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## **Introduction - UCC/EAN-128 Barcodes and MH10 Labels**

Sears Canada requires suppliers to apply an MH10 shipping label on each shipping carton or hanging set for Catalogue (SMART), Retail Replenishment (RIM) and Retail Fashion Pick/Pack (SAMS FXD) merchandise. The requirement for Retail Fashion Bulk merchandise (SAMS FC) is one MH10 label per purchase order placed on the lead carton/hanging set.

Sears relies on the serialized UCC/EAN-128 Shipping Container Code (SSCC-18) and other information on the MH10 labels for tracking and processing of merchandise throughout the distribution chain.

Every label must adhere to standards outlined in this document for quality, appearance and scanability. In addition, the placement of the labels on cartons must be precise in order for merchandise to be processed quickly through automatic scanners. For further details regarding label placement requirements please see the *Operational Requirements* section of this guide for your particular ordering and distribution channel.

### **Supplier Requirements**

- A UPC/EAN Manufacturer Identification Number (MIN) is required in the SSCC-18 barcode. Suppliers can apply for a UPC MIN with the Electronic Commerce Council of Canada (ECCC).
- All suppliers are to obtain copies of the industry guideline documents regarding barcodes and labelling. Sears will indicate any necessary specifications beyond these standards.
- Suppliers must have a printer and label printing software set up according to the label specifications.
- Once the supplier's printer is set up and test labels are printed, suppliers are required to submit a minimum of three test labels for analysis. **ScanRight** is the third party service that Sears has partnered with for certification of labels – Sears will not perform this certification. Suppliers are responsible for the cost of certification. Certification must be obtained before suppliers receive purchase orders. See the [MH10 Label Certification](#) document for details.

### **Label Specifications**

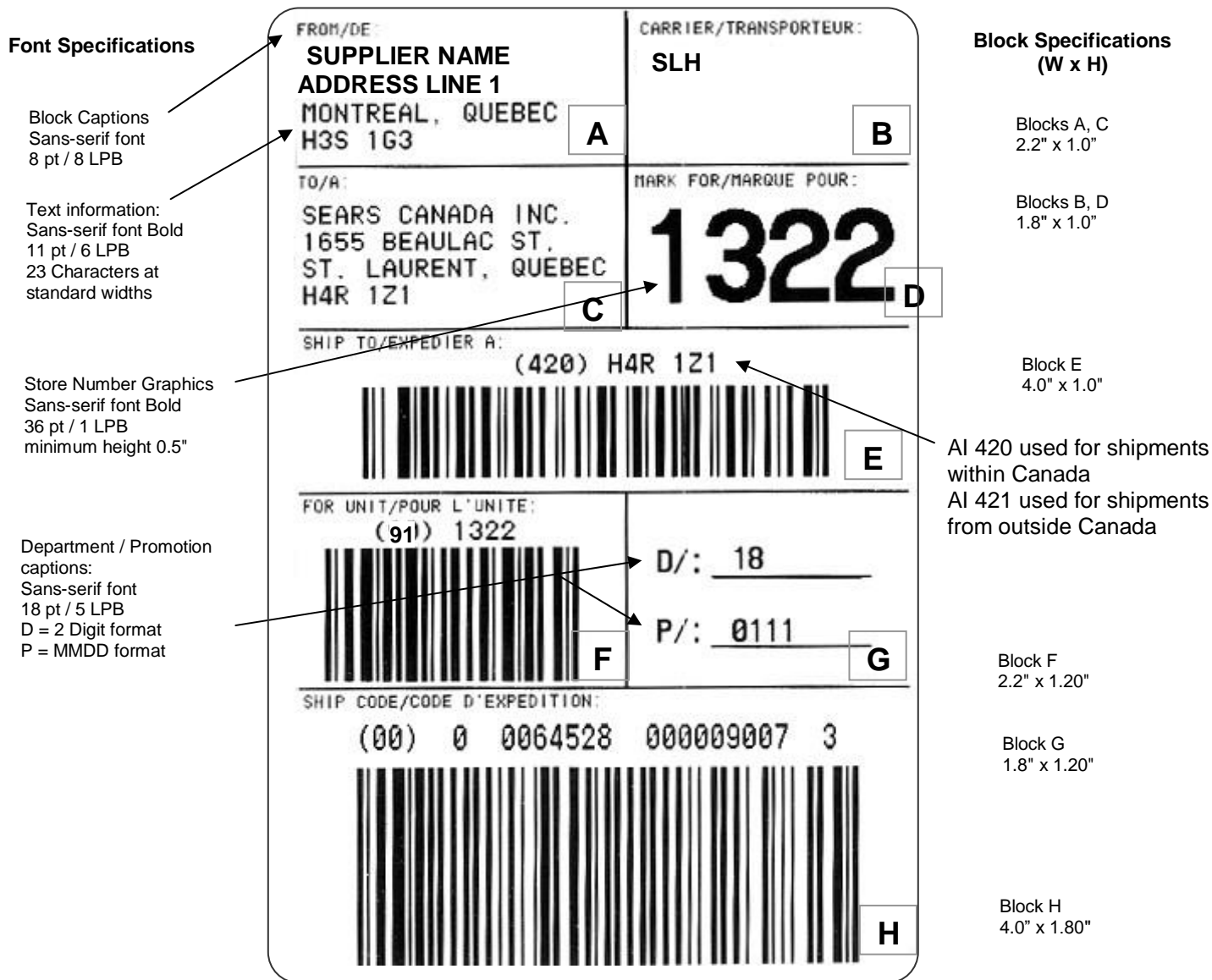
Printing of the MH10 labels must adhere to the following standards in order to produce high quality labels:

<b>Label Stock</b>
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Dimensions:	Sears Standard MH10 common extended label type is 4" x 6". Allowable Sears Variant label formats are shown on <a href="#">page 8</a> which are within MH10.8 standards.
Substrate:	Pressure sensitive labels, 20 lb. face stock, or sufficiently opaque to eliminate background show-through
Adhesive:	Adhesive sufficient for label to arrive intact and scannable
Finish:	White, matte surface, non-coated. Laminates and vinyls are not secure for conveyor or distance scanning.
Format:	Varies by print method, e.g., thermal transfer vs. laser. Round corners help to prevent peel-off. Select toner or ribbons to obtain most durable barcode image.
<b>Image Colour Display</b>	
All requirements are for black imaging on white background. This applies to fixed imaging, barcode imaging and human readable data.	
<b>Print Methods</b>	
Allowable methods:	<ul style="list-style-type: none"> <li>• Laser</li> <li>• Thermal transfer</li> </ul>
Not allowed:	<ul style="list-style-type: none"> <li>• Dot matrix</li> <li>• Thermal direct</li> <li>• Photocopy</li> <li>• Hand-written labels</li> </ul>
<b>French Translation for Sears MH10 Label Block Captions</b>	
<b>English</b>	<b>French</b>
FROM	DE
TO	A
CARRIER	TRANSPORTEUR
MARK FOR	MARQUE POUR
SHIP TO	EXPÉDIER À
FOR UNIT	POUR L'UNITE
SHIP CODE	CODE D'EXPÉDITION
Suppliers are responsible for obtaining the correct French translation for applicable description information displayed in supplier data blocks, sub-blocks, captions and text.	

**Sears Standard MH10 Shipping Label Layout Specifications**  
 Label Size is 4"w X 6"h



- **LPB** - lines per block. Per ANSI MH10.8, approximate
- **pt** - points height measurements, approximate
- **Font** - standard sans serif font – e.g. Universal, Arial

For details on the barcodes used on the MH10, see [page 6](#).

**UCC/EAN 128 Barcode Specifications**



All barcodes on the MH10 label must follow Sears and industry standards and specifications for height, width, and other elements. Barcode print quality can only be verified using a measuring device called a *verifier*. It validates data characters, symbol characters, the barcode print quality and specification parameters. Information about these verification methods is available from ANSI, or the ECCC (Canada) and UCC (USA) as well as the verifier manufacturer or sales agent.

### Sears Barcode Specifications

"X" Dimension (width of narrowest element)	Minimum 0.02" For Sears variant label versions, "X" dimension for the AI 420/421 barcodes is 0.0148"
Barcode heights	<ul style="list-style-type: none"> <li>• AI 420, 421: 0.56"</li> <li>• AI 91: 0.88"</li> <li>• AI 00: 1.25"</li> </ul>
Human readable display	Bold, 14 point, sans-serif font - Universal, Arial, etc
ANSI Scan Reflectance Grade	B/6/660; B/10/660 ANSI standard method uses ten scan paths for grading
Print tolerances	Maximum USS-128 element tolerance is 50% of the total allowable symbol tolerance
Quiet zones (white space)	0.25" each zone
Print Contrast Signal (PCS)	Recommended Minimum: 85%

## Electronic Data Interchange (EDI) and the MH10

### 850 Purchase Order (PO)

Ensuring accuracy of all MH10 labels is the responsibility of the supplier. Do not hard-code the variable information on the MH10 label; obtain the following information from the PO to encode the MH10 label.

MH10 Element	PO 850 EDI Segment	Description
"Mark For"	N1*MA	Ultimate receiving destination / store number. Sears transmits store number in format "C001234" - only print the last 4 digits on the MH10, i.e. "1234".
"Ship To"	N1*ST	Ship-to first point of receipt address
P/:	REF*PD	Promotional code. Format MMDD
D/:	REF*DP	Department. 2-digit numeric

**856 Advanced Ship Notice (ASN)**

The supplier assigns a unique SSCC-18 number to each carton / hanging set, which cannot be repeated within one year, and encodes it on the MH10 in block H - see [page 3](#). This number is transmitted in the supplier’s ASN in the MAN segment, GM qualifier, to indicate the contents of that carton/hanging set.

MH10 Element	ASN 856 EDI Segment	Description
“Ship Code” SSCC-18	MAN*GM	Unique carton/hanging set identification number.

**Barcodes Used on the MH10**

The following UCC/EAN-128 barcodes are used in combination on the Sears MH10 label.

A barcode contains both symbol information and Human Readable (HR) information.

- The symbol characters include Start character, FNC1 character, the MOD103 check character, and the Stop character. Typically, these are inserted automatically by the symbol generation software.
- The HR characters show the data elements of the barcode. The HR information shows the Application Identifier (AI) in parentheses followed by a space, then the other HR characters. The parentheses and spaces are not encoded in the barcode, they are only used to facilitate key entry.

Examples

**AI 420 barcode**

Defines the destination postal code data for shipments within the same country.



UCC-EAN-128 Barcode Encoded Information:

Start/B FNC1 4 2 0 W 3 M 5 W 3 Mod103 Stop

**AI 421 barcode**

Defines the destination postal code data for shipments crossing a postal authority. It requires the International Standards Organization (ISO) 3166 numeric country code in the data string. The country code for Canada is 124.

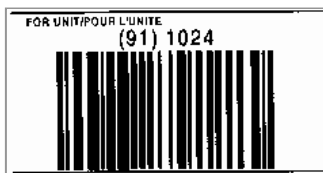


Barcode Encoded Information:

Start/C FNC1 4 2 1 1 2 4 CodeB M 9 W 3 W 5 Mod103 Stop

**AI 91 barcode**

Defines ultimate receiver destination information, for example the store number.



Barcode Encoded Information:

Start/C FNC1 9 1 1 0 2 4 Mod103 Stop

***Barcodes Used on the MH10 (Cont'd)***

**AI 00 barcode**

Also known as the SSCC-18. It is a unique number that identifies each carton/hanging set shipped to Sears.

**Note:** The SSCC-18 must be unique and must not be repeated within one year.



Barcode Encoded Information:

Start/C FNC1 0 0 0 0 5 2 1 7 7 5 1 3 8 9 5 7 1 7 2 Mod103 Stop

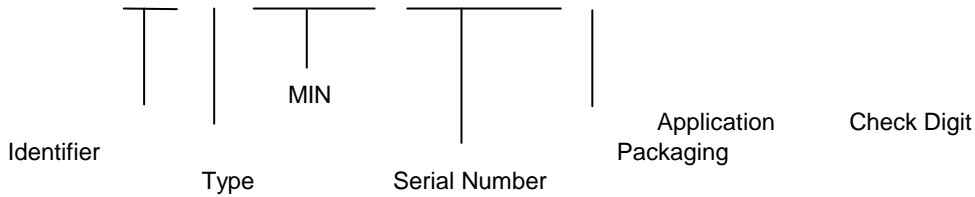
Mod10



**SSCC-18 Number Format**

The format of the SSCC-18 number on the AI 00 barcode is as follows:

**(00) 0 0012345 55555555 8**



- **Application Identifier** A prefix that defines the data type of the barcode number that follows.
- **Packaging Type** Shipping Container Type 0 = case, carton or hanging set.
- **MIN** Manufacturer Number. A unique number that identifies the manufacturer. See [page 1](#).
- **Shipping Container Serial Number** For carton / hanging set identification. Not reusable for one year.
- **Modulus 10 Check Digit** Calculated from the other numbers in the code. See [Appendix B](#).

**Sears Variant MH10 Label Layout**

For use only when supplier information is needed on label. Fonts as per the Standard MH10 layout.

**Label Size 4" X 6"** (not shown to scale)

<p>Block Specifications (W x H)</p> <p>Block A &amp; D 1.30" x 1.0" 23 Characters</p> <p>Block B &amp; C</p> <p>1.10" x 1.0"</p> <p>Block F 2.40 " x 1.20"</p> <p>Block G 1.60" x 1.20"</p> <p>4.0" x 1.80"</p>	<p>The diagram shows a 4x6 inch label layout with the following content and labels:</p> <ul style="list-style-type: none"> <li><b>Block A:</b> FROM/DE BUSINESS NAME, ADDRESS LINE 1, ADDRESS LINE 2, REXDALE, ONT W9 G7H</li> <li><b>Block B:</b> TO/A SHIP TO BUSINESS, SHIP TO ADDRESS 1, SHIP TO ADDRESS 2, ANY CITY, ONT W3M 5W3</li> <li><b>Block C:</b> SHIP TO POST/EXPEDIER A (420) W3M 5W3</li> <li><b>Block D:</b> CARRIER/TRANSPORTEUR, CARRIER NAME, PRO: 0123456789, B/L: 0123456789</li> <li><b>Block E:</b> RESERVED FOR SUPPLIER FREE FORM DATA, D/: 18, P/: 1230</li> <li><b>Block F:</b> FOR UNIT/POUR L'UNITE (91) 1024</li> <li><b>Block G:</b> MARK FDR/MARQUE POUR 1024</li> <li><b>Block H:</b> SHIP CODE/CODE D'EXPIEDITION (00) 0 0052177 513895717 2</li> </ul>	<p>H)</p> <p>2.70" x 1.0"</p> <p>Block E</p> <p>Block H</p>
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**Sears Variant MH10 Label Layout for Short Height Shipping Cartons**

For use only on shipping containers too short for the 4"x 6" label. Fonts as per the Standard MH10 layout.

**Label size 8" X 3"** (not shown to scale) Block Specifications (W x H)

<p><b>FROM/DE</b> <span style="float: right;"><b>A</b></span>          BUSINESS NAME          ADDRESS LINE 1          ADDRESS LINE 2          REXDALE          ONT 5W9 G7H</p>	<p><b>TO/A</b> <span style="float: right;"><b>C</b></span>          SHIP TO BUSINESS          SHIP TO ADDRESS 1          SHIP TO ADDRESS 2          ANY CITY, ONT W3M 5W3</p>	<p><b>FOR UNIT/POUR L'UNITE</b> <span style="float: right;"><b>F</b></span>          (91) 1024  </p>	<p><b>MARK FDR/MARDUE POUR</b> <span style="float: right;"><b>D</b></span>          1024</p>
<p><b>SHIP TO POST/EXPEDIER A</b> <span style="float: right;"><b>E</b></span>          (420) W3M 5W3  </p>	<p><b>CARRIER/TRANSPORTEUR</b>  <b>CARRIER NAME</b> <span style="float: right;"><b>B</b></span>          PRO: 0123456789          B/L: 0123456789</p>	<p><b>SHIP IDENTIFICATION</b> <span style="float: right;"><b>H</b></span>          (00) 0 0052177 000054321 7  </p>	
<p>RESERVED FOR          SUPPLIER          FREE FORM DATA</p>		<p><b>D/:</b> 18 <span style="float: right;"><b>G</b></span>  <b>P/:</b> 0111</p>	

Block A: 1.40" x 1.0"

Block B & G: 1.20" x 1.0"

Block C: 2.60" X 1.0"

Block D: 1.50" X 1.2"

Block E: 2.80" X 1.0"

Block F: 1.50" x 1.2"

Block H: 3.0" x 1.8"

**Barcode and Label Software Solutions**

For suppliers who wish to purchase a drop-in solution for label printing software, the packages listed below contain a template for the Sears standard MH10 label.

**LabelView** and **Label Matrix** manufactured by **Teklynx** International

Canadian Office: 56 Leek	
Crescent	
Richmond Hill, Ontario	Phone (414) 577-3900
Canada	Fax (414) 577-3901
L4B 1H1	<a href="http://www.teklynx.com">www.teklynx.com</a>



## **Appendix A – Industry Documents and Agencies**

**“American National Standard for Material Handling - Unit Loads and Transport Packages-Barcode Symbols” ANSI MH10.8M (1993), “ANSI Guideline For Barcode Print Quality” X3.182 (1990)**

**Contact:**

American National Standards Institute (ANSI)  
11 West 42nd St.  
New York, New York  
USA 10036  
(212) 642-4900 [www.ansi.org](http://www.ansi.org)

Electronic Commerce Council Of Canada (ECCC)  
(Formerly Product Code Council of Canada, PCCC)  
885 Don Mills Rd., Suite 301  
North York, Ontario  
Canada M3C 1V9  
(416) 510-8039 [www.eccc.org](http://www.eccc.org)

**"UCC/EAN-128 Application Identifier Standard" Application Standard For Shipping Container Codes (UCC, 1995)**

**Contact:**

Electronic Commerce Council Of Canada (ECCC)  
885 Don Mills Rd., Suite 301  
North York, Ontario  
Canada M3C 1V9  
1-800-567-7084 or (416) 510-8039  
[www.eccc.org](http://www.eccc.org)

Uniform Code Council (UCC)  
7887 Washington Village Dr.,  
Dayton, Ohio  
USA 45459  
(937) 435-3870  
[www.uc-council.org](http://www.uc-council.org)

**"USS-128 - Uniform Symbol Specification"**

**Contact:**

Automatic Identification Manufacturers Inc. (AIM Inc.)  
634 Alpha Drive  
Pittsburgh, Pennsylvania  
USA 15238  
1-800-338-0206 or (412) 963-8588 [www.aimusa.org](http://www.aimusa.org)

**Appendix B – Calculating the Modulus 10 (Mod10) Check Digit**

The Mod-10 check digit is the last number in the SSCC-128. Its value is calculated from the rest of the number.

MOD-10

<b>(00) 0 0012345 55555555 8</b> <small>1 2 3 5 7 9 11 13 15 17 19</small>	← Check Digit <u>Example</u>
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To calculate the check digit, number each character position from left to right, starting with the first number as position 1.

Step 1: Starting at position 1, add up all the values of the numbers in the odd numbered positions:

$$0+0+0+2+4+5+5+5+5+5 = 31$$

Step 2: Multiply the result of Step 1 by 3:

$$31 \times 3 = 93$$

Step 3: Starting at position 2, add up the values of the numbers in the even numbered positions:

$$0+0+1+3+5+5+5+5+5 = 29$$

Step 4: Add up the results of Step 2 and Step 3:

$$93 + 29 = 122$$

Step 5: The check digit is the smallest number 'X' which, when added to the value obtained in Step 4, provides a number that is a multiple of 10:

$$122 + X = 130$$

Therefore, X = 8      Mod10 Check digit = 8