



## **Lowe's Data Synchronization Process**

### **Vendor Implementation Guide**

**September 2007 version**

## Table of Contents

<u>Foreword</u>	
<u>Introduction</u> .....	page 1
<u>Section 1 - Executive Summary</u> .....	page 4
<u>Section 2 - Current Status of Lowe's Data Synchronization Process</u> .....	page 6
<u>Section 3 - Implementation Steps for the PCM Application</u> .....	page 8
<u>Step #1 - Data Assessment</u> .....	page 8
<u>Step #2 - Process Development</u> .....	page 8
<u>Step #3 - Datapool Selection</u> .....	page 9
<u>Step #4 - Item Registration</u> .....	page 9
<u>Step #5 - Product Registration within Lowe's PCM Application</u> .....	page 10
<u>Step #6 - Deliver the Product Data</u> .....	page 11
<u>Step #7 - Address Data Validation Errors</u> .....	page 12
<u>Step #8 - Additional Data Entry via Web Forms</u> .....	page 13
<u>Step #9 - Ongoing Maintenance</u> .....	page 14
<u>Step #10 - New Products</u> .....	page 14
<u>Section 4 - Lowe's Data Requirements for the PCM Application</u> .....	page 15
<u>General "Business Rules"</u> .....	page 15
<u>Core Schema, Barcode Schema Extension, and Hardlines Schema Extension</u> .....	page 18
<u>Data Validations for Barcodes</u> .....	page 45
<u>Section 5 - Lowe's Schema Extension</u> .....	page 48
<u>Appendix A - Lowe's Code Tables</u> .....	page 53
<u>Appendix B - Transaction Processing Choreography</u> .....	page 66
<u>Appendix C - Glossary of Terms</u> .....	page 68
<u>Appendix D - List of Additional Data Attributes</u> .....	page 71
<u>Appendix E - Bibliography</u> .....	page 75

## **Foreword**

This document contains information that is proprietary to Lowe's Companies, Inc., and is intended solely for the use of Lowe's authorized Vendors.

Any questions or comments regarding this Vendor Implementation Guide should be submitted via the PCM Support desk by login on at the following address:

[lowespcm@ecusthelp.com](mailto:lowespcm@ecusthelp.com)

## Introduction

Data synchronization refers to a process by which Vendors and Retailers ensure that their data is the same; that their data is "in sync". It is part of a global effort aimed at obtaining synchronization within specific industries and not one that is being solely undertaken by Lowe's. This process is to be ongoing, so as product data changes, the synchronization process will be used to communicate changes as well as new product information.

One of the key concepts of product data synchronization is the global-wide system of entity/product identification. The goal of this system is to have a unique global reference for each entity (process participant) and for each product. The unique global entity reference is the Global Location Number (GLN); the unique product reference is the Global Trade Item Number (GTIN). The establishment and use of the GLN and GTIN are pre-requisites for data synchronization with Lowe's and any other retailer adhering to global data standards.

The benefits of data synchronization are:

- Significant cost reduction due to fewer errors and reduced manual involvement in the process of data exchange.
- Improved decision-making due to better, more reliable information upon which to base decisions.
- Faster product turnaround time due to the automated processing of product data.

This global data synchronization effort involves many parties beyond Lowe's and its Vendors. Also included in this effort is the GS1 Global Registry, operated by the GDSN, Inc. The GS1 standards organization is responsible for the development of most of the data standards utilized by the Lowe's data synchronization process, and by the Global Data Synchronization Network as a whole.

In addition, Datapools are primary players in this process. A Datapool is a recognized entity that supports the exchange of data synchronization transactions between Vendors and Retailers, as well as exchanging these transactions with other Datapools. 1SYNC is the Datapool that Lowe's has chosen for their transactions. Vendors can also choose to use 1SYNC as their Datapool, or they can choose any recognized Datapool that interacts with 1SYNC.

**Note:** 1SYNC is the new name adopted by the datapool that was formed as a result of the merger of two datapools, UCCnet and Transora. In previous versions of the Vendor Implementation Guide, Lowe's datapool has been identified as UCCnet.

The purpose of this Vendor Implementation Guide is to provide a Lowe's Vendor with the information necessary for the Vendor to develop this data synchronization process. This Guide is intended as a source of information for a wide-ranging audience, as this document covers both the business-related and technical aspects of data synchronization.

This Guide contains the following sections:

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

1. [Section 1 - Executive Summary](#). This section provides a high-level overview of the overall Lowe's data synchronization process. This material is intended for both the Vendor's senior management team and the project management team responsible for implementing this process.
2. [Section 2 - Current Status of Lowe's Data Synchronization Process](#). This section provides a mid-level overview of the current state of the Lowe's data synchronization process, including general information regarding the data standards that are utilized in the Lowe's Product Content Management (PCM) application. This material is intended primarily for the Vendor's project management team responsible for implementing the data synchronization process. However, senior management may also benefit from reviewing this information.
3. [Section 3 - Implementation Steps for the PCM Application](#). This section provides a detailed, step-by-step set of instructions for a Vendor to become compliant with the first release of Lowe's PCM application. This material is intended for the Vendor's team tasked with implementing this process.
4. [Section 4 - Lowe's Data Requirements for the PCM Application](#). The core deliverable of any data synchronization process is a complete set of data attributes that pass a set of applicable data validations. This section provides a detailed list of the specific data attributes required by the Lowe's PCM application, and the data validations that must be met by the Vendor in order for the data to be accepted.
5. [Section 5 - Lowe's Schema Extension](#). Not all product data required by Lowe's is covered by the 1SYNC schemas. The Vendor has the choice of providing the Lowe's-specific data through manual web-form data entry, or by utilizing the Lowe's Schema extension as part of their 1SYNC processing. For those Vendors who want to utilize this optional schema extension, this section provides a detailed list of the data attributes that are included, as well as the data validations that must be met by the Vendor in order for the data to be accepted.
6. [Appendix A - Lowe's Code Tables](#). The data validations referred to in [Section #4, Lowe's Data Requirements for the PCM Application](#) and in [Section #5, Lowe's Schema Extension](#), frequently consist of ensuring that the value of a specific data attribute is one that Lowe's recognizes and accepts. Where this is the case, the data validations reference a Lowe's Code Table that contains these acceptable values. This Appendix lists all these Code Tables and the values contained therein, so that the Vendor will know the acceptable set of values for these data attributes.
7. [Appendix B - Transaction Processing Choreography](#). A graphic depicting the transaction flow between the Vendor and the Retailer, including the GS1 Global Registry and 1SYNC.

8. [Appendix C - Glossary of Terms](#). A reference section providing definitions of various terms utilized within this Guide.
9. [Appendix D - List of Additional Data Attributes](#). The specific data attribute requirements for Lowe's are detailed in Section 4, Lowe's Data Requirements for the PCM Application. However, there are additional data attributes that must be included in the CIN transaction in order to meet the requirements of the XML schemas. Lowe's does not require these data attributes, and Lowe's will ignore the data contained in these attributes. This section provides the Vendor with a list of these data attributes.
10. [Appendix E - Bibliography](#). A reference section providing URL links to external documents that a Vendor may find useful.

## **Section 1 - Executive Summary**

Data synchronization is the process by which a Vendor and a Retailer ensure that their data is kept in exact synchronization between the various information systems of the Vendor and those of the Retailer.

For Lowe's, the end goal of the data synchronization process is to synchronize 100% of the product data for every item supplied to it by a Vendor. For the purposes of this document, a Lowe's Vendor is defined as any entity that sells products to Lowe's, regardless of whether this entity is functioning as a Manufacturer or as a Distributor.

Lowe's is working for Vendor compliance with the synchronization process for product data. To facilitate this synchronization process, Lowe's introduced the first release of its Product Content Management (PCM) application in November 2005. This application is presently available for use by Vendors who are ready for product data synchronization. The synchronization process for price data is still being defined.

For the Vendor, the key step towards a successful participation in this data synchronization process is to undertake an assessment of the data requirements of Lowe's and the Vendor's ability to meet these requirements by providing the full range of product data (and price data, in the future). **The benefits of data synchronization rapidly diminish if the data is incomplete.**

At a high level, the steps that a Vendor must undertake can be summarized as follows (these steps are detailed in [Section 3 - Implementation Steps for the PCM Application](#)):

1. Assess Lowe's data requirements and determine the various systems within your organization that will be needed to provide the complete set of product data. Required data may not currently be present, or may not be present in an automated format, which may then require development on the part of the Vendor.
2. Develop the means by which you will send data to (and receive data from) the Datapool that you select in Step #3 below. This requires a decision as to whether you will develop this capability internally, or utilize the services and/or software of an external Solution Provider.
3. Select a Datapool.
4. Obtain your company's Global Location Number (GLN), and assign a Global Trade Item Number (GTIN) for each product. Using this GLN/GTIN information, add your products to your Datapool and they will register your products with the GS1 Global Registry.
5. Register the products that you sell to Lowe's within the Lowe's PCM application. This step is based upon web-form data entry.
6. Publish the applicable product data to Lowe's via the Datapool selected in #3 above (Price data synchronization will be added at a later date).
7. Address any data validation errors identified by Lowe's. Correct the errors and repeat step #6.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

8. Enter certain additional Lowe's-specific data attributes via web form data entry. This step is not applicable to Vendors who provide the Lowe's-specific data via the Lowe's Schema extension.
9. Once the initial set of product data (and price data, in the future) has been received and approved by Lowe's, maintain the data synchronization process on an ongoing basis, using this process to deliver data changes to Lowe's, as well as product and price data for any new products that Lowe's agrees to.

From a senior management perspective, Data assessment (step #1) and Process development (step #2) are the key steps. There are two reasons for this. First, incomplete data will negate most of the benefits of data synchronization, and will require the Vendor to adopt laborious manual processes in order to obtain and provide this data to Lowe's. Also, incomplete data will lead to increased data validation errors, potentially resulting in a significant increase in the Vendor's work effort associated with step #7 above.

Second, developing an integrated and automated synchronization process requires an investment of time and money. The management decision as to whether this development should utilize the services and/or software of an external Solution Provider needs to take into account a number of factors, including cost and timeline for Vendor compliance.

The data synchronization process continues to undergo changes. The data standards that are referenced in this August 2007 version of the Vendor Implementation Guide are still being enhanced. The ability to incorporate change into a Vendor's data synchronization process should be a primary consideration in management's decision as to whether to "build or buy" a data synchronization solution.

Lowe's is committed to the goal of synchronizing 100% of product and price data. Presently, the global data standards do not support 100% of the product data attributes required by Lowe's. In order to provide Vendors with the ability to fully synchronize product data, Lowe's and its Datapool, 1SYNC, will be supporting a "customized" standard that does allow the Vendor to automate 100% of the product data. This customization, referred to as the Lowe's Schema extension, will be available only to Vendors who utilize 1SYNC as their Datapool. For Vendors who are unable to provide the Lowe's Schema extension, Lowe's provides the Vendor with a means of providing this data via web forms.

Given this, if a Vendor has not yet selected a Datapool, Lowe's recommends that the Vendor consider the advantages offered by 1SYNC; namely its support for "customized" standards that are being developed by Lowe's in order to provide the Vendor with a fully automated means of delivering product data now, and price data in the future.

Above all, Lowe's reiterates its intent to implement this data synchronization process for product data in 4<sup>th</sup> Quarter 2007, and for price data shortly thereafter. Lowe's expects its Vendors to be able to support this process in the same timeframe.

## **Section 2 - Current Status of Lowe's Data Synchronization Process**

The core function in data synchronization is the delivery of data from the Vendor to the Retailer. The global standard for the delivery of product data is the CatalogueItemNotification (CIN) transaction. The Lowe's PCM application is currently available to receive CIN transactions from its Vendors.

The specific details of the data requirements for the PCM application are provided in [Section 4](#).

### **Lowe's will require the following from your CIN:**

1. The Vendor must provide a CIN transaction that is compliant.
2. The Vendor's CIN transaction must include all the Core attributes, the Barcode attributes, and the Hardlines Schema extension. Lowe's will not accept a CIN transaction that does not contain all of these components.
3. The inclusion of the Lowe's Schema extension is optional. A Vendor may choose not to include this extension. If that is the case, the Vendor will be expected to manually provide the data contained in this extension via web-form data entry.

The Lowe's PCM application will be the "long-term" Lowe's solution for the data synchronization process. The implementation of the PCM application by Lowe's will eventually lead to the discontinuation of the current processes for delivery of product data. Initially, the PCM application will be a "parallel" process, one that does not replace the current means by which product data is delivered by the Vendor to Lowe's (i.e. sending Item Setup sheets to Lowe's Merchandising Department). However, the PCM application allows the Vendor to test their readiness for, and prepare for, the full implementation of the Lowe's PCM application. The current means of communicating product data (Lowe's Item Setup sheets delivered to the appropriate Lowe's Merchandising contacts) must continue until Lowe's notifies the Vendor otherwise.

To utilize the PCM application, the Vendor must first complete the first four steps detailed in Section 3 - Implementation Steps for the PCM Application. If a Vendor has already undertaken a data synchronization process with another Retailer, they may have already completed Steps #2-3. However, the first step, the Data Assessment step, is one that is specific to the Lowe's data synchronization process, as Lowe's data requirements and data validations are unique.

### **Section 3 - Implementation Steps for the PCM Application**

The purpose of this section is to detail the steps necessary for a Vendor to implement the Lowe's data synchronization process using the Lowe's PCM application.

#### **Step #1 - Data Assessment**

This is the critical step in the overall process. Data synchronization does not work if the data is incomplete. Data that is incomplete will require intervention on the part of the Vendor to "complete" the data, thus causing more work and effort by the Vendor and by Lowe's.

Thus, it is highly important that the Vendor first understand the full range of Lowe's product data requirements. These requirements are detailed in [Section 4 - Lowe's Data Requirements for the PCM Application](#). The Vendor should first review these data requirements and gain a thorough understanding of these requirements, as well as understanding the associated data validations that Lowe's applies to ensure the "correctness" of the data.

Next, the Vendor should identify their internal application(s) that contain the data required by Lowe's. Since the data attributes cover a wide range of product-related functions (such as Logistics, Planogramming, HazMat, Advertising, etc.), it is possible that the Vendor will need to obtain this information from a number of different sources.

Ideally, this outcome of this assessment will be the following:

1. The Vendor has all the product data required by Lowe's.
2. All the data resides in one or more system applications.
3. Each of these systems applications can provide the applicable data to a centralized application, which can then combine the data as required.

However, this ideal outcome may not be the case. Certain data may not be currently available to the Vendor. Other data may exist only in a paper format. As part of the Data Assessment, the Vendor will need to resolve the instances where the ideal outcome is not met.

#### **Step #2 - Process Development**

Second in importance only to the data assessment is the process development. By process development, we are referring to the development of a process that will perform the following functions:

1. Combine all the various data inputs into a single product data repository.
2. Transform that data into the format supported by your Datapool.
3. Manage the communications of this format with your Datapool

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

4. Process the CatalogueItemConfirmation (CIC) transactions that will be returned by Lowe's in response to receiving the Vendor's CIN transactions.

If the Vendor has already participated in a data synchronization process with another Retailer, then the process that they have already developed should be able to be utilized for the Lowe's data synchronization process. However, if this is the first data synchronization effort, then the Vendor will need to consider whether to develop this capability internally, or choose to employ an external Solution Provider.

As with any decision of this nature, there will be a number of factors to consider - cost, scalability, adaptability, implementation timelines, etc. As indicated previously, this is a key decision for the Vendor.

If the Vendor is interested in the services of a Solution Provider, 1SYNC has provided a tool that will give you a complete listing of solutions certified for 1SYNC Data Pool implementation for your particular business needs., This list can be obtained at the following URL:

<http://www.1sync.org/partnerships.html>

Please note that this list is specific to 1SYNC; other Datapools will likely have a different set of Solution Providers.

### **Step #3 - Datapool Selection**

A Datapool is a required component of the data synchronization process. A Datapool functions as a central point for the exchange of data between a Vendor, GS1 Global Registry and and a Retailer, or between Datapools.

Lowe's utilizes 1SYNC as its Datapool, and recommends 1SYNC to its Vendors. However, a Vendor is not required to use 1SYNC. There are other Datapools that provide the basic functionality necessary for participation in the Lowe's data synchronization process. An example of a datapool other than 1SYNC is Agentrics.

Further information regarding 1SYNC is available at <http://1SYNC.org>

### **Step #4 - Item Registration**

At this point, Data assessment will have been completed. The Vendor will have implemented a data synchronization process as indicated in step #2 above. The Vendor will have selected a Datapool. The next step is for the Vendor to have added their items to their Datapool and the Datapool will register the products with the GS1 Global Registry.

The first action is to obtain a Company Prefix and a Global Location Number (GLN - a unique entity identification for the Vendor that is derived from the Company Prefix).

GS1 US (formerly the Uniform Code Council (UCC)) assigns Company Prefixes and can provide you with your GLN (the GLN is created fromn your company prefix). Once the Vendor has their Company Prefix, their

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Datapool can assist them in determining their GLN(s). The Vendor's Datapool can also help them to create a Global Trade Identification Number (GTIN) for each product that the Vendor wants to register. Note that a separate GTIN is required for each level of a packaging hierarchy for a product (Each, Inner-pack, Case, Pallet, etc.).

Once a Vendor has obtained a GLN and has created GTINs for each product to be registered, the next action is for the Vendor to add these products to their Datapool and the Datapool will register the products with the GS1 Global Registry.

**Step #5 – Product Registration within Lowe's PCM application**

The previous step will have registered the Vendor's products within the GS1 Global Registry and their Datapool Registry. However, this step will not have registered the products within Lowe's data synchronization application.

This Lowe's PCM Registration step can only be accomplished through web-form data entry. The Lowe's Registration function is part of the Lowe's PCM application.

To ensure data security, the PCM application relies on digital certificates for Vendor access to the application. Each representative of the Vendor's company that requires access to the PCM application will need to obtain a digital certificate. The process for this is as follows:

- A. If the representative already has a digital certificate for secure access to **Lowe'sLink®** website, please send an e-mail to [loweslink@lowes.com](mailto:loweslink@lowes.com) requesting access to the Product Content Management (PCM) application. This e-mail must contain the following information:
  - **Application Requested** – Product Content Management (PCM)
  - **Company Name**
  - **Representative's Name**
  - **Lowe's Home Office Vendor Number** (not the Ship-From Vendor Number used for Purchase Orders)
  
- B. If the representative does not already have a digital certificate for secure access to **Lowe'sLink®** website:
  1. Access the website, [www.loweslink.com](http://www.loweslink.com).
  2. Click on **Register Here** under **Getting Started** (right hand side of home page).
  3. Then complete and submit the online registration form. Please be sure to include your **Lowe's Home Office Vendor Number** in the Vendor Number input field when completing the registration

The Lowe's PCM application contains an on-line tutorial that is the best reference for the Vendor, in terms of identifying the actions involved in completing this step. **From the perspective of this Vendor Implementation Guide, it is important to note the following:**

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

- Lowe's does not employ a "blanket" subscription that allows any Vendor to publish any item to them. When a Vendor registers a specific product on the PCM application, the application generates a specific subscription for this product to 1SYNC. Without this specific subscription in place, 1SYNC will not allow the Vendor to deliver the product data to Lowe's.

**Step #6 – Deliver the Product Data**

At this point, the actual process of data synchronization between the Vendor and Lowe's may begin. This step involves the publication of the Vendor's product data via the CatalogueItemNotification transaction.

The Lowe's PCM application requires the Vendor to create one publication per packaging hierarchy. Thus, if a Vendor supplies a product to Lowe's in two separate configurations (example, individual product or the individual product in a case), this would be represented by two separate publications resulting in two CIN transactions.

With the completion of the registration in the PCM application, a CIS (CatalogueItemSubscription) transaction is generated on the part of Lowe's (**NOTE:** For brand new product data the Lowe's Merchant will initiate this process – see step 10 below). No further data will be revealed in the PCM application until the Vendor has completed the act of publication of CINs through their Datapool.

Please note that all Datapools apply data validations to the product data. If the CIN does not pass these validations, the Datapool will require the Vendor to correct the product data and resubmit.

If the Vendor's Datapool is 1SYNC (Lowe's Datapool), then 1SYNC will forward the CIN transactions that pass 1SYNC's validations to Lowe's. Lowe's will process these transactions in the Lowe's PCM application.

If a Vendor is using another Datapool besides 1SYNC, then once the Vendor delivers the CIN transactions to their Datapool, their Datapool would validate the transactions and then deliver the transactions to 1SYNC. As above, 1SYNC will forward the CIN transactions to Lowe's.

It is important to note that, if the Vendor undertakes this step prior to completing Step #5 above, the CIN transactions will not pass 1SYNC's validations. One of the key validations that 1SYNC applies is to confirm that the Retailer (Lowe's) has subscribed to the product data being sent by the Vendor. The completion of Step #5 triggers the subscription process between Lowe's and 1SYNC.

**Step #7 – Address Data Validation Errors**

The Vendor's Datapool will apply the first level of data validation to the CIN transactions. If the CIN transactions fail this validation level, they will not be forwarded on to Lowe's. The Vendor will need to correct the validation errors identified by their Datapool and re-submit the CIN transactions.

Lowe's applies a second level of data validation to CIN transactions when they are processed by the Lowe's PCM application. These validations are more rigorous than those commonly applied by Datapools

(including 1SYNC), and as such, this level of validation is the one where validation errors most commonly occur. The entire set of Lowe's data validations are provided in [Section 4 - Lowe's Data Requirements for the PCM Application](#).

After applying Lowe's data validation process, Lowe's will communicate the results of the validation process to the Vendor by two different means. First, Lowe's will send a CatalogueItemConfirmation (CIC) transaction to 1SYNC, which will forward it to the Vendor's Datapool. This CatalogueItemConfirmation transaction will have one of the following two statuses:

1. Status = ACCEPTED. This status means that the CIN transaction has passed validation.
2. Status = REVIEW. This status means that the CIN transaction has failed validation, and that the Vendor will need to correct the errors and resubmit the CIN transaction.

The CatalogueItemConfirmation transaction is limited to conveying a status; it cannot be used to provide the details of the validation errors. In order to convey these details, Lowe's has a second means of communication.

Within the Lowe's PCM application, each Vendor will be provided with their own Worklist. For each CIN that is processed by the Lowe's application, regardless of whether the CIN passes or fails data validations, a notification will be generated to the Vendor's Worklist. If the CIN has failed Lowe's validations, this notification will contain the specific details of the data validation failures.

The Vendor will need to monitor this Worklist, and when data validation errors are identified, the Vendor will need to correct these errors and then re-publish the appropriate CIN transaction.

#### **Step #8 - Additional Data Entry via Web Forms**

Lowe's requires additional product data attributes that are not included in the GS1 standards. The Vendor has the choice of providing this additional data manually, via web-form data entry in the PCM application, or by utilizing the optional Lowe's Schema extension. The Lowe's Schema extension is a Lowe's-specific extension to the GS1 standards for the CIN transaction, and this extension includes all the Lowe's-specific data attributes.

**Note:** The Vendor's choice for the provision of this data (manual web-form entry or Lowe's Schema extension) must be conveyed in advance to Lowe's. The PCM application will enforce this selection, so if a Vendor indicates that they will be providing this data via the Lowe's Schema extension, the PCM application will "fail" any CIN from that Vendor that does not contain this extension (and vice versa, if the Vendor has selected the manual web-form entry option).

When a Vendor successfully publishes a CIN transaction to Lowe's (one that passes all validations), a notification is generated to the Vendor's Worklist within the PCM application (refer Step #7 above). If the Vendor has chosen to enter the additional data manually via PCM,

this notification will contain a link that will direct the Vendor to the web forms for the additional data entry.

The additional data attributes that are required can include (but are not limited to):

- Special Order Availability Indicator
- Special Order Quantity Minimum (if Special Order Availability Indicator = TRUE)
- Special Order Quantity Multiple (if Special Order Availability Indicator = TRUE)
- Special Order Lead Time (if Special Order Availability Indicator = TRUE)
- Contains Wood Indicator
- Subject to US Patent Indicator
- Hazardous Material Classification
- Environmental Identifier

Details regarding these data attributes, including specific descriptions and associated Lowe's data validations, can be found in [Section 5 – Lowe's Schema Extension](#).

#### **Step #9 – Ongoing Maintenance**

The process of data synchronization is an ongoing one. Product data undergoes changes. As these changes occur, the Vendor must publish these changes to Lowe's. To do this, repeat steps #6 and #7 above, utilizing a CIN transaction with a data type = DATA\_CHANGE. As is the case with the initial CIN transactions, Lowe's will apply their data validations. Once the validation process has been completed, Lowe's will issue a CIC transaction and a notification to the Vendor's Worklist on Lowe's data synchronization application. The notification will advise the Vendor whether the DATA\_CHANGE CIN transaction passed or failed validation.

**New for June 2006:** Although your product data may pass all validations the Merchandising Assistant may need changes to the data. Lowe's has the ability to request product data changes through the PCM application. The Vendor will receive these requests in the form of a PCM Notification.

#### **Step #10 – New Products**

**New for June 2006:** When Lowes has decided to purchase a new product from a Vendor the Merchandising Assistant will request the new product through the PCM application. The Vendor will then receive a PCM worklist task to confirm the GTIN for that product. The Vendor will have the ability to correct or confirm the GTIN. Once the Vendor has confirmed that the GTIN Lowe's is requesting is correct, a CIS (CatalogueItemSubscription) transaction is generated on the part of Lowe's. Once the CIS transaction has been generated the product workflow continues with step 6 above.

After the Merchandising Assistant has reviewed and is satisfied with the product data (from steps 6-9), they will approve it in the PCM

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

application. The approval may be required by additional Lowe's employees i.e. the Logistics Specialist for dimensional data. Once all required approvals have taken place the GTIN status is updated to SYNCRONIZED and a notification is sent to the Vendor indicating the product was approved. Also, during the approval process the Merchandising Assistant will assign an internal SKU(Lowes Item Number) which will be used on the Lowe's Purchase Order.

## **Section 4 - Lowe's Data Requirements for the PCM Application**

The purpose of this section is to define the entire set of Lowe's product data requirements, and to document the data validations that will be applied by the Lowe's PCM application to this product data.

This section is divided into three sub-sections. The first sub-section contains the general "Business Rules" that will be applied by the PCM application to CIN transactions received from a Vendor.

The second sub-section is a table listing all the required data attributes that are contained in the Core Schema, the Barcode Schema extension and the Hardlines Schema extension. The second sub-section also includes the data validations that are applicable to these data attributes.

Due to the complexity of the data validations for Barcodes, the validations for barcode data attributes are identified separately in the third sub-section.

The requirements for the data contained in the Lowe's Schema Extension are defined in [Section 5](#).

### **General "Business Rules"**

The following lists the general business rules that will be applied by the Lowe's PCM application to a Vendor's CIN transaction. If the CIN transaction does not comply with these rules, the transaction will not pass Lowe's data validations.

1. Hierarchical Levels. A CIN transaction can only contain a single packaging hierarchy. A single packaging hierarchy can contain multiple hierarchical levels. An example would be a CIN that contained a Pallet level, a Case level, and an "Each" level. Lowe's only accepts the following four values for a Hierarchical Level:

BASE\_UNIT\_OR\_EACH  
PACK\_OR\_INNERPACK  
CASE  
PALLET

2. Combinations of Hierarchical Levels. In addition to #1 above, Lowe's only accepts the following nine combinations of Hierarchical Levels within a CIN transaction:

1. A single-level CIN with a Hierarchical Level of BASE\_UNIT\_OR\_EACH.
2. A single-level CIN with a Hierarchical Level of CASE.
3. A two-level CIN with Hierarchical Levels of CASE and BASE\_UNIT\_OR\_EACH.
4. A two-level CIN with Hierarchical Levels of PALLET and BASE\_UNIT\_OR\_EACH.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

5. A two-level CIN with Hierarchical Levels of PALLET and CASE.
  6. A three-level CIN with Hierarchical Levels of PALLET, PACK\_OR\_INNERPACK and BASE\_UNIT\_OR\_EACH.
  7. A three-level CIN with Hierarchical Levels of PALLET, CASE, and BASE\_UNIT\_OR\_EACH.
  8. A three-level CIN with Hierarchical Levels of CASE, PACK\_OR\_INNERPACK, and BASE\_UNIT\_OR\_EACH.
  9. A four-level CIN with Hierarchical Levels of PALLET, CASE, PACK\_OR\_INNERPACK, and BASE\_UNIT\_OR\_EACH.
3. **New for November 2006:** If a CIN fails validation, the Vendor should correct the errors and then re-submit the CIN transaction with a Notification Topic = DATA\_CHANGE or CORRECTION. This is a change from Lowe's requiring the Vendor to re-submit the CIN transaction with the same values.
4. Once the Vendor has successfully submitted an "Initial Load" or "New Item" CIN, they cannot submit another CIN for the same packaging hierarchy with these values. Subsequent CINs for this packaging hierarchy must have one of the following:
- CORRECTION
  - DATA\_CHANGE
5. A CIN transaction must contain the Barcode attributes and the Hardlines Schema extension. The Lowe's Schema extension is optional.
6. When a Vendor submits a DATA\_CHANGE CIN, the GTIN Effective Date must be different than the GTIN Effective Date previously sent for this packaging hierarchy. Also, the GTIN Effective Date must be current- or future-dated; no past-dated Effective Dates.
7. In a CORRECTION CIN, the GTIN Effective Date must match to the GTIN Effective Date of the CIN that is intended for correction. If the Vendor wants to correct the GTIN Effective Date, they must follow the same steps outlined in Business Rule #10 below. They must first send a DELETE CIN to remove the hierarchy with the invalid GTIN Effective Date, and then submit a NEW\_ITEM CIN with the corrected GTIN Effective Date.
8. The Vendor cannot submit an "unsolicited" CIN transaction to Lowe's. If this product has not been registered in the Lowe's data synchronization application, Lowe's will not have created and sent a CatalogueItemSubscription (CIS) transaction for this product. Without this CIS transaction, 1SYNC will not forward the CIN transaction to Lowe's. For Lowe's to accept a CIN, the highest level of the packaging hierarchy must have been registered within the Lowe's data synchronization application.
9. A Vendor cannot change an established packaging hierarchy relationship simply by sending Lowe's a DATA\_CHANGE CIN transaction. If a Vendor wants to change an established packaging hierarchy, they must first submit a DELETE CIN for the existing hierarchy. Once the existing hierarchy has been

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

withdrawn, the Vendor may then submit the revised packaging hierarchy via a NEW\_ITEM CIN (provided they are in compliance with Business Rule #9 above).

10. If the Vendor wants to withdraw or delete a specific packaging hierarchy that has been submitted and accepted by Lowe's, they have two options. The Vendor can issue a DELETE. Or, they can issue a CIN transaction = CORRECTION and a current date for either [Cancellation Date](#) or [Discontinuation Date](#). Without one of these two options being utilized, Lowe's may continue to treat this as an "active" packaging hierarchy.
  
11. Multiple packaging hierarchies. A specific trade item can exist in multiple packaging hierarchies at the same time, but only if one of the following conditions applies:
  - A. This trade item is the lowest level in each of these hierarchies, or
  - B. The relationship between this trade item and the next lowest-level trade item remains unchanged in all of the multiple packaging hierarchies.

As an example, an "Each" item can exist as its own single-level hierarchy, and it can exist in a second hierarchy along with a "Case" in a two-level hierarchy, as well as with an "Innerpack" and a "Case" in a three-level hierarchy, and with an "Innerpack", "Case", and "Pallet" in a four-level hierarchy.

Hierarchy 1 = GTIN #1 (Each)  
Hierarchy 2 = GTIN #2 (Case) + GTIN #1 (Each)  
Hierarchy 3 = GTIN #3 (Case) + GTIN #4 (Innerpack) + GTIN #1 (Each)  
Hierarchy 4 = GTIN #5 (Pallet) + GTIN #3 (Case) + GTIN #4 (Innerpack) + GTIN #1 (Each)

In this example, the Vendor cannot use the same GTIN for the Case level in Hierarchy 2 and in Hierarchy 3, because they reference different "next lower level trade items". In Hierarchy 2, the next lower level is the Each level. In Hierarchy 3, the next lower level is the Innerpack level.

However, the Vendor can use the same GTINs for the Case level and the Innerpack level in Hierarchies #3 and #4. In both of those hierarchies, the relationship between the Case and the Innerpack (next lowest level) remains unchanged, and the relationship between the Innerpack and the Each (next lowest level) also remains unchanged.

If a Vendor sends in a CIN containing a packaging hierarchy that conflicts with an existing packaging hierarchy, Lowe's will consider this to be a data validation failure, and treat the CIN accordingly. If this occurs, the Vendor will be required to either:

1. Change the new packaging hierarchy so that it does not conflict with the existing packaging hierarchy.

2. DELETE the existing packaging hierarchy (if it is no longer valid), and then re-submit the new packaging hierarchy.

**Core Barcode Attributes and Hardlines Schema Extension.**

The table beginning on the following page lists all the data attributes required by Lowe's that are present in the CatalogueItemNotification transaction, in either the Core Schema, the Barcode Schema extension, or the Hardlines Schema extension. The table also contains a reference to the one attribute that may be used in the SBDH extension.

Please note that this is not a comprehensive list of every data attribute in the CIN transaction; only those required by Lowe's. In order to create the CIN transaction, the Vendor will also have to provide all the data attributes that are considered to be mandatory by the XML schemas. [Appendix D](#) contains a list of these data attributes that are not required by Lowe's, but must be included in the CIN transaction to meet the XML schema requirements.

The first column in the table lists the data attribute by its common "business" name. The data attributes in this column are listed in alphabetical order. The second column provides a description of the data attribute.

The third column contains the Schema "Xpath" reference for this data attribute. This "Xpath" reference starts at the <tradeItem> node within the CIN transaction. This will be updated at a later date to reflect the GDSN attribute name.

Note: The Core/Hardlines schema Xpath reference is impacted and will be sunset by 1SYNC in November, 2007. Lowe's is in the process of updating the Xpath references throughout this vendor implementation guide. These updates will be reflected shortly. The reader should take caution that reference to the Xpath will be obsolete and Lowe's will replace this column with the GDSN name in a future release.

The fourth column lists the Lowe's Data Validations. For a number of attributes, the data validation consists of ensuring that the value for that data attribute matches one of the values that Lowe's accepts for that attribute. Where this occurs, the data validation will include a reference to [Appendix A](#), which contains all the code tables utilized by Lowe's for the purposes of data validation.

Lowe's has implemented several new or revised validations. In particular, Vendors who have already tested with Lowe's should check to ensure that their CIN transactions will meet the validations for the following data attributes:

- [Despatch Unit Indicator](#)
- [Extended Product Description](#)
- [Functional Name](#)
- [Invoice Unit Indicator](#)
- [Order Unit of Measure](#)
- [Party Name](#)
- [Selling Unit of Measure](#)

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

- [Storage Temperature Unit of Measure](#)
- [Target Market Country Code](#)
- [Total Quantity of Layers Per Trade Item](#)
- [Total Quantity of Trade Items Per Layer](#)
- [Volume](#)

Table 1 - Required Data Attributes and Data Validations - Core Schema, Barcode Schema Extension, and Hardlines Schema Extension

Common (Lowe's) Data Attribute Name (in Alphabetical Order)	Description	Core/Hardlines Schema Xpath	Lowe's Data Validations
Availability End Date	The date from which the trade item is no longer available from the information provider, including seasonal or temporary trade item and services. Date format is CCYY-MM-DDTHH:MM:SS.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemDateInformation/endTimeAvailabilityDateTime	<ol style="list-style-type: none"> <li>1. If both Availability End Date and <a href="#">Availability Start Date</a> are present, Availability End Date must be later than <a href="#">Availability Start Date</a>.</li> <li>2. Mandatory data attribute in a WITHDRAW CIN.</li> <li>3. Availability End Date must be current- or future-dated; no backdating allowed.</li> <li>4. Availability End Date cannot be greater than the <a href="#">Discontinuation Date</a> (where present) or the <a href="#">Cancellation Date</a> (where present).</li> </ol>
Availability Start Date	When item can first be ordered by the buyer for a new or seasonal item.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemDateInformation/startAvailabilityDateTime	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> </ol>
Barcode Symbology	The type of bar code or codes, which are visible on the item (e.g. UPCA, EAN13, EAN8, ITF14).	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/barCodeType	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must contain a value that is acceptable to Lowe's. Refer to the <a href="#">Barcode Symbology table in Appendix A</a>.</li> <li>3. Due to the complexity of the data validations surrounding Barcodes, the data validations for this</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			data attribute are listed separately under the subsection, <a href="#">Data Validations for Barcodes</a> .
Base Unit Indicator	An indicator identifying the trade item as the base unit level of the trade item hierarchy. Base unit is the smallest possible unit.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemUnitIndicator/isTradeltemABaseUnit	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. There can be only one occurrence of Base Unit Indicator = TRUE in a CIN.</li> <li>3. At the lowest hierarchical level, Base Unit Indicator must equal TRUE.</li> </ol>
Brand Name	The recognizable name used by a brand owner to uniquely identify a line of trade item or services. This is the name that is recognizable by the consumer.	/tradeltem/tradeltemInformation/tradeltemDescriptionInformation/brandName	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Cannot exceed 50 characters in length.</li> </ol>
Brand Owner GLN	The Global Location Number of the Brand Owner.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/brandOwnerOfTradeltem/brandOwner/gln	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Where present, must be 13 numeric digits and must pass check digit validation.</li> <li>3. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.</li> </ol>
Brand Owner Name	Name of the party who owns the brand of the trade item.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/brandOwnerOfTradeltem/nameOfBrandOwner	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Cannot exceed 35 characters in length.</li> <li>3. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Cancellation Date	Date that a trade item is withdrawn by the Vendor.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemDateInformation/canceledDate	<ol style="list-style-type: none"> <li>Where present, must be in YYYY-MM-DD format.</li> <li>Where present in a CORRECTION CIN, for the purposes of canceling a product hierarchy, must be current- or future-dated.</li> </ol>
Class of Dangerous Goods	Dangerous goods classification of the trade item. There are 9 danger classes, some classes are further subdivided into subclasses.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemHazardousInformation/classOfDangerousGoods	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a> is present, the XML schema requirements necessitate the inclusion of this data attribute.
Classification Agency	Code indicating the Classification Agency responsible for maintaining the Classification Code (see below).	/tradeltem/tradeltemInformation/classificationCategoryCode/additionalClassification/additionalClassificationAgencyName	<ol style="list-style-type: none"> <li>Mandatory data attribute at the Consumer Unit level.</li> <li>Where present, must have a value of "UDEX".</li> </ol>
Classification Code (also referred to as UDEX Classification Code)	A code classifying the type of trade item.	/tradeltem/tradeltemInformation/classificationCategoryCode/additionalClassification/additionalClassificationCategoryCode	<ol style="list-style-type: none"> <li>Mandatory data attribute at the Consumer Unit level. Must be a UDEX Classification Code.</li> <li>Cannot exceed 15 characters in length.</li> <li>Classification Code at one level must match the Classification Code at the next lowest level.</li> </ol>
Classification Description (also referred to as UDEX Category Name)	A description of the classification category referenced by the Classification Code (see above). An example would be "Power Tools".	/tradeltem/tradeltemInformation/classificationCategoryCode/additionalClassification/additionalClassificationCategoryDescription	<ol style="list-style-type: none"> <li>Optional data attribute, but where present, the Classification Description of the "parent" item must match the Classification Description of the "child" item.</li> <li>Cannot exceed 70 characters in length.</li> </ol>
Color Code	A code indicating the	/tradeltem/tradeltemI	None.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

	color of the trade item.	nformation/tradingPartnerNeutralTradeItemInformation/tradeItemColorDescription/colorCodeValue	
Color Code List Maintenance Agency	Code indicating the agency responsible for maintaining the Color Code (see above).	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemColorDescription/colorCodeListAgency	None (all values are acceptable).
Color Description	A description of the Color Code (see above).	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemColorDescription/colorDescription/description/text	1. Where present, cannot exceed 70 characters in length.
Consumer Unit Indicator (also referred to as Is Consumer Unit?)	Identifies whether the current hierarchy level of a trade item is intended as a unit to be purchased by the consumer.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemUnitIndicator/isTradeItemAConsumerUnit	1. Mandatory data attribute at all levels. 2. A CIN must contain at least one Consumer Unit Indicator = TRUE or at least one <a href="#">Variable Unit Indicator</a> = TRUE..
Contained GTIN (also referred to as Next Lower Level GTIN)	The GTIN of the next lowest level in the hierarchy. If the current level is the lowest level, then this value is the same as the value for GTIN at this level.	/tradeItem/nextLowerLevelTradeItemInformation/childTradeItem/tradeItemIdentification/gtin	1. Mandatory data attribute at all levels except the lowest level. 2. Where present at the lowest level, the value of this attribute must match the value of the <a href="#">GTIN</a> data attribute at the lowest level. 3. The value of Contained GTIN at one level must match the value of the <a href="#">GTIN</a> data attribute at the next lowest level (not applicable to the lowest level - refer #2 above). 4. All other validations applied to the <a href="#">GTIN</a> data attribute are applied to this attribute as well.

Country of Origin	The country code (codes) in which the goods have been produced or manufactured.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradelttemCountryOfOrigin/countryOfOrigin	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the BASE_UNIT_OR_EACH hierarchical level.</li> <li>2. Must match an accepted Lowe's value for this data attribute. Refer to the <a href="#">Country of Origin Codes table in Appendix A</a> for the list of accepted country codes.</li> </ol>
Dangerous Goods Hazardous Code	A code indicating the applicable regulatory agency for dangerous goods.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradelttemHazardousInformation/dangerousGoodsHazardousCode	1. If <a href="#">U.N. Dangerous Goods Number</a> is present, this data attribute is required, and must contain a value of "DOT".
Dangerous Goods Margin Number	Information, whether for the base trade item or further packaging trade item a dangerous goods a-margin number does exist in the European dangerous goods agreements (and in the respective national dangerous goods legislation).	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradelttemHazardousInformation/dangerousGoodsAMarginNumber	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a> is present, the XML schema requirements necessitate the inclusion of this data attribute.
Dangerous Goods Packing Group	Identifies the degree of risk these dangerous goods present during transport according to IATA/IMDG/ADR/RID regulations.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradelttemHazardousInformation/dangerousGoodsPackingGroup	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a> is present, the XML schema requirements necessitate the inclusion of this data attribute.
Dangerous Goods Regulation Code	Code indicating the classification systems(s) of dangerous goods and/or the Agency responsible for it.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradelttemHazardousInformation/dangerousGoo	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

		dsRegulationCode	is present, the XML schema requirements necessitate the inclusion of this data attribute.
Dangerous Goods Shipping Name	Shipping name of the trade item classified as a dangerous good.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemHazardousInformation/dangerousGoodsShippingName	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a> is present, the XML schema requirements necessitate the inclusion of this data attribute.
Dangerous Goods Technical Name	Description of the chemical term of the trade item classified as a dangerous good.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemHazardousInformation/dangerousGoodsTechnicalName	None. Lowe's does not require this data attribute. However, if either <a href="#">Dangerous Goods Hazardous Code</a> or <a href="#">U.N. Dangerous Goods Number</a> is present, the XML schema requirements necessitate the inclusion of this data attribute.
Despatch Unit Indicator (also referred to as Is Despatch Unit?)	An indicator identifying that the information provider considers the trade item as a despatch (shipping) unit.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemUnitIndicator/isTradeltemADespatchUnit	1. Mandatory data attribute at all levels. 2. There must be at least one occurrence of Despatch Unit Indicator = TRUE in a packaging hierarchy.
Discontinuation Date	Date that a trade item is discontinued by the Vendor.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemDateInformation/discontinuedDate	1. Where present in a CORRECTION CIN, for the purposes of discontinuing a product hierarchy, must be current- or future-dated. 2. Where present, must be in YYYY-MM-DD format.
EAN/UCC Code (also referred to as Barcode)	Unique code assigned by the EAN/UCC system to this trade item.	/tradeltem/tradeltemIdentification/additionalTradeltemIdentification/uccnet:eanuccCode	1. Mandatory data attribute at all levels. 2. Due to the complexity of the data validations surrounding Barcodes, the

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			data validations for this data attribute are listed separately under the subsection, <a href="#">Data Validations for Barcodes</a> .
EAN/UCC Type (also referred to as Barcode Type)	Type of code indicated above.	/tradeltem/tradeltemIdentification/additionalTradeltemIdentification/uccnet:eanuccType	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must contain a value that is acceptable to Lowe's. Refer to the <a href="#">EAN/UCC Type table in Appendix A</a>.</li> <li>3. Due to the complexity of the data validations surrounding Barcodes, the data validations for this data attribute are listed separately under the subsection, <a href="#">Data Validations for Barcodes</a>.</li> </ol>
Extended Product Description	An extension of the <a href="#">Product Description</a> .	/tradeltem/tradeltemInformation/tradeltemDescriptionInformation/additionalTradeltemDescription/longDescription/longText	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Where present, cannot exceed 350 characters in length.</li> </ol>
Finish Description	Description of the outer surface/appearance of the product.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemFinish/tradeltemFinishDescription/text	<ol style="list-style-type: none"> <li>1. Where present, cannot exceed 70 characters in length.</li> </ol>
Flash Point Temperature	The lowest temperature at which a substance gives off a sufficient vapor to support combustion.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemHazardousInformation/flashPointTemperature/measurementValue	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">U.N. Dangerous Goods Number</a> is present.</li> <li>2. Where present, must be a numeric value.</li> <li>3. Total length not exceeding 4 digits before the decimal (4.2).</li> </ol>
Flash Point Temperature Unit of Measure	The unit of measure for Flash Point Temperature. Lowe's	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradelte	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Flash Point Temperature</a> in present.</li> </ol>

	preferred unit of measure is Fahrenheit.	mInformation/tradelt emHazardousInformation/flashPointTemperature/measurementValue/@unitOfMeasure	2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Temperature UOM table in Appendix A</a> for a list of the accepted units of measure.
Functional Name	Describes the functional use of this trade item.	/tradeltem/tradeltemInformation/tradeltemDescriptionInformation/functionalName/description/text	1. Where present, cannot exceed 35 characters in length. 2. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.
GLN (Global Location Number) (also referred to as Information Provider GLN)	Unique number assigned by the EAN/UCC system referencing the Vendor providing the information for these trade items.	/tradeltem/tradeltemInformation/informationProvider/gln	1. Mandatory data attribute at the Consumer Unit level. 2. Where present, must be 13 numeric digits and must pass check digit validation. 3. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.
Gross Weight	The gross weight of the trade item, including all packaging materials. At the Pallet level, this includes the weight of the pallet.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemMeasurements/grossWeight/measurementValue	1. Mandatory data attribute if this is an Orderable Unit. 2. Must be a positive numeric value not exceeding 10 digits before the decimal (10.4). 3. Gross Weight must be greater than or equal to <a href="#">Net Weight</a> . 4. At each level (other than the lowest level), Gross Weight must be greater than or equal to the cumulative Gross Weight at the next lowest level (Cumulative refers to the combined weight. As an example, 10 Cases weighing 8 pounds each

			would have a cumulative Gross Weight of 80 pounds). 5. For a DATA_CHANGE CIN, the value for Gross Weight cannot differ by more than 20% from the current value for Gross Weight. 6. A Vendor must provide 30 days advance notice of a change to Gross Weight. Failure to do so will not result in a data validation error, but will result in a "warning" message being included in the notification to the Vendor.
Gross Weight Unit of Measure	The unit of measure for Gross Weight. Lowe's preferred unit of measure is Pounds.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/grossWeight/measurementsValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Gross Weight</a> is present.</li> <li>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</li> <li>3. Where both are present, Gross Weight UOM and <a href="#">Net Weight UOM</a> must match.</li> </ol>
GTIN (Global Trade Identification Number)	Unique number assigned by the EAN/UCC system referencing a specific trade item at a specific hierarchical level.	/tradelItem/tradelItemIdentification/gtin	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must be 14 numeric digits, must have a valid check digit, and cannot contain more than six leading zeroes.</li> <li>3. Within a specific CIN, the same GTIN cannot be used for more than one hierarchical level.</li> </ol>
GTIN Effective Date (also referred to as Effective Date)	Effective date of all the information provided for this trade item.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemDateInformation/effectiveDate	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must be in YYYY-MM-DD format.</li> <li>3. If this is a DATA_CHANGE CIN, the GTIN Effective Date must</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			be greater than the "existing" GTIN Effective Date. Further, the Effective Date must be current- or future-dated.
Hierarchical Level (also known as Trade Item Unit Descriptor)	Defines the hierarchical level of the trade item.	/tradeltem/tradeltemUnitDescriptor	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. A "parent" level cannot have more than one "child" level assigned to it.</li> <li>3. A hierarchical level of BASE_UNIT_OR_EACH cannot have a "child" level assigned to it.</li> <li>4. Lowe's accepts only the following eight combinations of Hierarchical Level(s): <ol style="list-style-type: none"> <li>a) BASE_UNIT_OR_EACH</li> <li>b) CASE</li> <li>c) BASE_UNIT_OR_EACH + CASE</li> <li>d) BASE_UNIT_OR_EACH + PALLET</li> <li>e) CASE + PALLET</li> <li>f) BASE_UNIT_OR_EACH + PACK_OR_INNERPACK + CASE</li> <li>g) BASE_UNIT_OR_EACH + CASE + PALLET</li> <li>h) BASE_UNIT_OR_EACH + PACK_OR_INNERPACK + CASE + PALLET</li> </ol> </li> </ol>
Import Classification Type	Code indicating the type of Import Classification Value (refer <a href="#">Vendor Harmonized Tariff ID</a> ).	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemImportIdentification/importClassificationType	<ol style="list-style-type: none"> <li>1. If <a href="#">Vendor Harmonized Tariff ID</a> is present, this data attribute must be present.</li> <li>2. Where present, must be equal to HARMONIZED_TARIFF_SCHEDULE_OF_THE_US.</li> </ol>
In-box Depth	The measurement from front to back of the trade item, including packaging.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemMeasurements/depth/measurementV	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must be a positive numeric value not exceeding 10 digits before the decimal (10.4).</li> </ol>

		alue	<p>3. For a DATA_CHANGE CIN, the value for In-box Depth cannot differ by more than 20% from the current value for In-box Depth.</p> <p>4. A Vendor must provide 30 days advance notice of a change to In-box Depth. Failure to do so will not result in a data validation error, but will result in a "warning" message being included in the notification to the Vendor.</p>
In-box Depth Unit of Measure	The unit of measure for In-box Depth. Lowe's preferred unit of measure is Inches.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/depth/measurementValue/@unitOfMeasure	<p>1. Required data attribute if <a href="#">In-box Depth</a> is present.</p> <p>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</p> <p>3. The value for In-box Depth UOM must match <a href="#">In-box Height UOM</a> and <a href="#">In-box Width UOM</a>.</p>
In-box Height	The measurement of the height of the trade item, including packaging.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/height/measurementValue	<p>1. Mandatory data attribute at all levels.</p> <p>2. Must be a positive numeric value not exceeding 10 digits before the decimal (10.4).</p> <p>3. For a DATA_CHANGE CIN, the value for In-box Height cannot change by more than 20% from the previous value for In-box Height.</p> <p>4. A Vendor must provide 30 days advance notice of a change to In-box Height. Failure to do so will not result in a data validation error, but will result in a "warning" message being included in the notification to the Vendor.</p>

In-box Height Unit of Measure	The unit of measure for In-box Height. Lowe's preferred unit of measure is Inches.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/height/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">In-box Height</a> is present.</li> <li>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</li> <li>3. The value for In-box Height UOM must match <a href="#">In-box Depth UOM</a> and <a href="#">In-box Width UOM</a>.</li> </ol>
In-box Width	The measurement of the width of the trade item, including packaging.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/width/measurementValue	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must be a positive numeric value not exceeding 10 digits before the decimal (10.4).</li> <li>3. For a DATA_CHANGE CIN, the value for In-box Width cannot change by more than 20% from the previous value for In-box Width.</li> <li>4. A Vendor must provide 30 days advance notice of a change to In-box Width. Failure to do so will not result in a data validation error, but will result in a "warning" message being included in the notification to the Vendor.</li> </ol>
In-box Width Unit of Measure	The unit of measure for In-box Width. Lowe's preferred unit of measure is Inches.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemMeasurements/width/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">In-box Width</a> is present.</li> <li>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</li> <li>3. The value for In-box Width UOM must match <a href="#">In-box Depth UOM</a> and <a href="#">In-box Height UOM</a>.</li> </ol>
Invoice Unit	An indicator identifying	/tradelItem/tradelItem	1. Mandatory data

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Indicator (also referred to as Is Invoice Unit?)	that the information provider will include this trade item on their billing or invoice.	nformation/tradingPartnerNeutralTradeItemInformation/tradeItemUnitIndicator/isTradeItemAnInvoiceUnit	attribute at all levels. TRUE indicates that it is an Invoice Unit, FALSE indicates that it is not. 2. There must be at least one occurrence of Invoice Unit Indicator = TRUE in a packaging hierarchy.
Last Change Date/Time	A system generated value identifying the date and time a record was last updated. Date format is CCYY-MM-DDTHH:MM:SS.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemDateInformation/lastChangeDateTime	1. Mandatory data attribute at the Consumer Unit level. 2. Where present, must be in YYYY-MM-DD HH:MM:SS format.
Lead Time (also referred to as Ordering Lead Time)	The normal delivery time measured from receipt of order by the seller until the seller ships the trade item. Lead time is defined as from date of Purchase Order to shipment date.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemOrderInformation/orderingLeadTime/@measurementValue	1. Mandatory data attribute if this is an Orderable Unit. 2. Where present, must be a positive numeric value not exceeding 4 digits to the left of the decimal (4.0).
Lead Time Unit of Measure (also referred to as Ordering Lead Time UOM)	The unit of measure for Lead Time. Lowe's preferred unit of measure is Days.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemOrderInformation/orderingLeadTime/@unitOfMeasure	1. Required data attribute if <a href="#">Lead Time</a> is present. 2. Must match one of the accepted Lowe's values for this data attribute. Refer to the <a href="#">Lead Time UOM table in Appendix A</a> for the list of the accepted units of measure.
Manufacturer Global Location Number (GLN)	GLN identifying the manufacturer of the trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemManufacturerOfTradeItem/manufacturer/gln	1. Mandatory data attribute at the Consumer Unit level. 2. Where present, must be 13 numeric digits and pass check digit validation. 3. Where present in more than one hierarchical level, the values for this attribute must be consistent across all levels.
Manufacturer Name	Name of manufacturer of trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemManufacturerOfTradeItem/manufacturer/name	1. Cannot exceed 35 characters in length.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

		rtnerNeutralTradelte mInformation/manuf acturerOfTradeltem/ nameOfManufacture r	2. Where this data attribute is present in more than one hierarchical level in a CIN, the values must be consistent across all levels.
Maximum Storage Temperature	The maximum allowable temperature at which this trade item can be stored.	/tradeltem/tradeltemI nformation/tradingPa rtnerNeutralTradelte mInformation/tradelt emTemperatureInfor mation/storageHandl ingTemperatureMaxi mum/measurementV alue	1. Where present, must be a numeric value. 2. Total length cannot exceed 3 digits before the decimal (3.2).
Minimum Lifespan	The period of days, guaranteed by the manufacturer, before the expiration date of the trade item.	/tradeltem/tradeltemI nformation/tradingPa rtnerNeutralTradelte mInformation/tradelt emHandlingInformati on/minimumTradelte mLifespanFromTime OfArrival	1. Where present, must be a positive numeric value, with a maximum length of 5 digits.
Minimum Storage Temperature	The minimum allowable temperature at which this trade item can be stored.	/tradeltem/tradeltemI nformation/tradingPa rtnerNeutralTradelte mInformation/tradelt emTemperatureInfor mation/storageHandl ingTemperatureMini mum/measurementV alue	1. Where present, must be a numeric value. 2. Where present, length cannot exceed 3 digits before the decimal (3.2). 3. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.
MSDS Number (also referred to as Material Safety Data Sheet Number)	Manufacturer's identification number for the material safety data sheet for the trade item.	/tradeltem/tradeltemI nformation/tradingPa rtnerNeutralTradelte mInformation/materi alSafetyData/materia lSafetyDataSheetNu mber	1. Cannot exceed 20 characters in length. 2. If <a href="#">U.N. Dangerous Goods Number</a> is present and the Hazardous Material Identifier is equal to 1, this data attribute is required.
MSRP (also referred to as Suggested Retail Price)	Manufacturer's suggested retail price.	/tradeltem/tradeltemI nformation/tradingPa rtnerNeutralTradelte mInformation/sugges	1. Where present, must be a numeric value, but cannot be a negative value.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

		tedRetailPrice/value	2. Total length cannot exceed 7 digits before the decimal (7.2).
Nesting Increment	Indicates the incremental height of trade items nested together.	/tradeltem/extension s/hardlines:hardlines TradeltemExtension/hardlines:nestingInformation/hardlines:nestingIncrement/measurementValue	1. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Nesting Increment Unit of Measure	The unit of measure of nesting increment. Lowe's preferred unit of measure is Inches.	/tradeltem/extension s/hardlines:hardlines TradeltemExtension/hardlines:nestingInformation/hardlines:nestingIncrement/measurementValue/@unitOfMeasure	1. Required data attribute if <a href="#">Nesting Increment</a> is present. 2. Must match one of the accepted Lowe's values for this attribute. Refer to the <a href="#">Nesting Increment UOM table in Appendix A</a> for a list of the accepted units of measure.
Net Content	The amount of the trade item contained by a package.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemMeasurements/netContent/measurementValue	1. Mandatory data attribute at the Consumer Unit level. 2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Net Content Unit of Measure	The unit of measure for Net Content.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemMeasurements/netContent/measurementValue/@unitOfMeasure	1. Required data attribute if <a href="#">Net Content</a> is present. 2. Must match one of the accepted Lowe's values for this attribute. Refer to the <a href="#">Net Content UOM table in Appendix A</a> for a list of the accepted units of measure.
Net Weight	The net weight of the trade item, excluding packaging. At the Pallet level, this does not include the weight of the pallet.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemMeasurements/netWeight/measurementValue	1. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4). 2. If <a href="#">Gross Weight</a> is also present, Net Weight must be less than or equal to <a href="#">Gross Weight</a> .

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			<p>3. At all levels (except the lowest level), Net Weight at one level must be greater than or equal to the cumulative Net Weight at the next lowest level (refer <a href="#">Gross Weight</a> for example of "cumulative weight").</p> <p>4. In a DATA_CHANGE CIN, the Net Weight cannot change by more than 20% from the previous value for Net Weight.</p> <p>5. A Vendor must provide 30 days advance notice of a change to Net Weight. Failure to do so will not result in a data validation error, but will result in a "warning" message being included in the PCM notification to the Vendor.</p>
Net Weight Unit of Measure	The unit of measure for Net Weight. Lowe's preferred unit of measure is Pounds.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemMeasurements/netWeight/measurementValue/@unitOfMeasure	<p>1. Required data attribute if <a href="#">Net Weight</a> is present.</p> <p>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</p> <p>3. If both are present, Net Weight UOM and <a href="#">Gross Weight UOM</a> must match.</p>
Next Lower Level Trade Item Information	This is a class of data attributes that specifies which hierarchical level is the next lowest level (in relation to the current level).	/tradeltem/nextLowerLevelTradeltemInformation	<p>1. At the BASE_UNIT_OR_EACH level, this attribute class must not be present.</p>
Number of Components (also referred to as Pieces Per Trade Item)	Numeric value to indicate number of physical pieces used to make up the consumer unit.	/tradeltem/extensions/hardlines:hardlinesTradeltemExtension/hardlines:piecesPerTradeltem/measurementValue	<p>1. Where present, must be a positive numeric value.</p> <p>2. No decimals; cannot exceed 9 digits.</p>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Number of Units Contained (also referred to as Quantity of Next Lower Level GTIN)	The number of next lower level trade item that this trade item contains.	/tradeItem/nextLowerLevelTradeItemInformation/childTradeItem/quantityofNextLowerLevelTradeItem	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Contained GTIN</a> is present.</li> <li>2. Where present, must be a positive integer not exceeding 10 digits.</li> <li>3. Provided this level is one that is registered in the PCM application, the Quantity must match the registered Barcode quantity. Barcode quantity is defined as the number of lowest level units that are contained within this specific level of a packaging hierarchy.</li> </ol>
Order Quantity Maximum	Maximum number of trade items that a Retailer can include on a single order.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemOrderInformation/orderQuantityMaximum	<ol style="list-style-type: none"> <li>1. Where present, must be a positive integer value not exceeding 10 digits.</li> </ol>
Order Quantity Minimum	Minimum number of trade items that a Retailer must include on a single order.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemOrderInformation/orderQuantityMinimum	<ol style="list-style-type: none"> <li>1. Mandatory data attribute if this is an Orderable Unit.</li> <li>2. Where present, must be a positive integer value not exceeding 5 digits.</li> </ol>
Order Quantity Multiple	The order quantity multiples in which the trade item may be ordered.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemOrderInformation/orderQuantityMultiple	<ol style="list-style-type: none"> <li>1. Mandatory data attribute if this is an Orderable Unit.</li> <li>2. Where present, must be a positive integer value not exceeding 5 digits.</li> </ol>
Order Unit of Measure	The unit of measure to be used when ordering this trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/orderingAndSellingUnitOfMeasure/orderingUnitOfMeasure	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level and at the Variable Unit level.</li> <li>2. If <a href="#">Selling Unit of Measure</a> is present, this data attribute is required.</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			3. Must match an accepted Lowe's value for this attribute. Refer to the <a href="#">Order UOM table in Appendix A</a> for the list of accepted units of measure.
Orderable Unit Indicator (also referred to as Is Orderable Unit?)	An indicator identifying that the information provider considers this trade item to be at a hierarchy level where they will accept orders from customers.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemUnitIndicator/isTradeltemAnOrderableUnit	1. Mandatory data attribute at all levels. 2. A CIN must contain at least one Orderable Indicator = TRUE.
Out-of-box Depth	The measurement from front to back of the trade item, not including packaging.	/tradeltem/extension s/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:depth/measurementValue	1. Required data attribute if either <a href="#">Out-of-box Height</a> or <a href="#">Out-of-box Width</a> is present. 2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Out-of-box Depth Unit of Measure	The unit of measure for Out-of-box Depth. Lowe's preferred unit of measure is Inches.	/tradeltem/extension s/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:depth/measurementValue/@unitOfMeasure	1. Required data attribute if <a href="#">Out-of-box Depth</a> is present. 2. Where present, must match <a href="#">Out-of-box Height UOM</a> and <a href="#">Out-of-box Width UOM</a> .
Out-of-box Height	The measurement of the height of the trade item, not including packaging.	/tradeltem/extension s/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:height/measurementValue	1. Required data attribute if either <a href="#">Out-of-box Depth</a> or <a href="#">Out-of-box Width</a> is present. 2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Out-of-box Height Unit of Measure	The unit of measure for Out-of-box Height. Lowe's preferred unit of measure is Inches.	/tradeltem/extension s/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:h	1. Required data attribute if <a href="#">Out-of-box Height</a> is present. 2. Where present, must match <a href="#">Out-of-box Depth</a>

		eight/measurementValue/@unitOfMeasure	<a href="#">UOM</a> and <a href="#">Out-of-box Width UOM</a> .
Out-of-box Width	The measurement of the width of the trade item, not including packaging.	/tradeltem/extension/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:width/measurementValue	<ol style="list-style-type: none"> <li>1. Required data attribute if either <a href="#">Out-of-box Depth</a> or <a href="#">Out-of-box Height</a> is present.</li> <li>2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).</li> </ol>
Out-of-box Width Unit of Measure	The unit of measure for Out-of-box Width. Lowe's preferred unit of measure is Inches.	/tradeltem/extension/hardlines:hardlinesTradeltemExtension/hardlines:outOfBoxInformation/hardlines:width/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Out-of-box Width</a> is present.</li> <li>2. Where present, must match <a href="#">Out-of-box Depth UOM</a> and <a href="#">Out-of-box Height UOM</a>.</li> </ol>
Packaging Material	Code identifying the type of packaging material.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/packagingMaterial/packagingMaterialCode	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. Must match one of the accepted Lowe's values for this attribute. Refer to the <a href="#">Packaging Material table in Appendix A</a> for the list of accepted codes.</li> </ol>
Packaging Material Code List Maintenance Agency	Code identifying the agency responsible for maintaining the Packaging Material Code (see above).	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/packagingMaterial/packagingMaterialCodeListMaintenanceAgency	<ol style="list-style-type: none"> <li>1. Where present, must be a value of "E".</li> <li>2. If <a href="#">Packaging Material</a> is present, this data attribute is required.</li> </ol>
Packaging Type	Code indicating the type of packaging – Bag, Box, Carton, etc.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/packagingType/packagingTypeCode	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Must match one of the accepted Lowe's values for this attribute. Refer to the <a href="#">Packaging Type table in Appendix A</a> for the list of accepted codes.</li> </ol>

Party Name (also referred to as Information Provider Name)	Name of the party referenced by the <a href="#">Information Provider GLN</a> .	/tradeltem/tradeltemInformation/informationProviderOfTradeItem/nameOfInformationProvider	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Cannot exceed 35 characters in length.</li> <li>3. Where present in more than one hierarchical level, the values for this attribute must be consistent across these levels.</li> </ol>
Peg Hole Number	Used to indicate the peg hole numbers when more than one hole is present in the product or packaging. Peg holes should be numbered from the upper left corner of the front of the package to the bottom right corner. The peg holes should be identified from left to right, top to bottom with left to right having precedence.	/tradeltem/extension/sbdh:sBDHTradeItemExtension/sbdh:pegHoleNumber	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Peg Vertical</a> and <a href="#">Peg Horizontal</a> are present.</li> </ol>
Peg Horizontal	The measurement of the horizontal distance from the edge of the trade item to the center of the hole into which the peg is inserted when the trade item is displayed on a pegboard.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMeasurements/pegHorizontal/measurementValue	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Peg Vertical</a> or <a href="#">Peg Hole Number</a> is present.</li> <li>2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).</li> </ol>
Peg Horizontal Unit of Measure	The unit of measure for Peg Horizontal. Lowe's preferred unit of measure is Inches.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMeasurements/pegHorizontal/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Peg Horizontal</a> is present.</li> <li>2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.</li> </ol>
Peg Vertical	The measurement of the vertical distance from the edge of the	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeItem	<ol style="list-style-type: none"> <li>1. Required data attribute if <a href="#">Peg Horizontal</a> or <a href="#">Peg Hole Number</a> is present.</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

	trade item to the center of the hole into which the peg is inserted when the trade item is displayed on a pegboard.	mInformation/tradeItemMeasurements/pegVertical/measurementValue	2. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Peg Vertical Unit of Measure	The unit of measure for Peg Vertical. Lowe's preferred unit of measure is Inches.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemMeasurements/pegVertical/measurementValue/@unitOfMeasure	1. Required data attribute if <a href="#">Peg Vertical</a> is present. 2. Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Measurements UOM table in Appendix A</a> for the list of accepted units of measure.
Priced Amount On Packaging (also referred to as Pre-Priced Amount)	The retail price as marked on the trade item package.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/priceOnTradeItem/retailPriceOnTradeItem	1. Where present, must be a positive numeric value not exceeding 10 digits before the decimal (10.4).
Product Description	The "long description" of the trade item. If not present, Lowe's utilizes the <a href="#">Short Description</a> as the value for this attribute.	/tradeItem/tradeItemInformation/tradeItemDescriptionInformation/longDescription/longText	1. Where present, cannot exceed 1000 characters in length.
Product Variant Description	Description of the variable aspects of a product, if applicable.	/tradeItem/tradeItemInformation/tradeItemDescriptionInformation/variant/description/text	1. Where present, cannot exceed 35 characters in length.
Recalled Item Indicator	An indicator for the trade item to determine if the manufacturer or supplier has recalled the product.	/tradeItem/extension/hardlines:hardlinesTradeItemExtension/hardlines:isTradeItemRecalled	TRUE indicates that the trade item has been recalled. FALSE indicates that it has not.
Replaced GTIN	The GTIN of a trade item that is being permanently replaced by this trade item.	/tradeItem/replacedTradeItemIdentification/gtin	1. Optional data attribute, but where present, must pass the same validations applied to the <a href="#">GTIN</a> data attribute.

Seller Item Number	Vendor-assigned item number.	/tradeltem/tradeltemIdentification/additionalTradeltemIdentification/value when @xsi:type="eanucc:CommonAlternateTradeltemIdentificationType" and @type="SELLER_ASSIGNED"	1. Cannot exceed 35 characters in length. Further, Seller Item Number cannot contain any of the following characters: Tilde, underscore, semicolon, greater than sign, less than sign, backslash, or asterisk.
Selling Unit of Measure	Vendor-assigned unit of measure to be used for the sale of this item.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/orderingAndSellingUnitOfMeasure/sellingUnitOfMeasure	1. Mandatory data attribute at the Consumer Unit level and at the Variable Unit level. 2. Where present, must match one of the Lowe's accepted values for this attribute. Refer to the <a href="#">Selling UOM table in Appendix A</a> for a list of the accepted units of measure.
Source Tag Location (also referred to as Security Tag Location)	Code indicating where the EAS tag is located on the trade item.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/securityTagInformation/securityTagLocation	None.
Source Tag Type (also referred to as Security Tag Type)	Code indicating the type of Source Tag (see above).	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/securityTagInformation/securityTagType	1. If <a href="#">Source Tag Location</a> is present, this data attribute is required. 2. Where present, must be equal to ACOUSTO_MAGNETIC_EAS_TAG.
Stacking Factor	Indicates the maximum number of levels that this trade item may be stacked.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemHandlingInformation/stackingFactor	1. Required data attribute if either <a href="#">Nesting Increment</a> or <a href="#">Nesting Increment UOM</a> is present. 2. Where present, must be a positive integer value; not exceeding 9 digits.

Stacking Weight Maximum	Indicates the maximum allowable weight for this trade item in a stack.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemHandlingInformation/stackingWeightMaximum/measurementValue	<ol style="list-style-type: none"> <li>Where present, must be a positive, numeric value.</li> <li>Total length cannot exceed 7 digits before the decimal (7.2).</li> </ol>
Stacking Weight Maximum Unit of Measure	The unit of measure for Stacking Weight Maximum. Lowe's preferred unit of measure is Pounds.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemHandlingInformation/stackingWeightMaximum/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>Required data attribute if <a href="#">Stacking Weight Maximum</a> is present.</li> <li>Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Stacking Weight UOM table in Appendix A</a> for a list of the accepted units of measure.</li> </ol>
Storage Temperature Unit of Measure	The unit of measure for <a href="#">Minimum Storage Temperature</a> (there is also a unit of measure for <a href="#">Maximum Storage Temperature</a> ). Lowe's preferred unit of measure is Fahrenheit.	/tradelItem/tradelItemInformation/tradingPartnerNeutralTradelItemInformation/tradelItemTemperatureInformation/storageHandlingTemperatureMinimum/measurementValue/@unitOfMeasure	<ol style="list-style-type: none"> <li>Required data attribute if either <a href="#">Maximum Storage Temperature</a> or <a href="#">Minimum Storage Temperature</a> is present.</li> <li>Where present, must be an accepted Lowe's value for this attribute. Refer to the <a href="#">Temperature UOM table in Appendix A</a> for the list of accepted units of measure.</li> <li>Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.</li> </ol>
Sub Brand	Secondary brand level (primary level <a href="#">is Brand Name</a> ). Can be used to provide the Trademark.	/tradelItem/tradelItemInformation/tradelItemDescriptionInformation/subBrand	<ol style="list-style-type: none"> <li>Cannot exceed 35 characters in length.</li> <li>Where present in more than one level of the hierarchy, the values for this attribute must be consistent across all levels.</li> </ol>
Suggested Return Goods Policy (also referred to as	A code that describes the policy for the return of defective,	/tradelItem/extension s/hardlines:hardlines TradelItemExtension/	<ol style="list-style-type: none"> <li>Mandatory data attribute at the Consumer Unit level.</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Return Goods Disposition)	damaged, or non-salable product.	hardlines:rightOfReturnForNonSoldTradeItem/hardlines:returnGoodsPolicy	2. Must match one of the Lowe's accepted values for this attribute. Refer to the <a href="#">Return Goods Policy table in Appendix A</a> for the list of accepted values for this attribute.
Target Market Country Code	The target market code indicates the country level (or higher geographical definition) in which the Vendor will make the GTIN available to buyers.	/tradeItem/tradeItemInformation/targetMarketInformation/targetMarketCountryCode	1. Mandatory data attribute at all levels. Must equal "840" (country code for U.S.). 2. Where present in more than one level of the hierarchy, the values for this attribute must be consistent across these levels.
Total Quantity of Layers Per Trade Item	The number of layers contained in a trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemHierarchy/quantityOfCompleteLayersContainedInATradeItem	1. Mandatory data attribute at the Pallet level. 2. Where present, must be a positive integer not exceeding 9 digits.
Quantity of Trade Items Per Layer	The quantity of next lower level trade items in a single layer. For example, if a Pallet contained 48 cases, stored in 8 layers of 6 cases per layer, the quantity of items per layer would be 6.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemHierarchy/quantityOfTradeItemsContainedInACompleteLayer	1. Mandatory data attribute at the Pallet level. 2. Where present, must be a positive integer not exceeding 9 digits. 3. At the Pallet level multiply the value for this attribute by the value for <a href="#">Total Quantity of Layers Per Trade Item</a> . The sum must equal the value for Quantity of Children at this level.
U.N. Dangerous Goods Number (also referred to as DOT Dangerous Goods Number).	Dangerous goods hazard ID number, assigned by the Department of Transport (DOT), which must be applied to the vehicle, when transporting this trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/unitedNationsDangerousGoodsNumber	1. If either <a href="#">Flash Point Temperature</a> or <a href="#">Flash Point Temperature UOM</a> is present, this data attribute is required. 2. If <a href="#">Dangerous Goods Hazardous Code</a> equals DOT, this data attribute is required.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Variable Unit Indicator	Identifies whether this trade item is a variable unit. TRUE indicates that it is a variable unit, FALSE indicates that it is not.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemUnitIndicator/isTradeltemAVariableUnit	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at all levels.</li> <li>2. If a CIN does not contain at least one instance where the Consumer Unit Indicator = TRUE, then there must be at least one instance where the Variable Unit Indicator = TRUE.</li> </ol>
Vendor Description	A short version of the <a href="#">Product Description</a> .	/tradeltem/tradeltemInformation/tradeltemDescriptionInformation/descriptionShort/description/text	<ol style="list-style-type: none"> <li>1. Mandatory data attribute at the Consumer Unit level.</li> <li>2. Where present, cannot exceed 70 characters in length.</li> </ol>
Vendor Harmonized Tariff ID (also referred to as Import Classification Value)	The Harmonized Tariff System (HTS) code for this trade item.	/tradeltem/tradeltemInformation/tradingPartnerNeutralTradeltemInformation/tradeltemImportIdentification/importClassificationValue	<ol style="list-style-type: none"> <li>1. This data attribute is required if both of the following conditions are met: A) <a href="#">Country of Origin</a> data attribute is present at this level, and B) One or more of the values for <a href="#">Country of Origin</a> are not equal to US.</li> <li>2. Where present, cannot exceed 11 characters.</li> </ol>
Vendor Model Number	Vendor-assigned model number for this trade item.	/tradeltem/extension/hardlines/hardlinesTradeltemExtension/hardlines:modelNumber	<ol style="list-style-type: none"> <li>1. At the Consumer Unit level, this data attribute is required only if <a href="#">Seller Item Number</a> is not present. At a Non-Consumer Unit level, this data attribute is optional.</li> <li>2. Cannot exceed 70 characters. Further, Vendor Model Number cannot contain any of the following characters: Tilde, underscore, semicolon, greater than sign, less than sign, backslash, or asterisk.</li> </ol>
Volume	The volume of the trade item, as	This attribute is derived by Lowe's.	<ol style="list-style-type: none"> <li>1. At each hierarchical level (other than the lowest</li> </ol>

	calculated by multiplying the <a href="#">In-box Depth</a> x <a href="#">In-box Height</a> x <a href="#">In-box Width</a> .	It is not provided by the Vendor, but the derivation is based on Vendor data.	level), Volume must be greater than or equal to Volume in the next lowest level. 2. The derived value cannot exceed 10 digits before the decimal (10.4).
Warranty Description	Description of the warranty that applies to this trade item.	/tradeltem/extension s/hardlines:hardlines TradeltemExtension/hardlines:warrantyInformation/hardlines:warrantyDescription/longDescription/longText	1. Cannot exceed 1000 characters in length.
Warranty URL	The URL where the warranty for this trade item is displayed.	/tradeltem/extension s/hardlines:hardlines TradeltemExtension/hardlines:warrantyInformation/hardlines:urlForWarranty	1. Cannot exceed 1000 characters in length.

**Data Validations for Barcodes**

The following steps constitute the total set of data validations that Lowe's applies to Barcode-related data attributes. As part of the Lowe's Product Data Registration process ([Step #5 in the Implementation Steps](#)), the Vendor will be expected to provide the Barcode and Barcode Quantity for each registered product. These are referenced below as "registered Barcode" and "registered Barcode Quantity".

1. At each hierarchical level in a CIN, there must be at least a single iteration of each of the following data attributes – [Barcode Symbology](#), [EAN/UCC Code](#), and [EAN/UCC Type](#). The following table provides the values for EAN/UCC Type and Barcode Symbology for each of the five types of EAN/UCC Codes accepted by Lowe's:

Table 2 – Values for EAN/UCC Type and Barcode Symbology

Type of EAN/UCC Code	Value for EAN/UCC Type	Value for Barcode Symbology
UCC-12	UP	<b>UPC_A_SYMBOL or UPC_E_SYMBOL</b> Note – for a consumable/dispatch unit a UCC-12 may be encoded into an ITF-14 by right justifying and zero-filling the UCC-12
EAN/UCC-14	UK	<b>ITF_14_SYMBOL</b>
EAN/UCC-13	EN	<b>EAN_UCC_13_SYMBOL</b>
EAN/UCC-8	EO	<b>EAN_UCC_8_SYMBOL</b>

2. At each hierarchical level, there must be at least one Barcode that matches the registered Barcode for this GTIN. **A Vendor can choose to provide more than one Barcode for each GTIN, but if they do so, all the Barcodes must pass the barcode validations.** The first check in this step is to ensure that one Barcode provided by the Vendor matches the registered Barcode. The second check is, for each Barcode provided by the Vendor, the barcode validations will confirm:

- a) The Barcode matches to a Barcode currently residing on the Lowe's barcode table.
- b) The Quantity in the CIN matches the Barcode Quantity.

Provided that a Barcode matches the registered Barcode, and the Quantity check is successful, continue to Step #3. If no Barcode in the CIN matches to the registered Barcode, or if the Barcode Quantity Check fails, Lowe's will issue a data validation error notification and stop the Barcode validation process.

3. Lowe's then determines the Lowe's Legacy Bar Code Type based upon the following algorithm:

- If the Barcode is not numeric, the Legacy Bar Code Type is undefined.
- If length is 8, then inspect the first digit. If the first digit is 0, the Legacy Bar Code Type = 2 (UPC-E Barcode). If the first digit is 2, the Legacy Bar Code Type is undefined. If the first digit is anything else, Legacy Bar Code Type = 5 (EAN/UCC-8 Barcode).
- If length is 12, Legacy Bar Code Type = 1 (UPC-A Barcode).
- If length is 13, Legacy Bar Code Type = 4 (EAN/UCC-13 Barcode).
- If length is 14, Legacy Bar Code Type = 3 (ITF-14 Barcode).
- If length is anything else, Legacy Bar Code Type is undefined.

4. If the Lowe's Legacy Bar Code Type is undefined, the Barcode is dropped from the data. For each Barcode where the Lowe's Legacy Bar Code Type is a numeric value (1-5), Lowe's then checks to ensure that there is a corresponding value for EAN/UCC Type. If there is not a corresponding value, that Barcode is dropped from the data. At the end of this step, if all the Barcodes for this GTIN have been dropped, Lowe's will issue a data validation error notification and stop the Barcode validation process.

5. After completion of Steps 1-4 for all Barcodes for a specific GTIN, for each remaining Barcode (i.e. those that have not been "dropped"), Lowe's then checks to ensure that there is a corresponding value for Barcode Symbology. If there is not a corresponding value, that Barcode is dropped from the data. At the end of this step, if all the Barcodes for this GTIN have been dropped, Lowe's will issue a data validation error notification and stop the Barcode validation process.

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

6. For each remaining Barcode, Lowe's will determine if the Barcode is internal (meaning generated by Lowe's) or external, using the following algorithm:
  - If Barcode is 12 digits in length and contains either the digits "40000" in positions 1-5 or "0828439" in positions 1-7, the Barcode is internal. Otherwise, the Barcode is external.
7. If an internal Barcode is received from a Vendor, Lowe's will issue a data validation error notification and stop the Barcode validation process.
8. For each remaining Barcode, perform a Barcode Check Digit Validation. If a remaining Barcode fails this validation, Lowe's will issue a data validation error notification and stop the Barcode validation process.
9. For each remaining Barcode, Lowe's will check whether the Barcode already exists within their application. If the Barcode already exists on the table, Lowe's will check to ensure that the Barcode is not already assigned to a different GTIN. If it has been assigned to another GTIN, Lowe's will issue a data validation error notification and stop the Barcode validation process.
10. If no data validation error is encountered in Steps 1-9, the Barcode validation process has been successfully completed.

### Section 5 - Lowe's Schema Extension

The goal of the Lowe's Schema extension is to allow the Vendor the choice of providing 100% of Lowe's product data requirements electronically, rather than having to manually enter some of the product data via web forms. The Lowe's Schema extension is an optional component of the CatalogueItemNotification transaction - it is the Vendor's choice as to whether they want to utilize this option or not. However, if these data attributes are not provided via the Lowe's Schema extension, they must be manually entered via web forms within the PCM application.

Note: Starting in September, 2007, Lowe's will begin a 3-phased approach to the retirement of the Lowe's Schema extension. Please reference Table 3 to identify the Phase 1 impacted attributes. These attributes are being retrieved from the HMDP. We request you not populate these attributes identified in the table.

The following table lists all the data attributes required by Lowe's if the Lowe's Schema extension is utilized. The first column lists the data attribute by its common "business" name. The data attributes in this column are listed in alphabetical order. The second column provides a description of the attribute. The third column contains the Schema "Xpath" reference for this data attribute. This "Xpath" reference starts at the <tradeItem> node within the CIN transaction. The fourth column lists the Lowe's Data Validations.

Note: The Core/Hardlines schema Xpath reference is impacted and will be sunset by 1SYNC in November, 2007. Lowe's is in the process of updating the Xpath references throughout this vendor implementation guide. These updates will be reflected shortly. The reader should take caution that reference to the Xpath will be obsolete and Lowe's will replace this column with the GDSN name in a future release.

Table 3 - Required Data Attributes and Data Validations - Lowe's Schema Extension

Common (Lowe's) Data Attribute Name (in Alphabetical Order)	Description	Lowe's Schema Extension Xpath	Data Validations
Available for	Identifies whether this	/tradeItem/extensions	1. This data attribute is

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Special Order (also referred to as Special Order Availability Indicator)	trade item is available for special orders.	/lowes:lowesTradeItemExtension/lowes:lowesTradeItemIndicator/lowes:isItemAvailableForSpecialOrder	mandatory at the Consumer Unit level. TRUE indicates that the trade item is available for special orders, FALSE indicates that it is not.
Contains Wood Indicator	Identifies whether the trade item contains wood.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:lowesTradeItemIndicator/lowes:isWoodAComponentOfThisItem	1. This data attribute is mandatory at the Consumer Unit level. TRUE indicates that it does contain wood, FALSE indicates that it does not.
Direct to Consumer Delivery Indicator	Identifies whether the Vendor supports direct-to-consumer delivery for this trade item.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:lowesTradeItemIndicator/lowes:isItemAvailableForDirectToConsumerDelivery	None. TRUE indicates that the Vendor does support direct-to-consumer delivery for this trade item, FALSE indicates that they do not support this.
Environmental Identifier	Identifies the environmental aspects or characteristics of this trade item.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:environmentalOrHazardousInformation/lowes:environmentalIdentifier	1. This data attribute is mandatory at all levels. There can be multiple iterations of this data attribute. However, if the value of NO_ENVIRONMENTAL_ATTRIBUTE_SPECIFIED is indicated, no other iterations of this attribute can be provided.
Hazardous Material Identifier	An identifier indicating the level of HazMat information that is required for this trade item.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:environmentalOrHazardousInformation/lowes:hazardousMaterialClassification	1. If neither MSDS Number nor UN Dangerous Goods Number is present, this data attribute must be either NO_MSDS_AND_NOT_REGULATED_BY_DOT_(CFR49) or MSDS_AND_ORMD_WITHOUT_LIMITED_OR_REPORTABLE_QUANTITY or MSDS_AND_NOT_REGULATED_BY_DOT_(CFR49) 2. If both MSDS Number

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			and UN Dangerous Goods Number are present, this must be one of the two remaining valid values for this attribute. 3. This data attribute is mandatory at all levels.
Image Color Type	The type of color used for this advertising image. Options are Color, Black & White, or Grayscale.	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageColorType	<b>***DO NOT POPULATE***</b>  1. If <a href="#">Image Usage</a> = ADVERTISING, this attribute is required.
Image Effective Start Date	The date from which this image is the current image for this GTIN.	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageEffectiveStartDate	<b>***DO NOT POPULATE***</b>  1. If <a href="#">Image File URL</a> or <a href="#">Image Usage</a> is present, this data attribute is required.
Image Effective End Date	The date at which this image ceases to be the current image.	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageEffectiveEndDate	<b>***DO NOT POPULATE***</b>  1. If present, must be greater than <a href="#">Image Effective Start Date</a> .
Image File Name	The name of the file containing the image of the trade item.	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageFileName	<b>***DO NOT POPULATE***</b>  None.
Image File Type	The type of image file (commonly the three-character file extension).	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageFileType	<b>***DO NOT POPULATE***</b>  1. If <a href="#">Image File Name</a> or <a href="#">Image File URL</a> or <a href="#">Image Usage</a> is present, this data attribute is required.
Image File URL	The URL from which the Retailer can download this image file.	/tradelItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:imageFileUrl	<b>***DO NOT POPULATE***</b>  1. If <a href="#">Image File Name</a> or <a href="#">Image Usage</a> is present, this data attribute is required.
Image Language Identifier	The language(s) which are applicable to this	/tradelItem/extensions/lowes:lowesTradeItem	<b>***DO NOT POPULATE***</b>

	image.	mExtension/lowes:imageType/lowes:imageLanguageIdentifier	None. If not present, Lowe's will default to "EN" (English).
Image Usage	The purpose for which this image is intended for – either for Advertising, or for Planogramming, or as a Logo.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:imageUsage	<p><b>***DO NOT POPULATE***</b></p> <ol style="list-style-type: none"> <li>1. Image data is optional. However, if a Vendor provides image data, they must meet the following validations.</li> <li>2. If Image data is present, there must be at least one iteration of this data attribute at the Consumer Unit level with a value = ADVERTISING.</li> <li>3. If Image data is present, and Image Usage = PLANOGRAMMING, there must be at least three Planogramming images provided, one with an Image View = FRONT_VIEW, one with an Image View = LEFT_VIEW, and one with an Image View = TOP_OF_CENTER_VIEW.</li> <li>4. If Image File URL or Image File Name is present, this data attribute is required.</li> </ol>
Image View	The view of the trade item provided by this image file. An example would be "Front View".	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:imageView	<p><b>***DO NOT POPULATE***</b></p> <ol style="list-style-type: none"> <li>1. If <a href="#">Image Usage</a> = ADVERTISING or PLANOGRAMMING, this data attribute is required.</li> </ol>
In-Package Indicator	Identifies whether the image is of the trade item in the package, or out of the package.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:isImageOfItemInPackage	<p><b>***DO NOT POPULATE***</b></p> <ol style="list-style-type: none"> <li>1. If <a href="#">Image Usage</a> = ADVERTISING, this data attribute is required. TRUE indicates that the image is of the trade item in its package, FALSE indicates that the image is of the trade item outside of its package.</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Is Security Tag Present	If the item contains a security tag, the value for this indicator is "true".	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:additionalProductInformation/lowes:isSecurityTagPresent	<ol style="list-style-type: none"> <li>1. This data attribute is mandatory at the Consumer Unit level.</li> <li>2. If the item is marked as "true", the core attributes securityTagLocation and securityTagType will be mandatory.</li> </ol>
Planogram Display Type	Identifies whether this planogram image is of the trade item in a display or tray.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:imageType/lowes:planogramDisplayType	<p><b>***DO NOT POPULATE***</b></p> <ol style="list-style-type: none"> <li>1. If <a href="#">Image Usage</a> = PLANOGRAMMING, this data attribute is required. TRUE indicates that the image is of the trade item in a display or tray, FALSE indicates that the image is solely of the trade item itself.</li> </ol>
Point Value	A number assigned to this trade item in order to convey truckload quantity in an alternative measurement, rather than traditional cubic measurements.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:truckLoadType/lowes:pointValue	<ol style="list-style-type: none"> <li>1. Where present, must be a positive numeric value.</li> <li>2. Total length cannot exceed 4 digits before the decimal (4.3).</li> </ol>
Product Features & Benefits	Text provided by the Vendor indicating the product's features and benefits associated with this trade item.	/tradeItem/extensions/lowes:lowesTradeItemExtension/lowes:additionalProductInformation/lowes:productFeaturesBenefits	<p><b>***DO NOT POPULATE***</b></p> <ol style="list-style-type: none"> <li>1. Each iteration of this attribute cannot exceed 1000 characters in length.</li> <li>2. Cannot exceed twenty-five iterations of this attribute (25,000 total characters).</li> <li>3. Where present in more than one level of the hierarchy, the values for</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			this attribute must be consistent across these levels.
Related Product Information (also referred to as Dependent Trade Item)	Text provided by the Vendor indicating the additional products required in order to utilize this trade item.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:additionalProductInformation/lowes:dependentProprietaryTradelItem	<ol style="list-style-type: none"> <li>Each iteration of this attribute cannot exceed 1000 characters in length.</li> <li>Cannot exceed twenty-five iterations of this attribute (25,000 total characters).</li> </ol>
Shelf Unit Quantity	Recommended quantity of units of trade item to be displayed to the consumer at point-of-sale.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:shelfQuantityInformation/lowes:shelfUnitQuantity/measurementValue	<ol style="list-style-type: none"> <li>Must be a positive numeric value, no decimals, not exceeding 9 digits.</li> </ol>
Source Tag Commit Date	The effective date upon which this item includes a security tag (also referred to as a source tag).	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:additionalProductInformation/lowes:securityTagCommitDate	<ol style="list-style-type: none"> <li>If <a href="#">Source Tag Location</a> or <a href="#">Source Tag Type</a> is present, this attribute is required.</li> </ol>
Special Order Lead Time	The normal delivery time for a special order, as measured from receipt of the special order by the seller until the seller ships the trade item.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:lowesTradelItemIndicator/lowes:specialOrderInformationType/lowes:specialOrderQuantityLeadTime	<ol style="list-style-type: none"> <li>If <a href="#">Available for Special Order</a> =TRUE, this data attribute is required.</li> <li>Where present, must be a positive integer not exceeding 5 digits.</li> <li>Where present in more than one level of the hierarchy, the values for this attribute must be consistent across all levels.</li> </ol>
Special Order Lead Time Unit of Measure	The unit of measure for Special Order Quantity Lead Time. Lowe's preferred unit of measure is Days.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:lowesTradelItemIndicator/lowes:specialOrderInformationType/lowes:specialOrderQuantityLeadTime@measurementValue	<ol style="list-style-type: none"> <li>If <a href="#">Special Order Lead Time</a> is present, this data attribute is required.</li> <li>Where present, must be a value accepted by Lowe's for this attribute. Refer to the <a href="#">Lead Time UOM table in Appendix A</a> for the list of the accepted</li> </ol>

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

			units of measure.
Special Order Quantity Minimum	Minimum number of trade items that a Retailer must include on a special order.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:lowesTradelItemIndicator/lowes:specialOrderInformationType/lowes:specialOrderQuantityMinimum	1. If <a href="#">Available for Special Order</a> =TRUE, this data attribute is required. 2. Where present, must be a positive integer value not exceeding 5 digits.
Special Order Quantity Multiple	The order quantity multiples in which the trade item may be special-ordered.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:lowesTradelItemIndicator/lowes:specialOrderInformationType/lowes:specialOrderQuantityMultiple	1. If <a href="#">Available for Special Order</a> =TRUE, this data attribute is required. 2. Where present, must be a positive integer value not exceeding 5 digits.
Truck Load Quantity	The number of trade items that may be included in a "standard" truck load.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:truckLoadType/lowes:truckloadQuantity/measurementValue	1. Must be a positive numeric value, no decimals, not exceeding 9 digits.
US Patent	Identifies whether this trade item is subject to a U.S. Patent.	/tradelItem/extensions/lowes:lowesTradelItemExtension/lowes:lowesTradelItemIndicator/lowes:isItemSubjectToUSPatent	1. Mandatory at the Consumer Unit level. TRUE indicates that the trade item is subject to a U.S. Patent, FALSE indicates that it is not.

### Appendix A – Lowe's Code Tables

This Appendix lists the Code tables that are referenced as part of the Lowe's data validation process, to ensure that the values sent by the Vendor in the CIN transaction are ones that can be utilized by Lowe's.

The tables are listed in alphabetical order.

<b>Barcode Symbology</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
UPC_A_SYMBOL	UPC-A Symbology
UPC_E_SYMBOL	UPC-E Symbology
ITF_14_SYMBOL	ITF-14 Symbology
EAN_UCC_13_SYMBOL	EAN/UCC-13 Symbology
EAN_UCC_8_SYMBOL	EAN/UCC-8 Symbology

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
US	UNITED STATES
GB	UNITED KINGDOM
MX	MEXICO
AR	ARGENTINA
CA	CANADA
AF	AFGHANISTAN
AL	ALBANIA
DZ	ALGERIA
AS	AMERICAN SAMOA
AD	ANDORRA
AO	ANGOLA
AI	ANGUILLA
AQ	ANTARCTICA
AG	ANTIGUA AND BARBUDA
AM	ARMENIA
AW	ARUBA
AU	AUSTRALIA
AT	AUSTRIA
AZ	AZERBAIJAN
BS	BAHAMAS
BH	BAHRAIN
BD	BANGLADESH
BB	BARBADOS
BY	BELARUS

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
BE	BELGIUM
BZ	BELIZE
BJ	BENIN
BM	BERMUDA
BT	BHUTAN
BO	BOLIVIA
BA	BOSNIA AND HERZEGOWINA
BW	BOTSWANA
BR	BRAZIL
BN	BRUNEI DARUSSALAM
BG	BULGARIA
BF	BURKINA FASO
BI	BURUNDI
KH	CAMBODIA
CM	CAMEROON
CV	CAPE VERDE
KY	CAYMAN ISLANDS
CF	CENTRAL AFRICAN REPUBLIC
TD	CHAD
CL	CHILE
CN	CHINA
CX	CHRISTMAS ISLAND
CC	COCOS (KEELING) ISLANDS
CO	COLOMBIA
KM	COMOROS
CD	CONGO, Democratic Republic of
CG	CONGO, People's Republic of
CK	COOK ISLANDS
CR	COSTA RICA
HR	CROATIA (local name: Hrvatska)
CU	CUBA
CY	CYPRUS
CZ	CZECH REPUBLIC
DK	DENMARK
DJ	DJIBOUTI
DM	DOMINICA
DO	DOMINICAN REPUBLIC
EC	ECUADOR
EG	EGYPT
SV	EL SALVADOR

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
GQ	EQUATORIAL GUINEA
ER	ERITREA
EE	ESTONIA
ET	ETHIOPIA
FK	FALKLAND ISLANDS (MALVINAS)
FO	FAROE ISLANDS
FJ	FIJI
FI	FINLAND
FR	FRANCE
GF	FRENCH GUIANA
PF	FRENCH POLYNESIA
GA	GABON
GM	GAMBIA
GE	GEORGIA
DE	GERMANY
GH	GHANA
GI	GIBRALTAR
GR	GREECE
GL	GREENLAND
GD	GRENADA
GP	GUADELOUPE
GU	GUAM
GT	GUATEMALA
GN	GUINEA
GW	GUINEA-BISSAU
GY	GUYANA
HT	HAITI
HN	HONDURAS
HK	HONG KONG
HU	HUNGARY
IS	ICELAND
IN	INDIA
ID	INDONESIA
IR	IRAN (ISLAMIC REPUBLIC OF)
IQ	IRAQ
IE	IRELAND
IL	ISRAEL
IT	ITALY
JM	JAMAICA
JP	JAPAN

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
JO	JORDAN
KZ	KAZAKHSTAN
KE	KENYA
KI	KIRIBATI
KP	KOREA, DEMOCRATIC PEOPLE'S REP
KR	KOREA, REPUBLIC OF
KW	KUWAIT
KG	KYRGYZSTAN
LA	LAO PEOPLE'S DEMOCRATIC REPUB
LV	LATVIA
LB	LEBANON
LS	LESOTHO
LR	LIBERIA
LY	LIBYAN ARAB JAMAHIRIYA
LI	LIECHTENSTEIN
LT	LITHUANIA
LU	LUXEMBOURG
MO	MACAU
MK	MACEDONIA, THE FORMER YUGOSLAV
MG	MADAGASCAR
MW	MALAWI
MY	MALAYSIA
MV	MALDIVES
ML	MALI
MT	MALTA
MH	MARSHALL ISLANDS
MQ	MARTINIQUE
MR	MAURITANIA
MU	MAURITIUS
YT	MAYOTTE
FM	MICRONESIA, FEDERATED STATES O
MD	MOLDOVA, REPUBLIC OF
MC	MONACO
MN	MONGOLIA
MS	MONTSEERRAT
MA	MOROCCO
MZ	MOZAMBIQUE
MM	MYANMAR
NA	NAMIBIA
NR	NAURU

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
NP	NEPAL
NL	NETHERLANDS
AN	NETHERLANDS ANTILLES
NC	NEW CALEDONIA
NZ	NEW ZEALAND
NI	NICARAGUA
NE	NIGER
NG	NIGERIA
NU	NIUE
NF	NORFOLK ISLAND
MP	NORTHERN MARIANA ISLANDS
NO	NORWAY
OM	OMAN
PK	PAKISTAN
PW	PALAU
PA	PANAMA
PG	PAPUA NEW GUINEA
PY	PARAGUAY
PE	PERU
PH	PHILIPPINES
PL	POLAND
PT	PORTUGAL
PR	PUERTO RICO
QA	QATAR
RE	REUNION
RO	ROMANIA
RU	RUSSIAN FEDERATION
RW	RWANDA
KN	SAINT KITTS AND NEVIS
LC	SAINT LUCIA
VC	SAINT VINCENT AND THE GRENADIN
WS	SAMOA
SM	SAN MARINO
ST	SAO TOME AND PRINCIPE
SA	SAUDI ARABIA
SN	SENEGAL
SC	SEYCHELLES
SL	SIERRA LEONE
SG	SINGAPORE
SK	SLOVAKIA (Slovak Republic)

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
SI	SLOVENIA
SB	SOLOMON ISLANDS
SO	SOMALIA
ZA	SOUTH AFRICA
ES	SPAIN
LK	SRI LANKA
SH	ST. HELENA
PM	ST. PIERRE AND MIQUELON
SD	SUDAN
SR	SURINAME
SZ	SWAZILAND
SE	SWEDEN
CH	SWITZERLAND
SY	SYRIAN ARAB REPUBLIC
TW	TAIWAN
TJ	TAJIKISTAN
TZ	TANZANIA, UNITED REPUBLIC OF
TH	THAILAND
TG	TOGO
TK	TOKELAU
TO	TONGA
TT	TRINIDAD AND TOBAGO
TN	TUNISIA
TR	TURKEY
TM	TURKMENISTAN
TC	TURKS AND CAICOS ISLANDS
TV	TUVALU
UG	UGANDA
UA	UKRAINE
AE	UNITED ARAB EMIRATES
UY	URUGUAY
UZ	UZBEKISTAN
VU	VANUATU
VA	VATICAN CITY STATE (HOLY SEE)
VE	VENEZUELA
VN	VIET NAM
VG	VIRGIN ISLANDS (BRITISH)
VI	VIRGIN ISLANDS (U.S.)
WF	WALLIS AND FUTUNA ISLANDS
YE	YEMEN

<b>Country of Origin Codes</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
YU	YUGOSLAVIA
ZM	ZAMBIA
ZW	ZIMBABWE

<b>EAN/UCC Type</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
UP	UCC-12 (1-5-5-1)
EN	EAN.UCC-13 (7-5-1)
UK	EAN.UCC-14 (1-2-5-5-1)
EO	EAN.UCC-8

<b>Lead Time Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
HR	Hours
DA	Days
WK	Weeks
MT	Months
Note: Lowe's preferred value for this unit of measure is DA (Days).	

<b>Measurements Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
CF	Cubic Feet
CM	Centimeter
FT	Feet
GR	Gram
IN	Inches
KG	Kilogram
LB	Pounds
LF	Linear Foot <b>(New value – November 2005)</b>
ME	Milligrams
MR	Meter
OZ	Ounces
YD	Yard
CC	Cubic Centimeters
CI	Cubic Inches
CR	Cubic Meter
Note: For linear measurements, Lowe's preferred unit of measure is IN (Inches). For weights, Lowe's preferred unit of measure is LB (Pounds).	

<b>Nesting Increment Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
CM	Centimeters
FT	Feet
IN	Inches
MR	Meter
YD	Yards

<b>Net Content Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
BA	Bale <b>(New value – July 2006)</b>
BL	Block <b>(New value – July 2006)</b>
BF	Board Feet <b>(New value – July 2006)</b>
1N	Count <b>(New value – July 2006)</b>
CF	Cubic Feet
CM	Centimeters
CN	Can
CU	Cup
EA	Each (Lowest Consumer Selling Unit)
EV	Envelope <b>(New value – July 2006)</b>
FO	Fluid Ounce
FT	Feet
GA	Gallon
GR	Gram
IN	Inches
LM	Linear Meter <b>(New value – July 2006)</b>
LT	Liter <b>(New value – July 2006)</b>
LB	Pounds
ML	Milliliter
MM	Millimeter <b>(New value – July 2006)</b>
58	Net Kilograms <b>(New value – July 2006)</b>
OZ	Ounces
PA	Pail <b>(New value – July 2006)</b>
PC	Piece
PT	Pint
QT	Quart
SH	Sheet <b>(New value – July 2006)</b>
SF	Square Foot
SM	Square Meter <b>(New value – July 2006)</b>
ST	Set
YD	Yard
SY	Square Yard

<b>Order Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
B8	Board
BD	Bundle
BG	Bag
BX	Box
CA	Case
CF	Cubic Feet
CG	Card (Items on a Card)
CT	Carton
CW	Hundred Pounds (CWT)
DS	Display (Pre-Assembled Unit)
EA	Each (Lowest Consumer Selling Unit)
FT	Feet
HL	Hundred Feet (Linear)
KT	Kit
LB	Pounds
LF	Linear Foot
MX	Mod Pallet (Mixed)
OZ	Ounces
PC	Piece
PH	Pack
PK	Package
PL	Pallet
PN	Pounds Net
PR	Pair
RL	Roll
SF	Square Foot
ST	Set
TM	Thousand Feet (Board)
TY	Tray
UN	Unit

<b>Packaging Material</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
01	ALUMINUM
04	AS SPECIFIED BY THE DOT
07	BURLAP
10	CHEMICALLY HARDENED FIBRE
13	CLOTH
16	CLOTH TOP
19	CLOTH OR FABRIC
22	COMPRESSED
25	CORRUGATED OR SOLID

<b>Packaging Material</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
28	DOUBLE-WALL PAPER
31	FIBRE
34	FIBRE (PAPERBOARD)
37	FIBERBOARD
40	FIBERBOARD METAL
43	GLASS
46	IN INNER CONTAINERS
48	WIRE/CORD
49	INSULATED
50	STEEL - VINYL COATED
51	WIRE MESH
52	IRON OR STEEL
55	LEAD
58	METAL
59	METAL CANS
61	MOISTURE RESISTANT
64	MOLDED PLASTIC
67	MULTIPLE-WALL PAPER (2 OR MORE WALLS)
70	MULTIPLE-WALL PAPER (3 OR MORE WALLS)
71	NOT OTHERWISE SPECIFIED
72	PAPER - VCI
73	OTHER THAN GLASS
74	OTHER THAN METAL, PLASTIC TUBES, GLASS
75	PLASTIC - VACUUM FORMED
76	PAPER
77	PLASTIC - STRUCTURAL FOAM
78	PLASTIC - INJECTION MOLDED
79	PLASTIC
80	POLYETHYLENE LINED
81	PLASTIC - VIRGIN
82	PULPBOARD
83	PLASTIC - REGRIND
84	POLYSTYRENE
85	RUBBER
86	FOAM
88	RUBBER AND FABRIC
89	SPECIAL
90	STANDARD
91	STAINLESS STEEL

<b>Packaging Material</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
92	TUBES, METAL, OR PLASTIC
94	WOOD
95	SINGLE WALL CORRUGATED BOARD
96	DOUBLE WALL CORRUGATED BOARD
97	TRIPLE WALL CORRUGATED BOARD

<b>Packaging Type</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
BAG	BAG
BDG	BANDING
BOT	BOTTLE
BOX	BOX
BXT	BUCKET
CAN	CAN
CNT	CONTAINER
CTN	CARTON
CYL	CYLINDER
JAR	JAR
PAL	PAIL
PWT	PLASTIC-WRAPPED TRAY
TBE	TUBE
TRY	TRAY
TUB	TUB
BAL	BALE
LSE	LOOSE
ROL	ROLL
BDL	BUNDLE
STW	STRETCH WRAP
SLV	SLEEVE
PKG	PACKAGE
KIT	KIT

<b>Return Goods Policy</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
DESTROY_FOR_CREDIT	Destroy product for credit
RETURN_FOR_CREDIT	Return product for credit
HOLD_FOR_INSPECTION	Hold product for inspection
CALL_FOR_AUTHORIZATION	Call for return authorization number

<b>Selling Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
B8	Board
BD	Bundle
BG	Bag
BX	Box
CA	Case
CF	Cubic Feet
CG	Card (Items on a Card)
CT	Carton
CW	Hundred Pounds (CWT)
DS	Display (Pre-Assembled Unit)
EA	Each (Lowest Consumer Selling Unit)
FT	Feet
HL	Hundred Feet (Linear)
KT	Kit
LB	Pounds
LF	Linear Foot
MX	Mod Pallet (Mixed)
OZ	Ounces
PC	Piece
PH	Pack
PK	Package
PL	Pallet
PN	Pounds Net
PR	Pair
RL	Roll
SF	Square Foot
ST	Set
TM	Thousand Feet (Board)
TY	Tray
UN	Unit

<b>Stacking Weight Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>
GR	Gram
KG	Kilogram
LB	Pounds
ME	Milligrams
OZ	Ounces

<b>Temperature Unit of Measure</b>	
<b>Accepted Values</b>	<b>Description of Value</b>

<b>Temperature Unit of Measure</b>	
CE	Celsius
FA	Fahrenheit
Note: Lowe's preferred unit of measure is FA (Fahrenheit).	

## **Appendix B - Transaction Processing Choreography**

The following diagram depicts the transaction processing choreography for this data synchronization process. The diagram is based on the following assumptions:

- a) The Vendor has selected 1SYNC as their Datapool. If a Vendor has selected a different Datapool, then this choreography will also include the exchange of transactions between the Vendor's Datapool and 1SYNC.
- b) The Vendor's CIN transaction includes the Core Schema, the Barcode Schema extension, the Hardlines Schema extension, and the Lowe's Schema extension.
- c) The Vendor's CIN transaction passes 1SYNC and Lowe's data validations (which triggers the first CIC transaction), and the product data is then approved by Lowe's (triggering the second CIC transaction).

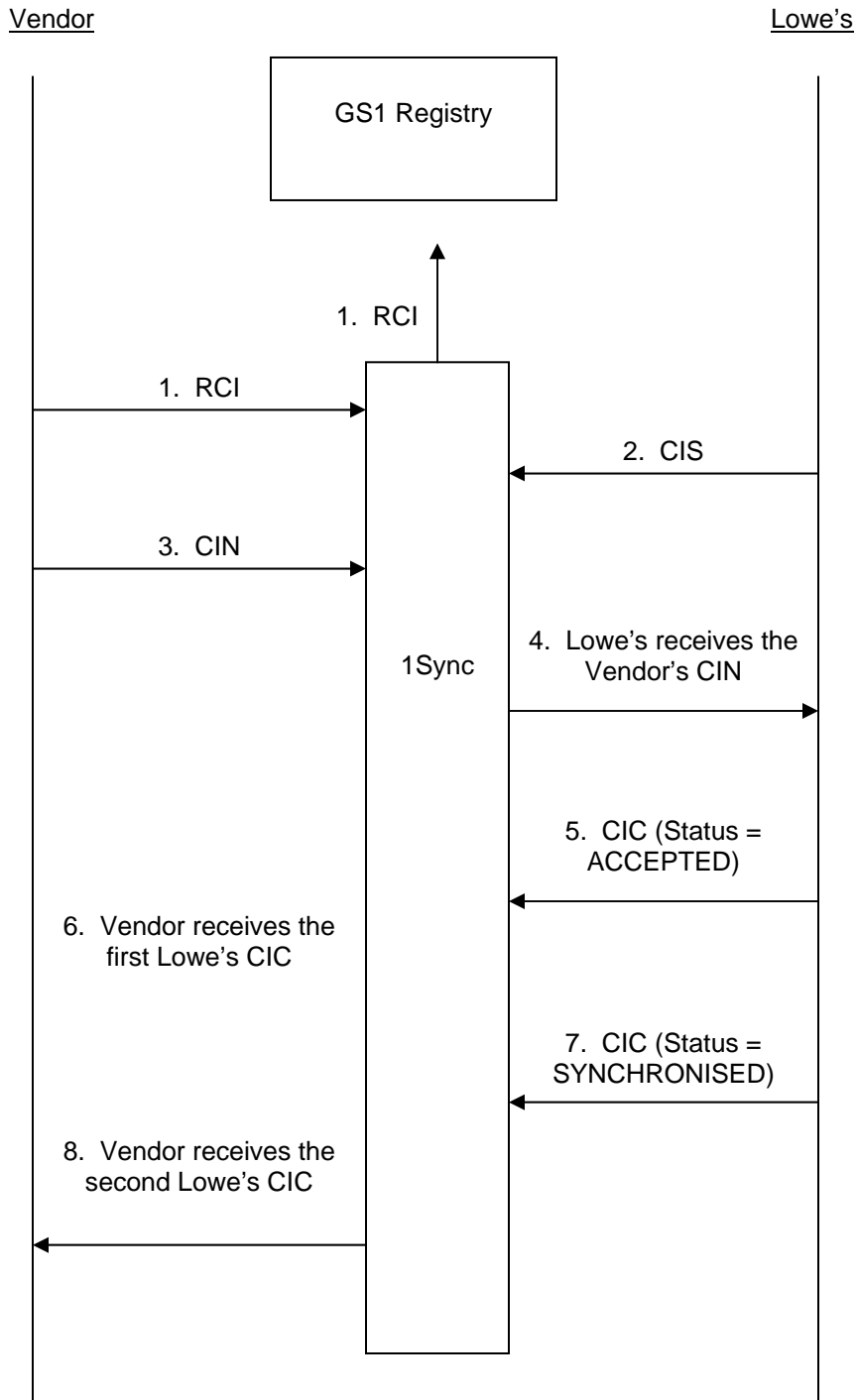
### Transaction Choreography

1. Vendor registers their trade items with the GS1 Global Registry, by sending a RegisterCatalogueItem (RCI) transaction to the Registry via 1SYNC.
2. Vendor registers their trade items with the Lowe's PCM application. This triggers the subscription process. Lowe's sends a CatalogueItemSubscription (CIS) transaction (one per packaging hierarchy) to 1SYNC.
3. Vendor publishes their trade items (combined in packaging hierarchies) and a CatalogueItemNotification (CIN) transaction is created. A CIN must include one or more packaging hierarchies. Vendor's Datapool sends the CIN to 1SYNC. 1SYNC sends the CIN to Lowe's
4. Lowe's processes the transaction into the PCM application.
5. The CIN passes Lowe's validations that are applied by the PCM application. Lowe's sends a CatalogueItemConfirmation (CIC) transaction to 1SYNC. The CIC transaction has a status of ACCEPTED. 1SYNC sends the CIC to the Vendor's Datapool.
6. The Vendor processes the CIC transaction.

### Future choreography - PCM Release 2

7. Once the PCM Application releases the product data to Lowe's Merchandising and Logistics, the PCM application sends a second CIC transaction to 1SYNC. This CIC has a status of SYNCHRONISED. 1SYNC sends the CIC to the Vendor's Datapool.
8. The Vendor processes the second CIC transaction.

Lowes's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version



### Appendix C – Glossary of Terms

Table 4 – Glossary of Terms

Term	Definition
1SYNC	<p>Lowe's Datapool. A Vendor may also choose 1SYNC as their Datapool. 1SYNC is the only Datapool that currently supports the Lowe's schema extension.</p> <p><b>Note:</b> 1SYNC formerly known as UCCnet and Transora.</p>
Barcode Schema Extension	A function-specific extension to the Core Schema. This extension includes two data attributes, EAN/UCC Type and EAN/UCC Code.
CatalogueItemConfirmation (CIC)	The XML transaction that Lowe's will initiate as a response to receiving a CIN transaction from a Vendor. Lowe's will send the first CIC transaction once Lowe's has completed their data validation process. Lowe's will send a second CIC transaction when the product data is approved and synchronized.
CatalogueItemNotification (CIN)	The XML transaction that a Vendor's Datapool will send to communicate product data.
CatalogueItemSubscription (CIS)	The XML transaction that Lowe's will initiate to indicate to 1SYNC that they are willing to receive a Vendor's CIN that contains the GTIN referenced in the CIS transaction. Lowe's will send in a CIS transaction for each GTIN identified as being the "highest" level in a packaging hierarchy.
Core Schema	This is the primary schema within the CIN transaction. This schema contains all the data attributes that are considered to be generic (i.e. they do not apply to a specific industry).
Datapool	An independent entity that facilitates the exchange of transactions in support of the global data synchronization process. A Datapool supports

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

	transaction exchange between Vendors , The GS1 Global Registry and Retailers, and also supports transaction exchange with other Datapools.
EAN/UCC (now GS1)	The EAN/UCC System standardizes barcodes, EDI transaction sets, XML schemas and other supply chain solutions for more efficient business.
Global Data Standards Network (GDSN)	The network of Datapools and the GS1 Global Registry that supports the global data synchronization standards.
Global Location Number (GLN)	The Global Location Number is a unique global identification number of a specific entity, be it a Vendor, a Retailer, a Datapool, or a Solution Provider. The Global Location Number is based upon a Company Prefix, which is assigned and administered by the GS1 standards organization.
Global Standards Management Process (GSMP)	The process by which global data standards are developed and maintained.
Global Trade Identification Number (GTIN)	The Global Trade Identification Number is a unique global identification number for a specific hierarchical level of a specific product.
GS1 Global Registry	A global repository of registered trade items. For each registered trade item, the GS1 Global Registry maintains a small set of core data. The keys are GTL, GTIN and Target Market that result in a unique record. The GS1 Registry is managed by the GDSN.
Hardlines Schema Extension	This is an industry-specific extension to the Core Schema within the CIN transaction. This extension must be included in any CIN that is sent to Lowe's.
Hierarchical Level	A hierarchical level is a specific level within a packaging hierarchy. Examples of hierarchical levels would be Pallet, Case, Innerpack, Each (Base Unit), etc. Every

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

	hierarchical level is assigned its own GTIN.
Lowe's Schema Extension	This is a schema extension that contains data attributes that are specific to Lowe's. This extension is optional within the CIN transaction, and will only be utilized once the PCM application is implemented.
Packaging Hierarchy	A packaging hierarchy is comprised of one or more hierarchical levels. A specific GTIN can exist in multiple hierarchical levels. As an example, an "Each" (Base Unit) hierarchical level may exist as a "stand-alone" packaging hierarchy, and it may also exist in a separate hierarchy with a Case, and in a third hierarchy with a Case and a Pallet.
Product Content Management (PCM) application	The Lowe's application for its internal management of the data synchronization process.
RegisterCatalogueItem (RCI)	The XML transaction utilized by the Vendor's Datapool to register trade items with the GS1 Global Registry.
Solution Provider	An entity that provides software and/or a hosted solution designed to assist a Vendor or Retailer in becoming compliant with the global data synchronization process.
Vendor Business Unit (VBU) number	An internal Lowe's number identifying a specific business unit within a Vendor organization. A Vendor may have multiple VBU numbers.

### Appendix D – List of Additional Data Attributes

This Appendix provides a list of the data attributes that meet the following set of criteria:

1. These data attributes are required to be included in the CIN transaction in order to meet the requirements of the XML schemas that support this transaction. Please refer to the XML schemas themselves for specific information as to the exact requirements.
2. These data attributes are not required by Lowe's (the data attributes required by Lowe's are detailed in the [Section 4 - Lowe's Data Requirements for the PCM Application](#)). Lowe's will ignore the information contained in these attributes.

These data attributes are part of the "body" of the CIN transaction. This list does not include data attributes that are part of the "message header" of the CIN transaction.

Note: The Core/Hardlines schema Xpath reference is impacted and will be sunset by 1SYNC in November, 2007. Lowe's is in the process of updating the Xpath references throughout this vendor implementation guide. These updates will be reflected shortly. The reader should take caution that reference to the Xpath will be obsolete and Lowe's will replace this column with the GDSN name in a future release.

Table 5 - Data Attributes not required by Lowe's, but are mandatory in the Core Schema

Common (Lowe's) Data Attribute Name (in Alphabetical Order)	Description	Core Schema Xpath (from the <tradeItem> node)
Batch Number Indicator (also referred to as Has Batch Number?)	Identifies whether the packaging marking contains a Batch Number. TRUE indicates that the Batch Number is on the packaging, FALSE indicates that it is not.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMarking/hasBatchNumber
Classification Category Code	Code classifying the category of this trade item. This is a different data attribute from <a href="#">Classification Code</a> , which is required by Lowe's.	/tradeItem/tradeItemInformation/classificationCategoryCode/classificationCategoryCode
Classification Category Definition	A definition of the Classification Category indicated above.	/tradeItem/tradeItemInformation/classificationCategoryCode/classificationCategoryDefinition

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Classification Category Name	The name of the Classification Category indicated above.	/tradeItem/tradeItemInformation/classificationCategoryCode/classificationCategoryName
Consumer Availability Date/Time	Date/time when the trade item is available to the consumer.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemDateInformation/consumerAvailabilityDateTime
Handling Instructions	Text instructions for handling of this trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemHandlingInformation/handlingInstructionsCode/description/text
Net Content Declaration Indicator	Indicates whether the net content has been declared for this trade item. TRUE indicates that it has been declared, FALSE indicates that it has not.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMeasurements/isNetContentDeclarationIndicated
Non-Sold Trade Item Returnable Indicator	Identifies whether an unsold item can be returned. TRUE indicates that it can be returned, FALSE indicates that it cannot.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMarketing/isNonSoldTradeItemReturnable
Non-Sold Trade Item Recyclable Indicator	Identifies whether an unsold item can be recycled. TRUE indicates that it can be recycled, FALSE indicates that it cannot.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemMarketing/isTradeItemMarkedAsRecyclable
Packaging Marked as Recyclable	Indicates whether the packaging of this trade item states that the item is recyclable. TRUE indicates that packaging marking does indicate recyclable, FALSE indicates that the packaging marking does not indicate this.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMarking/isPackagingMarkedAsRecyclable
Packaging Marked as	Indicates whether the	/tradeItem/tradeItemInformation

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Returnable	packaging of this trade item indicates that the item is returnable. TRUE indicates that packaging marking does indicate returnable, FALSE indicates that the packaging marking does not indicate this.	n/tradingPartnerNeutralTradeItemInformation/packagingMarking/isPackagingMarkedAsReturnable
Packaging Marked with Expiration Date	Indicates whether the packaging of this trade item states the expiration date of this item. TRUE indicates that packaging marking does indicate the expiration date, FALSE indicates that the packaging marking does not indicate this.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMarking/isPackagingMarkedWithExpirationDate
Packaging Marked with Green Dot	Indicates whether the packaging of this trade item is marked with a green dot (which has certain environmental significance). TRUE indicates that packaging marking does include the green dot, FALSE indicates that the packaging marking does not include it.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMarking/isPackagingMarkedWithGreenDot
Packaging Marked with Ingredients	Indicates whether the packaging of this trade item states the ingredients of this item. TRUE indicates that packaging marking does state the ingredients, FALSE indicates that the packaging marking does not.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMarking/isPackagingMarkedWithIngredients
Packaging Material Composition Quantity	Quantity of materials used in the packaging of this trade item.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMaterial/packagingMaterialCompositionQuantity/measurementValue
Packaging Material Description	Text description of the packaging material.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingMaterial/packagingMaterialDescription/text

Lowe's Data Synchronization Process  
Vendor Implementation Guide – August 2007 version

Packaging Type Description	Text description of the packaging type.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/packagingType/packagingTypeDescription
Publication Date	Date that the trade item information is published by the Information Provider.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/tradeItemDateInformation/publicationDate
Quantity of Children	Number of "child" levels assigned to this hierarchical level. As per Lowe's general business rules, there must be only one child level per hierarchical level.	/tradeItem/nextLowerLevelTradeItemInformation/quantityOfChildren
Suggested Retail Price Effective Start Date	Effective start date of the retail price suggested by the Vendor.	/tradeItem/tradeItemInformation/tradingPartnerNeutralTradeItemInformation/suggestedRetailPrice/effectiveStartDate
Target Market Description	Text description of the Target Market Country Code.	/tradeItem/tradeItemInformation/targetMarketInformation/targetMarketDescription/text

## **Appendix E - Bibliography**

EAN/UCC System Frequently Asked Questions (FAQs).

Uniform Code Council, Inc.

[http://www.uc-council.org/ean\\_ucc\\_system/stnds\\_and\\_tech/eanucc-faq.html](http://www.uc-council.org/ean_ucc_system/stnds_and_tech/eanucc-faq.html).

Global Location Number (GLN) Implementation Guide. Uniform Code Council, Inc., May 2002.

[http://www.uc-council.org/ean\\_ucc\\_system/pdf/GLN.pdf](http://www.uc-council.org/ean_ucc_system/pdf/GLN.pdf).

Global Trade Item Numbers (GTIN) Implementation Guide. Uniform Code Council, Inc., May 2004.

[http://www.uc-council.org/ean\\_ucc\\_system/pdf/GTIN.pdf](http://www.uc-council.org/ean_ucc_system/pdf/GTIN.pdf).

Getting Started. 1SYNC

[http://www.1sync.org/getting\\_started.html](http://www.1sync.org/getting_started.html)

Subscription Fees. 1SYNC

[http://www.1sync.org/subscription\\_fees.html](http://www.1sync.org/subscription_fees.html)

Subscribing:

[http://www.1sync.org/subscribe\\_now.html](http://www.1sync.org/subscribe_now.html)

About Us: 1SYNC, Inc.

<http://www.1sync.org/aboutus.html>

Implementation Options:

[http://www.1sync.org/implementation\\_options.html](http://www.1sync.org/implementation_options.html)

Success Stories/Industry Studies:

[http://www.1sync.org/industry\\_studies.html](http://www.1sync.org/industry_studies.html)

GDSN:

<http://www.1sync.org/gdsn.html>