

National UPC Database X9.93 Upload/Download Process

The X9.93-2007 specification defines the process and standards for uploading/downloading UPC data. The National UPC database shall make use of certain aspects of this specification for the purpose of exchanging UPC data with the State Agencies. Omissions and exclusions include components of the specification that are relevant to the data exchange with retailers (such as pricing) or necessary for automated transfer mechanisms. This provides a more streamlined process that better reflects the interaction with the National UPC database.

Therefore, the WIC UPC file exchanged with the National UPC database shall contain only detail records as defined in this document. No header, trailer, or acknowledgement records or files found in the X9.93 specification are included. Because the foundation of this revised specification is the X9.93 standard and the UPC detail record, operational State Agencies should be able to leverage existing means to generate and process the product data. This foundation also enables future interaction with other organizations where this data is relevant to business processes.

The following requirements and business rules describe the expected interaction between the National UPC database and the State Agencies. Adherence to these rules is required in order to guarantee interoperability.

WIC UPC Upload/Download Requirements and Business Rules:

- File specification
 - The file upload/download for WIC UPC shall adhere to the X9.93 Part 2:2007 (draft) specification. This will enable using a similar file structure and process to exchange UPC product data with retailers. State Agencies shall be responsible for creating files with the proper structure.
 - The WIC UPC file shall be a text-based, fixed-field length file that contains ASCII characters only.
 - Since certain fields in the file apply solely to retailers (e.g., Item Price), these fields will not be validated or loaded if present in the file submitted to the National UPC database and not provided when downloaded from the database.
- Transfer mechanism
 - The file shall be uploaded and/or downloaded via a web browser while the user is logged into the National UPC web-based application.
 - The user logs into the National UPC database and proceeds to the Upload page.
 - The user selects the file on their computer to upload.
 - The system uploads the file and validates the data according to the established rules.
 - The system loads the valid data and sends an email to the user listing any validation errors and the results of the upload.
 - Browser requirements:

- The National UPC web-based application is certified to support the latest version of IE (currently IE v7). Other popular browsers such as Firefox may be used, although these are not recommended nor supported.
 - The browser must permit Javascript.
 - No special browser add-ons are necessary to interact with the system.
 - A future enhancement may be undertaken to provide this data via web services in an XML format, or via alternative system-to-system means such as FTP.
- Product Upload
 - The system shall enable State users to upload product data to the National UPC database.
 - If a product already exists in the database, the system shall only update the fields specific to the user's State Agency and not overwrite the core-level details of the product (shared amongst all State Agencies).
 - This eliminates the need to indicate whether the file is a "NEW" or "UPDATE" file. All files are processed by the system in the same manner.
 - During the upload process, the Manufacturer shall be derived based on the UPC of the product. This is necessary because the State Agencies do not currently maintain the Manufacturer for a product, and would be burdensome to obtain. Therefore, the Manufacturer can be excluded from the transmission file.
 - As part of the launch of the system, a list of known Manufacturers shall be preloaded into the National UPC database. This information will be obtained by FNS.
 - If the Manufacturer code is not found in the UPC database, a record shall be created for this Manufacturer with the name = "SYSTEM CREATED: MANUFACTURER CODE NOT FOUND"
 - In the data file, the UPC shall be provided in expanded format – either UPC-A, GTIN-13, or GTIN-14, including the first digit and the check digit
 - On rare occasions, a State Agency may upload an Infant Formula that has not been approved by WIC and does not exist in the National UPC database.
 - The product shall be given the Approved status for the State Agency.
 - If the subcategory is not recognized, the system shall permit the product to be uploaded and the subcategory shall be blanked out.
 - The "Approved in WIC Works" checkbox is set to unchecked.
 - An email shall be sent to the Federal user informing them of the new infant formula to review.
 - The Federal user shall examine the product, enter missing Infant Formula-specific information, and assign/add the proper subcategory, if deemed to be valid.
 - The Federal user shall check the "Approved in WIC Works" flag for the formula. This indicates to other State Agencies that the formula has been reviewed and approved. Note: even while the "Approved in WIC Works" checkbox is unchecked, there is no restriction on other State Agencies accessing, editing, and approving this formula.

- Product approval
 - State Agencies are permitted to upload products without providing the supplemental nutritional data that is required to be entered online. Once uploaded, the product has an Approved status for the State Agency.
 - Even though the product does not have the necessary data to pass validations, the product may still be Approved by any other State Agency.
 - The system will identify these products that were loaded and approved via the upload to handle them differently than products entered online. The “Method of Entry” for the product shall be displayed in the application as “Upload” rather than “Online”.

- Validation/Error processing
 - Records that do not pass the mandatory validation rules shall not be loaded and will be identified in the upload results
 - Validation rules that will result in rejection of the product record include:
 - Invalid record format
 - Invalid field values as specified in the notes column
 - Unrecognized category or subcategory code (exception: allow and save as blank any unrecognized subcategory code for Infant Formula categories)
 - Invalid check digit
 - Unrecognized unit of measure, benefit unit

- Product Download
 - The system shall enable State users to download product data from the database.
 - The system shall provide the user with several options for which to select data to download:
 - State Agency Approved Product List (complete list)
 - All products approved by the user’s State Agency that have changed (includes newly added) within the specified timeframe
 - All products that have been approved by the user’s State Agency within the specified timeframe
 - The system shall enable the user to select products based on the following timeframes:
 - Custom date
 - Current month
 - Previous month
 - Previous quarter
 - The download file shall utilize the same file format as the upload file.

Upload Process (detailed):

1. The system receives the file transmission.
2. The system reads and processes each record in the file.
 - a. The system validates that the structure of the record adheres to the specification.
 - b. The system validates the check digit of the UPC. If invalid, an error is generated and sent to the user.

- c. The system derives the manufacturer of the product based on the UPC and looks up the manufacturer in the database. If found, the manufacturer is associated with the product. If not found, the manufacturer is added to the database.
- d. The system looks up the UPC in the database.
 - i. If the UPC is not found, the system adds the product assigned to the specified category/subcategory. The product is added to the database with a status of "Approved" for the State Agency.
 - ii. If the UPC is found, the system adds only the State Agency-specific information to the database with a status of "Approved" and associates with the product. None of the shared, common product information is updated or overwritten. If the product already exists for the State Agency, this State Agency-specific product information is overwritten with the data in the upload.
- e. The system sends an email to the logged-in user providing the results of the transmission, listing the rejected records.

WIC UPC/PLU Detail Record

Data Element Name	WIC NUPC Data Element	Format	Position	Condition	Notes
Record Identification Code	Not saved, only used during upload	PIC X(2)	1-2	Mandatory	Value = "D4" for a detail record
Record Sequence Number	Not saved, only used during upload	PIC 9(6)	3-8	Mandatory	Starting at "000001" and incrementing by one for each detail record
Message Type Identifier	Not saved, only used during upload	PIC 9(4)	9-12	Mandatory	Value = "1344"
UPC/PLU	UPC	PIC 9(17)	13-29	Mandatory	Right Justified Zero Filled Includes initial digit and check digit
Item Description	Product Name (if new), State Agency Product Name	PIC X(50)	30-79	Mandatory	
Category Code	Food Category Code	PIC 9(2)	80-81	Mandatory	
Category Description	Not used	PIC X(50)	82-131	Mandatory	
Sub-category Code	Food Subcategory Code	PIC 9(3)	132-134	Mandatory	Leave blank if State Agency-only approved Infant Formula (not in WIC Works or National UPC database)
Sub-category Description	Not used	PIC X(50)	135-184	Mandatory	
Unit of Measure	State Agency Unit of Measure	PIC X(10)	185-194	Mandatory	Abbreviated description of the measure used to describe product content amount (e.g. "lb" for pound).
Package Size	Total Package Amount	PIC 9(3)V99	195-199	Mandatory	Size of the contents of the package quantified in

Data Element Name	WIC NUPC Data Element	Format	Position	Condition	Notes
					standard benefit units of measure
Benefit Quantity	State Agency Exchange Size	PIC 9(3)V99	200-204	Mandatory	
Benefit Unit	State Agency Unit of Measure	PIC X(50)	205-254	Mandatory	Text description (fully spelled-out) of the originator's specified benefit issuance unit of measure, per standard ANSI 260.1 – 1993
Item Price	Not used	PIC 9(4)V99	255-260	Mandatory	
Price Type	Not used	PIC X(2)	261-262	Mandatory	Values: "00" – Not Disclosed, "01" – Maximum Price, "02" – Contracted Price
Card Acceptor Identification Code	Not used	PIC X(15)	263-277	Mandatory	Used to identify the specific store using the UPC/PLU code
Date, Effective	Effective Date	PIC 9(8) CCYYMMDD	278-285	Mandatory	If no date is entered, effective upon receipt
Date, End	Expiration Date	PIC 9(8) CCYYMMDD	286-293	Mandatory	If no date is entered, authorization continues
Purchase Indicator	Apply Product to Wildcard food subcategory (000)?	PIC 9	294	Mandatory	Values: "0" – No, "1" - Yes