located directly beneath the serial number bar coded symbol and should be 0.1 inches high.

#### 3.6. WEIGHT

The weight shall be included for all rolled goods. This field shall be human readable and display a minimum of 4 digits. The value shall be in bold and a minimum of .3 inches high. If the unit of measure is not pounds (lb) then the units must be specified. The units shall be in bold and a minimum of .3 inches high.

### 3.7. SPECIAL DATA AREA

All of the remaining fields in this special data area are optional. Their use is to be in accordance with any agreement between the Supplier and Amtex Purchasing Department. If used, however, all fields shall be separated by thin lines and shall contain a title in the upper left corner.

#### **3.7.1. SUPPLIER CODE**

The human readable supplier code, if present, shall be the Amtex assigned supplier (vendor) number in bold and a minimum of 0.2 inches high. Field size shall be a maximum of 5 numeric positions, where leading zeroes may be suppressed.

The supplier code bar coded data, if present, shall appear directly below the human readable line and be a minimum of 0.5 inches high. Data to be bar coded shall consist of all human readable plus the data identifier prefix (V).

#### 3.7.2. LOT NUMBER

The lot number data for raw material, if used, should be in bold and a minimum of 0.3 inches high. Field size shall be a maximum of 10 alpha/numeric positions, and leading and trailing zeros, shall not be suppressed.

The Lot Number field bar code symbol, if present, shall appear directly below the human readable lines, and be a minimum of 0.5 inches high. Data to be bar coded shall consist of all human readable plus the data identifier prefix (T).

#### 3.7.3. DESCRIPTION

The Part Description, if used, should be in bold and a minimum of 0.3 inches high. This field shall be in human readable form only, allowing for 2 lines, containing 20 alpha/numeric positions. Suggested descriptions include a definition of the part plus color definition, where applicable.

#### **3.8.** ADVANCED SHIP NOTICE (ASN)

The data contained in the label shall be consistent with the data transmitted in the advanced shipment notification.

#### 4.0. BAR CODE SYMBOLOGY

All bar codes on the label shall be the 3-of-9 (code 39) type and shall conform to the AIAG-B-1 standard.

### 4.1. CODE CONFIGURATION

The five (5) characters (-, \$, /, +, %) of the 3-of-9 symbology shall not be used on the shipping/parts identification label.

## 4.2. CODE DENSITY AND DIMENSIONS

The bar heights shall be a minimum of 0.5 inches high (13 mm). The average narrow elements shall be within the range of .013 to .017 inches. The ratio of the average width of the narrow elements to the average width of the wide elements shall be 3:1, with an allowable range of 2.8:1 to 3.2:1.

#### 4.3. CHECK DIGITS

Check digits shall not be used in the bar codes.

### 4.4. **REFLECTIVITY AND CONTRAST**

The printed bar code symbol shall meet the reflectivity and contrast requirements at all electromagnetic wave lengths from 633-900 nanometers.

#### 4.5. QUIET ZONE

The quiet zone is the area immediately preceding the bar code start character and following the stop character, which contains no markings. The minimum quiet zone shall be .25 inch.

### 5.0. SPECIAL LABELS

A Master Label, as shown in exhibit B, shall be used when the supplier and Amtex agree that the total contents of a multiple, common item pack should be identified. Each subpack of the multiple pack should be identified with a Shipping/Parts Identification Label. The total multiple pack shall be identified with a Master Label in a location specified by Amtex. The label shall be placed on the pack in a manner that when the pack is broken apart the label is discarded (i.e., hang Master Label from banding or attach to stretch wrap).

At the top of this label, the heading "MASTER LABEL" shall be printed in bold 1.0 inch high letters. The balance of the label format shall conform to the specifications for a normal label except that the data identifier for the serial number shall be "4S" instead of "S". This serial number must be a unique number not repeated over the course of a year, nor repeated within any of its subpacks. The quantity on the Master Label shall be the total in all subpacks.

#### 5.2. MIXED ITEM LOADS

Mixed item loads shall have a label with the words "MIXED LOAD" in bold 1.0 inch high letters attached in a noticeable location. See exhibit C.

When label design C is used, each subpack or item shall be identified with a normal Shipping/Parts Identification Label.

#### 5.3. ROLLED GOODS

Rolled goods shall have the human readable weight in pounds in bold and a minimum of .3 inches high. The field shall be a maximum of 5 numeric positions and leading zeroes may be suppressed. See exhibit D.

# **EXHIBIT** A



# EXHIBIT B



# **EXHIBIT C**



# **EXHIBIT D**

