**ANSI/HIBC 5.0**
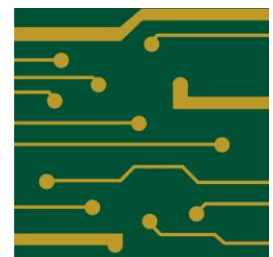
# THE HEALTH INDUSTRY
# BAR CODE (HIBC)
# SYNTAX STANDARD

**Secretariat:**
**Health Industry Business Communications Council**
**2525 E. Arizona Biltmore Circle, Suite 127**
**Phoenix, Arizona 85016**

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* When calling from within the U.S., you must first dial 011.

# Contents

## Foreword

Automatic identification technology is continually evolving. As technological advances prove applicable to the health care industry, they will be incorporated into revisions of this standard, wherever possible. However, every attempt will be made to maintain the existing data structures, thereby allowing new technology to be introduced into systems in a non-disruptive manner. HIBCC recognizes that this standard is a technology driven solution to improvement of health care delivery. As new technology becomes widely available, the standard will be modified to incorporate the advantages of the new technologies. References to other and symbol formats have been updated to reflect current usage.

## 1.0 Scope

This document describes the voluntary HIBC Syntax Standard which defines ASCII character combinations beginning with the "+" character as defined in ANSI MH10.8.2, referenced in ISO/IEC 15418 and used in ISO/IEC 15434.  Users of HIBCC data formats are encouraged to consider aligning themselves with the data formats defined in 15434 provide global transparency in their facilities and supply chains.  Note: this standard allows full use of the 15434 data structures which is in addition to the 25S and 25P examples used in the SLS.

## 1.1 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

*ISO/IEC 15418 Information technology -- Automatic identification and data capture techniques -- GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance*

*ANSI MH10.8.2, Data Application Identifier Standard*

*ISO/IEC 15434 Information technology -- Automatic identification and data capture techniques -- Syntax for high-capacity ADC media*

*ANSI/HIBC 1 THE HEALTH INDUSTRY BAR CODE (HIBC) PROVIDER APPLICATIONS STANDARD*

*ANSI/HIBC 2 THE HEALTH INDUSTRY BAR CODE (HIBC) SUPPLIER LABELING STANDARD*

*ANSI/HIBC 3 POSITIVE IDENTIFICATION FOR PATIENT SAFETY Part 1: Medication Delivery*

The above International Standards can be obtained at either http://www.ansi.org or http://www.iso.org

## 2.0 HIBCC syntax

The "+" character (ASCII 43) is a Category 0 Data Identifier (DI) as defined in the ANSI MH10.8.2, Data Application Identifier Standard which designates HIBCC data formats. Following are the currently defined characters that can follow the "+" character and their meaning. In this document, the term ASCII character is used to mean a character from the ISO/IEC 646 standard. The ASCII values identified are decimal numbers.

The ISO/IEC 15434 Information technology -- Automatic identification and data capture techniques -- Syntax for high-capacity ADC media standard (15434 syntax) is a generic method of encoding multiple data fields in a format that is recognizable worldwide. One of its supported formats is Data Identifiers (DIs). The 15434 syntax uses a specific combination of characters to surround the DI data. Following is an example of a single data field in the 15434 syntax format.

```
                    [ ) >Rs 06 Gs xxxxxxxxxxx Rs EoT
Header sequence: [ ) >Rs ------------I    I  I      I       I
Format Indicator for DI structure: 06 ------I   I      I       I
Group separator: Gs ----------------------------I      I       I
Embedded data:  xxxxxxxxxxx -------------------------I       I
Stop sequence: Rs EoT ----------------------------------------------------I
```

## 2.1 Provider application Standard (PAS)

Following the "+" character, the character defined to identify data conforming to the PAS is the "/" character (ASCII 47) .

## 2.2 Supplier labeling standard (SLS)

Following the "+" character, the characters defined to identify data conforming to the SLS are the alpha-numeric characters and "$" (ASCII 43). See Section 4.

## 2.3 Positive identification for patient safety Part 1: Medication Delivery (PID)

Following the "+" character, the character defined to identify data conforming to the PID is the "<" character (ASCII 60).

## 3.0 Data structure examples

Following are examples of data that could be encoded in HIBCC approved data carriers according to the ISO/IEC 15434 message format.

## 3.1 PAS data

[ ) >Rs 06 Gs +/EU9C83416F2/Z34H159$ Rs EoT

## 3.2 SLS data

SLS data format only

[ ) >Rs 06 Gs +A99912345/$$59901510X3J Rs EoT

SLS data format with a DI serial number

[ ) >Rs 06 Gs +A99912345/$$59901510X3J Gs S12345678 Rs EoT

All data encoded with DIs

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The compatible DI's used to identify the data elements are:
  (25P) Unique producte code applied with Issuing Agencey Code (LH) and LIC (A999)
  (26Q) Packaging Level, specifying the hierarchical level of packaging in accordance with HIBC specifications
  (14D) Expiration Date (YYYYMMDD)
  (1T) LOT - Traceability Number assigned by the Supplier
  (S) Serial number or code assigned by the Supplier

The Data elements embedded with 15434 using DI's
[ ) >Rs 06 Gs 25PA999 Gs 26Q1 GS 14D20140730 GS 1T10X3 Gs S12345678 Rs EoT


## 3.3 PID data

[ ) >Rs 06 Gs +<SDID> Lf VER1.0 Lf
DIA|36800432621|3012345678|DrugABC|30|mg|||20071212 Lf <\SDID> Rs EoT

## 4.0 HIBCC syntax assignment

HIBCC controls the use of characters following the "+" Data Identifier (DI).  Table 1 contains a list of the possible ASCII characters that can follow the "+" with current assignments, characters reserved for future assignments and characters that are not recommended for use immediately after the "+".  See Table 1.

Table 1

Current status of the ASCII characters following the DI "+" in ANSI/HIBC standards.

| Character | ASCII value | HIBCC meaning after the "+" character | Character | ASCII value | HIBCC meaning after the "+" character |
|---|---|---|---|---|---|
| space | 32 | Not for use after the "+" character | P | 80 | HIBCC SLS |
| ! | 33 | Reserved | Q | 81 | HIBCC SLS |
| " | 34 | Reserved | R | 82 | HIBCC SLS |
| # | 35 | Reserved | S | 83 | HIBCC SLS |
| $ | 36 | HIBCC SLS | T | 84 | HIBCC SLS |
| % | 37 | Reserved | U | 85 | HIBCC SLS |
| & | 38 | Reserved | V | 86 | HIBCC SLS |
| apostrophe | 39 | Reserved (1) | W | 87 | HIBCC SLS |
| ( | 40 | Reserved | X | 88 | HIBCC SLS |
| ) | 41 | Not for use after the "+" character | Y | 89 | HIBCC SLS |
| * | 42 | Not for use after the "+" character | Z | 90 | HIBCC SLS |
| + | 43 | HIBCC Data Identifier (ISO/IEC 15418) | [ | 91 | Reserved |
| comma | 44 | Reserved (1) | \ | 92 | Not for use after the "+" character |
| - | 45 | Reserved | ] | 93 | Not for use after the "+" character |
| full stop | 46 | Reserved (1) | ^ | 94 | Reserved |
| / | 47 | HIBCC PAS | _ | 95 | Not for use after the "+" character |
| 0 | 48 | HIBCC SLS | grave accent | 96 | Not for use after the "+" character |
| 1 | 49 | HIBCC SLS | a | 97 | Reserved |
| 2 | 50 | HIBCC SLS | b | 98 | Reserved |
| 3 | 51 | HIBCC SLS | c | 99 | Reserved |
| 4 | 52 | HIBCC SLS | d | 100 | Reserved |
| 5 | 53 | HIBCC SLS | e | 101 | Reserved |
| 6 | 54 | HIBCC SLS | f | 102 | Reserved |
| 7 | 55 | HIBCC SLS | g | 103 | Reserved |
| 8 | 56 | HIBCC SLS | h | 104 | Reserved |
| 9 | 57 | HIBCC SLS | i | 105 | Reserved |
| colon | 58 | Reserved (1) | j | 106 | Reserved |
| semicolon | 59 | Reserved (1) | k | 107 | Reserved |
| < | 60 | PID Patient Safety | l | 108 | Reserved |
| = | 61 | Reserved | m | 109 | Reserved |
| > | 62 | Not for use after the "+" character | n | 110 | Reserved |
| ? | 63 | Reserved (1) | o | 111 | Reserved |
| @ | 64 | Reserved (1) | p | 112 | Reserved |
| A | 65 | HIBCC SLS | q | 113 | Reserved |
| B | 66 | HIBCC SLS | r | 114 | Reserved |
| C | 67 | HIBCC SLS | s | 115 | Reserved |
| D | 68 | HIBCC SLS | t | 116 | Reserved |
| E | 69 | HIBCC SLS | u | 117 | Reserved |
| F | 70 | HIBCC SLS | v | 118 | Reserved |
| G | 71 | HIBCC SLS | w | 119 | Reserved |
| H | 72 | HIBCC SLS | x | 120 | Reserved |
| I | 73 | HIBCC SLS | y | 121 | Reserved |
| J | 74 | HIBCC SLS | z | 122 | Reserved |
| K | 75 | HIBCC SLS | { | 123 | Reserved |
| L | 76 | HIBCC SLS | \| | 124 | Reserved (1) |
| M | 77 | HIBCC SLS | } | 125 | Not for use after the "+" character |
| N | 78 | HIBCC SLS | ~ | 126 | Reserved |
| O | 79 | HIBCC SLS | DEL | 127 | Not for use after the "+" character |

Reserved      Can be assigned by HIBCC in future standards
Reserved (1)     Can be assigned by HIBCC in future standards but these characters may cause confusion

# Appendix A – Reference Definitions

For the purposes understanding the HIBC Syntax standard the following informative definitions are included for convenience.

## D.1 EHIBCC
EHIBCC (European Health Industry Business Communications Council) is an organization established in Brussels, Belgium for administration of the Health Industry Bar Code (HIBC) Supplier Labeling Standard. It is located at Jozef Israelaan 3, 2596 AM The Hague, The Netherlands. The telephone number for EHIBCC is 011-31-70-3244754 and the Fax number is 011-31-70-324-2522. Web site: www.ehibcc.com

## D.2 HIBC
Health Industry Bar Code.

## D.3 HIBCC
(Health Industry Business Communications Council) is the organization responsible for the development and maintenance of standards and services for use in the health care industry. HIBCC standards and information on its services, including the HIN System, the UPN Repository and other ecommerce applications are available from HIBCC at: 2525 E Arizona Biltmore Circle, Suite 127, Phoenix, Arizona 85016 or through one of the international offices. The telephone number for HIBCC is 602-381-1091. Fax: 602-381-1093. Email: info@hibcc.org Web site: http://www.hibcc.org.

## D.4 Syntax
The arrangement of ASCII characters (e.g. letters, numbers, +, %, +,  $) in a specific order to convey meaning beyond the use of the characters themselves.