



GCA Standard 134-1998

EMBARC/X12 - 1998

Electronic Manifest and Receiving Advice
for Paper Used in Publishing and Printing

Prepared by GCA's Electronic Data Interchange Committee

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Background :

The Graphic Communication Association (GCA) became Idealliance in 2001 to better serve all segments of the graphic and visual communications value chain. Idealliance is a not-for-profit industry association with a history of innovation and transformation going back to 1896 with particular emphasis on supply chain best practices and specifications in color management, digital content, forest and paper products, production workflow, and mail. This updated copy of the Electronic Manifest and Receiving Advice for Paper Used in Publishing and Printing (EMBARC) / X12 standard serves as a snapshot in time of a widely used specifications for roll and sheet paper shipping and receiving transaction sets, along with data segments, data elements and codes for paper handling.

EMBARC/X12-1998

Ship Notice and Receiving Advice for Paper Used in Printing and Publishing

Introduction

EMBARC represents a pioneering and successful use of electronic data interchange (EDI) in American industry. In 1985 - well before most other industries began planning for EDI - a GCA committee issued the first release of Specification EMBARC: Electronic Manifest and Bar Coding of Paper Stock Shipments, establishing a standard format for an electronic manifest sent from paper mills to printers. This new specification improves on the original EMBARC in a number of ways:

- Updates EMBARC in the national standard format for EDI
- Provides date fields with century information for unambiguous compliance with year 2000 requirements
- Adds a matching receiving advice transaction to acknowledge receipt and notify the supplier immediately of problems
- Recommends best practices for getting the most value out of these transactions

EMBARC makes unit based inventories happen

Original EMBARC transmissions consist of a series of flat files, in either 80 or 128 character records, with each record identified by a two- or three-character code. The position of the field in the record determines the meaning of the field. This simple and straightforward design has made EMBARC easy to implement and encouraged its growth throughout the industry.

EMBARC enables printers and print customers to gain more detailed information about their paper inventories. When combined with a unique unit identification scheme, EMBARC allows receivers of paper shipments to capture individual roll or skid numbers transferred electronically from the paper suppliers. Since the paper suppliers generate those roll or skid numbers from their computer systems, customers can enter this detailed information without re-keying (a common source of errors). As a result, customers can learn much more about their paper inventories, with little or no additional cost or staffing.

These unit-based inventories allow paper customers to manage inventories more closely and reduce safety cushions caused by the uncertainty of lot- or weight-based systems. Unit-based inventories also encourage printers to track paper use through their entire production cycles, to reduce paper waste. Where print customers furnish paper used in print jobs, they often require close accounting of these valuable resources, including reports of waste and usage. Unit-level inventories make this close management of paper possible, and paper customers often receive electronic manifests as well as the printers.

Why fix EMBARC?

While EMBARC quickly became a successful EDI specification, it has its limitations. EMBARC preceded the development of the manifest/ship notice transaction set found in the North American standard for EDI known as X12. As companies began to use other EDI transactions in the X12 standard, or exchange transactions outside the printing/publishing industry, they found the need to support both the EMBARC and X12 standards. GCA's EDI committee released an X12 version of EMBARC in 1991 that found some use in the industry, but the simple fixed-length field format of the original EMBARC maintained many of its followers.

As the year 2000 approaches, however, the fixed-length field format of EMBARC becomes more of a liability than an asset. EMBARC uses date fields in the classic Year/Month/Day or YYMMDD format. Since these fields have fixed lengths, one cannot simply add two positions for century, without having to rewrite each of the records with date information. With companies needing to transfer date information in unambiguous formats, i.e. with century clearly identified, original EMBARC will not work.

GCA's EDI Committee decided to update its X12 version of EMBARC, rather than rewriting the original fixed-length field format. The committee also included many of the features from the EDI transactions developed by American Forest & Paper Association's EDI committee in 1993-94.

Best practices to make EMBARC/X12 more valuable

GCA's group also recommended a number of best practices for companies using this transaction. These best practices include:

- Sending a receiving advice transaction to acknowledge receipt of the paper and immediately indicate any problems with the shipment; see the recommended format for this receiving advice transaction that accompanies the ship notice/manifest
- Identifying multi-roll packages with the first roll in the package, rather than a separate package identifier, although the specification allows for separate package identifiers as well
- In the ship notice/manifest, adding a separate hierarchical level for tare (using code T) as a flag for shipments of sheeted rather than roll paper

A brief introduction to the X12 standard

Previous EMBARC users will find the format of this document considerably different from the original flat files. It uses the standard for EDI in North America known as X12. We offer a brief introduction to the X12 standard below. You can learn more about X12, and EDI in general, from the Data Interchange Standards Association, available on the Web at www.disa.org or by telephone at 703-548-7005.

The X12 standard divides into a series of transaction sets, roughly equivalent to hard-copy business documents such as invoices, purchase orders, and manifests. Some transaction sets, such as manifests, are widely applicable across many industries and, for that reason, have a great deal of flexibility built in. This flexibility, however, comes with a price - transactions can become very complex. GCA's EDI Committee has focused these transactions on established or desired business practices in the paper, publishing, direct marketing, and printing industries, stripping away the irrelevant parts of the standard and simplifying them considerably.

The X12 standard divides transaction sets into three main parts - header, detail, and summary. Header information covers items applicable to the transaction as a whole, such as the parties involved in the transaction. Detail includes the guts of the transaction, such as line items, product descriptions, and unit (roll or skid) descriptions. Summaries involve hash totals, such as number of line items in the transaction, and the number of segments transmitted.

The X12 standard uses data segments as the main building blocks of the transaction sets. Data segments are collections of related data elements, identified with unique two- or three-character codes. One often finds many of the same data segments repeated across many transactions. For example the name (N1) and date/time (DTM) segments appear in almost all transactions, including those in this document. The order of the segments listed in this document is the order in which they must appear in the transaction. Please note that a sender may repeat most segments in a transaction, but may also require a specified looping structure.

The ship notice/manifest transaction allows for two different structures of detail data segments, one for roll paper and one for sheeted paper. Each structure has a somewhat different hierarchy for organizing information in the detail part of the transaction.

ROLL PAPER HIERARCHY:	SHEETED PAPER HIERARCHY:	INFORMATION IN THIS LEVEL:
Shipment	Shipment	Parties in the transaction, dates, times
Order	Order	Purchase order references and totals, if more than one p.o. covered in shipment
	Tare	Number of skids or pallets and types, tare weights
Product Description	Product Description	Grade name, basis weights, totals for each product
Item	Item	Roll, package, skid identifiers and weights

Data segments then are comprised of a series of data elements. The name (N1) segment for example has one data element for a qualifier -code number -from a table in the X12 standard to identify each of the parties in the transaction, such as the supplier, ship-to location, or purchaser. The next data element in the segment is the name of the entity. Another qualifier element, this time with codes to describe the type of identification code, follows the name. The identification codes recommended for these transactions are DUNS numbers or for book publishers the Standard Address Number (SAN) assigned by the Book Industry Systems Advisory Committee. The actual code number follows this qualifier.

Readers will see a few references to composite data elements, which are separate collections of data elements within data segments. In these transactions however, we use only one data element within composite elements.

Former EMBARC users will find other differences in data elements. The standard calls for minimum and maximum lengths of data elements, rather than fixed length data elements as in the original EMBARC. As a result, senders need delimiters between the data elements; asterisks (*) in these transactions. Where senders of transactions need to skip optional data elements or those not recommended for our industry, they need only repeat the asterisk for each data element skipped. For example, skipping the first (optional) data element in a line item (LIN) data segment reads:

LIN**PO*123456 n/l

The n/l at the end of a data segment indicates next-line indicator.

Contents of this document

This EMBARC/X12 publication has five parts

- Specifications for the ship notice/manifest transaction set, giving the recommended data segments, data elements, and codes
- Examples of the ship notice/manifest for roll and sheeted paper
- A mapping guide giving the translation of each original EMBARC record and field into EMBARC/X12 data segments and elements
- Specifications for the receiving advice transaction set, giving the recommended data segments, data elements, and codes
- Examples of the receiving advice, matched to the data in the ship notice/manifest

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GCA's EDI Committee, led by Bill Orndorff of Perry-Judd's Inc. and Karen Rosenberg of Time Inc. (earlier by Hugo Barreca of Gruner+ Jahr USA Publishing), asked Gerry Galewski of Perry-Judd's Inc. to lead this group. Under Galewski's leadership, the group developed these transactions for the industry. Eric Wee of ED/WISE prepared the roll paper example.

The group benefited from the invaluable contributions of the following individuals:

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EMBARC/X12: Ship Notice/Manifest for Paper Used in Publishing and Printing

This document contains the format and establishes the data contents of the Ship Notice/Manifest Transaction Set (856) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to list the contents of a shipment of goods as well as additional information relating to the shipment, such as order information, product description, physical characteristics, type of packaging, marking, carrier information, and configuration of goods within the transportation equipment. The transaction set enables the sender to describe the contents and configuration of a shipment in various levels of detail and provides an ordered flexibility to convey information.

The sender of this transaction is the organization responsible for detailing and communicating the contents of a shipment, or shipments, to one or more receivers of the transaction set. The receiver of this transaction set can be any organization having an interest in the contents of a shipment or information about the contents of a shipment.

Heading:

Pos	ID	Segment Name	Reg	Max Use	Repeat	Notes	Page Number
010	ST	Transaction Set Header	M	1			7
020	BSN	Beginning Segment for Ship Notice	M	1			8
040	DTM	Date/Time Reference	O	10			9

Detail:

Pos	ID	Segment Name	Reg	Max Use	Repeat	Notes	Page Number
Loop ID-HL					200000		
010	HL	Hierarchical Level	M	1			10
020	LIN	Item Identification	O	1			11
050	PRF	Purchase Order Reference	O	1			13
060	PO4	Item Physical Details	O	1			14
070	PID	Product/Item Description	O	200			16
080	MEA	Measurements	O	40			18
100	PKG	Marking, Packaging, Loading	O	25			20
120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12			22
130	TD3	Carrier Details (Equipment)	O	12			24
150	REF	Reference Identification	O	>1			25
190	MAN	Marks and Numbers	O	>1			26
200	DTM	Date/Time Reference	O	10			27
Loop ID-NI					200000		
220	N1	Name	O	1			28
240	N4	Address Information	O	2			29
250	N4	Geographic Location	O	1			30
260	REF	Reference Identification	O	12			31
270	PER	Administrative Communications Contact	O	3			32

Summary:

Pos	ID	Segment Name	Reg	Max Use	Repeat	Notes	Page Number
010	CTT	Transaction Totals	O	1		33	
020	SE	Transaction Set Trailer	M	1		34	

ST Transaction Set Header

Pos: 101	Max: 1
Heading - Mandatory	
Loop: N/A	Elms: 2

To indicate the start of a transaction set and to assign a control number

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax				
ST01	143	Transaction Set Identifier Code Description: Code uniquely identifying a Transaction Set	M	ID	3/3				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>856</td> <td>Ship Notice/Manifest</td> </tr> </tbody> </table>	Code	Name	856	Ship Notice/Manifest			
Code	Name								
856	Ship Notice/Manifest								
ST02	329	Transaction Set Control Number Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9				

Semantics:

- I. The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 856 selects the Manifest/Ship Notice Transaction Set).

BSN Beginning Segment for Ship Notice

Pos: 020	Max: 1
Heading - Mandatory	
Loop: N/A	Elms: 4

To transmit identifying numbers, dates, and other basic data relating to the transaction set

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax										
BSN01	353	Transaction Set Purpose Code Description: Code identifying purpose of transaction set	M	ID	2/2										
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>Original</td> </tr> <tr> <td>01</td> <td>Cancellation</td> </tr> <tr> <td>05</td> <td>Replace</td> </tr> <tr> <td>07</td> <td>Duplicate</td> </tr> </tbody> </table>	Code	Name	00	Original	01	Cancellation	05	Replace	07	Duplicate			
Code	Name														
00	Original														
01	Cancellation														
05	Replace														
07	Duplicate														
BSN02	396	Shipment Identification Description: A unique control number assigned by the original shipper to identify a specific shipment	M	AN	2/30										
BSN03	373	Date Description: Date expressed as CCYYMMDD	M	DT	8/8										
BSN04	337	Time Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00- 23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	M	TM	4/8										

Semantics:

1. BSN03 is the date the shipment transaction set is created.
2. BSN04 is the time the shipment transaction set is created.

DTM Date/Time Reference

Pos: 040	Max: 10
Heading - Optional	
Loop: N/A	Elms: 4

To specify pertinent dates and times

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
DTM01	374	Date/Time Qualifier Description: Code specifying type of date or time, or both date and time	M	ID	3/3

Code	Name
011	Shipped

DTM02	373	Date Description: Date expressed as CCYYMMDD	C	DT	8/8
DTM03	337	Time Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H =hours (00- 23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD - hundredths (00-99)	C	TM	4/8
DTM04	623	Time Description: Code identifying the time	O	ID	2/2

Code	Name
CT	Central Time
ET	Eastern Time
LT	Local Time - Use for times outside the continental USA
MT	Mountain Time
PT	Pacific Time

Syntax:

R020305 - At least one of DTM02 or DTM03 is required.

C0403 - If DTM04 is present, then DTM03 is required.

HL

Hierarchical Level

Pos: 010	Max: 1
Detail - Mandatory	
Loop: HL	Elms: 4

To identify dependencies among and the content of hierarchically related groups of data segments

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
HL01	628	Hierarchical ID Number Description: A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	M	AN	1/12
HL02	734	Hierarchical Parent ID Number Description: Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O	AN	1/12
HL03	735	Hierarchical Level Code Description: Code defining the characteristic of a level in a hierarchical structure	M	ID	1/2

Code	Name
D	Product Description
I	Item
O	Order
S	Shipment
T	Shipping Tare - Used only for sheeted product

HLO4	736	Hierarchical Child Code Description: Code indicating if there are hierarchical child data segments subordinate to the level being described	O	ID	1/1
------	-----	--	---	----	-----

Code	Name
O	No Subordinate HL Segment in This Hierarchical Structure.
I	Additional Subordinate HL Data Segment in This Hierarchical Structure.

Comments:

- The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- The HL segment defines a top-down/left-right ordered structure.
- HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.
- The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.

LIN

Item Identification

Pos: 020	Max: 1
Detail - Optional	
Loop: N/A	Elem: 17

To specify basic item identification data

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
LIN01	350	Assigned Identification Description: Alphanumeric characters assigned for differentiation within a transaction set	O	AN	1/20
LIN02	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)	M	ID	2/2

Code	Name
BP	Buyer's Part Number
CL	Color
GC	Grade Code
GD	Grain Direction
GN	Grade Name
JP	Package Type Code
MA	Machine Number
PG	Packaging Specification Number - Use for identifiers on multi-roll packages
PM	Number of Positions on Machine
PS	Position
RD	Reel Number
RO	Roll Number
RS	Set Number
SK	Stock Keeping Unit (SKU)
SN	Serial Number
SU	Side Up/Side Down
VN	Vendor's (Seller's) Item Number - Use for the Sheeted Paper Identifier

LIN03	234	Product/Service ID Description: Identifying number for a product or service	M	AN	1/48
LIN04	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN05	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48
LIN06	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN07	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48

LIN08	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN09	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48
LIN10	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN11	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48
LIN12	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN13	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48
LIN14	235	Product/Service ID Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN15	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48
LIN16	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN17	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48

Syntax:

- P0405 - If either LIN04 or LIN05 are present, then the others are required.
- P0607 - If either LIN06 or LINO7 are present, then the others are required.
- P0809 - If either LIN08 or LIN09 are present, then the others are required.
- PI011 - If either LIN IO or LIN 11 are present, then the others are required.
- PI213 - If either LIN12 or LIN13 are present, then the others are required.
- PI415 - If either LIN14 or LIN15 are present, then the others are required.
- PI617 - If either LIN16 or LIN17 are present, then the others are required.

Semantics:

- I. LIN01 is the line item identification

PRF Purchase Order Reference

Pos: 050	Max: 1
Detail - Optional	
Loop: N/A	Elms: 4

To provide reference to a specific purchase order

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PRF01	324	Purchase Order Number Description: Identifying number for Purchase Order assigned by the orderer/purchaser	M	AN	1/22
PRF02	328	Release Number Description: Number identifying a release against a Purchase Order previously placed by the parties involved in the transaction	O	AN	1/30
PRF03	327	Change Order Sequence Number Description: Number assigned by the orderer identifying a specific change or revision to a previously transmitted transaction set	O	AN	1/8
PRF04	373	Date Description: Date expressed as CCYYMMDD	O	DT	8/8

Semantics:

- I. PRF04 is the date assigned by the purchaser to purchase order.

PO4 Item Physical Details

Pos: 060	Max: 1
Detail - Optional	
Loop: N/A	Elem: 13

To specify the physical qualities, packaging, weights, and dimensions relating to the item

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PO401	356	Pack Description: The number of inner containers, or number of individual units if there are no inner containers, per outer container. Use this data element to express the number of rolls in a package.	O	N0	1/6
PO402	357	Size Description: Size of supplier units in pack	C	R	1/8
PO403	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	C	ID	2/2

Code	Name
CM	Centimeter
IN	Inch
MM	Millimeter

PO404	103	Packaging Code Description: Code identifying the type of packaging; Part 1: Packaging Form, Part 2: Packaging Material. If the Data Element is used, then Part 1 is always required	C	AN	3/5
-------	-----	--	---	----	-----

Code	Name
Part 1: Packaging Form	
BOX	Box
CTN	Carton
MRP	Multi-Roll Pack
PLT	Pallet
ROL	Roll
SKD	Skid
Part 2: Packaging Material	
76	Paper
79	Plastic
90	Standard
94	Wood

PO405	187	Weight Qualifier Not used in this implementation of the standard.	O	ID	1/2
PO406	384	Gross Weight per Pack Not used in this implementation of the standard.	C	R	1/9

Ref	ID	Element Name	Reg	Type	MinMax
PO407	355	Unit or Basis for Measurement Code Not used in this implementation of the standard.	C	ID	2/2
PO408	385	Gross Volume per Pack Not used in this implementation of the standard.	C	R	1/9
PO409	355	Unit or Basis for Measurement Code Not used in this implementation of the standard.	C	ID	2/2
PO410	82	Length Description: Largest horizontal dimension of an object measured when the object is in the upright position	C	R	1/8
PO411	189	Width Description: Shorter measurement of the two horizontal dimensions measured with the object in the upright position	C	R	1/8
PO412	65	Height Description: Vertical dimension of an object measured when the object is in the upright position	C	R	1/8
PO413	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken. See PO403 for codes.	C	ID	2/2

Syntax:

1. PO402 P0203 - If either PO402 or PO403 are present, then the others are required.
2. PO410 C1013 - If PO410 is present, then P0413 is required
3. PO411 C1113 - If PO411 is present, then PO413 is required
4. P0412 C1213 - If PO412 is present, then PO413 is required
5. PO413 L13101112 - If PO413 is present, then at least one of PO410, PO411 or PO412 is required.

Comments:

1. PO403 - The “Unit or Basis for Measure Code” in this segment position is for purposes of defining the pack (PO401) /size (PO402) measure which indicates the quantity in the inner pack unit. For example: If the carton contains 24 12-Ounce packages, it would be described as follows: Data element 356 = “24”; Data element 357 = “12”; Data element 355 = “OZ”.
2. PO413 defines the unit of measure for PO410, PO411, and PO412.

PID

Product/Item Description

Pos: 070	Max: 200
Detail - Optional	
Loop: N/A	Elms: 5

To describe a product or process in coded or free-form format, in this case the AF&PA/GCA basis size codes and grain direction codes, and color and shade information from the seller.

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PID01	349	Item Description Type Description: Code indicating the format of a description	M	ID	1/1

Code	Name
F	Free-form
S	Structured (From Industry Code List)
X	Semi-structured (Code and Text)

PID02	750	Product/Process Characteristic Code Description: Code identifying the general class of a product or process characteristic	O	ID	2/3
-------	-----	---	---	----	-----

Code	Name
08	Product
35	Color
38	Grade
40	Shade
BW	Basis Weight Size
GD	Grain Direction

PID03	559	Agency Qualifier Code Description: Code identifying the agency assigning the code values	C	ID	2/2
-------	-----	---	---	----	-----

Code	Name
AS	Assigned by Seller - Use for color and shade codes/ descriptions
GC	Graphic Communications Association - Use for grain direction codes
PA	American Forest & Paper Assn - Use for basis weight size and recommended grade categories

PID04	751	Product Description Code Description: A code from an industry code list which provides specific data about a product characteristic	C	AN	1/12
-------	-----	--	---	----	------

Code	Name
BASIS WEIGHT SIZE CODES	
A	17 in x 22 in
B	20 in x 26 in
C	20 in x 30 in
D	22.5 in x 28.5 in
E	25.5 in x 30.5 in
F	24 in x 36 in
G	25 in x 38 in
H	1,000 square ft
J	Grams per sq meter
GRAIN DIRECTION CODES	
L	Grain direction, Long
S	Grain direction, Short

See Appendix for recommended grade categories

PID05	352	Description Description: A free-form description to clarify the related data elements and their content	C	AN	1/80
-------	-----	--	---	----	------

Syntax:

- C0403 - If PID04 is present, then PID03 is required
- R0405 - At least one of PID04 or PID05 is required.

Semantics:

1. Use PID03 to indicate the organization that publishes the code list being referred to.
2. PID04 should be used for industry-specific product description codes.

Comments:

- I. If PID01 equals "F", then PID05 is used. If PID01 equals "S", then PID04 is used. If PID01 equals "X", then both PID04 and PID05 are used.

MEA Measurements

Pos: 080	Max: 40
Detail - Optional	
Loop: N/A	Elms: 4

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
MEA01	737	Measurement Reference ID Code Description: Code identifying the broad category to which a measurement applies	O	ID	2/2

Code	Name
CS	Core Size
CT	Counts
PD	Physical Dimensions
SP	Splices
WT	Weights

MEA02	738	Measurement Qualifier Description: Code identifying a specific product or process characteristic to which a measurement applies	O	ID	1/3
-------	-----	--	---	----	-----

Code	Name
B	Billed Weight
G	Gross Weight
N	Actual Net Weight
T	Tare Weight
BK	Bulk
BW	Basis Weight
CA	Caliper
DI	Diameter
DN	Density
ID	Inside Diameter
LN	Length
NA	Number per Package
NU	Number per Unit
OD	Outside Diameter
TH	Thickness
WT	Weight

MEA03	739	Measurement Value Description: The value of the measurement	C	R	1/20
-------	-----	--	---	---	------

Ref	ID	Element Name	Reg	Type	MinMax
MEA04	C001	Composite Unit of Measure Description: To identify a composite unit of measure	C	Comp	
	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M	ID	2/2

Code	Name
BX	Box
CM	Centimeter
CT	Carton
FT	Foot
GR	Gram
IN	Inch
KG	Kilogram
LB	Pound
LF	Linear Foot
LM	Linear Meter
LR	Layer(s)
MM	Millimeter
MP	Metric ton
NS	Short Ton
PK	Package
PL	Pallet/Unit Load
PQ	Pages per Inch
RL	Roll
RM	Ream
SH	Sheet
SV	Skid
UN	Unit

Syntax:

1. MEA03 R03050608 - MEA03 is required.

Semantics:

1. MEA04 defines the unit of measure for MEA03.

PKG

Marking, Packaging, Loading

Pos: 100	Max: 25
Detail - Optional	
Loop: N/A	Elem: 4

To describe marking, packaging, loading, and unloading requirements, in this case industry codes for cores and skids.

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PKG01	349	Item Description Type Description: Code indicating the format of a description	C	ID	1/1

Code	Name
S	Structured (From Industry Code List)

PKG02	753	Packaging Characteristic Code Description: Code specifying the marking, packaging, loading and related characteristics being described	O	ID	1/5
-------	-----	---	---	----	-----

Code	Name
65	Core Characteristics
68	Skid/Pallet Type

PKG03	559	Agency Qualifier Code Description: Code identifying the agency assigning the code values	C	ID	2/2
-------	-----	---	---	----	-----

PKG04	754	Packaging Description Code Description: A code from an industry code list which provides specific data about the marking, packaging or loading and unloading of a product	C	AN	1/7
-------	-----	--	---	----	-----

Code	Name
Core 1	Material, Alpha
F	Fiber, reinforced
H	Fiber, high strength
X	Fiber, extra high strength
U	Fiber, ultra high strength
I	Iron
S	Steel
A	Aluminum

Core 2	End-type, Alpha
P	Plain
N	Notched
M	Notched, full metal (tip or cap)
C	Plain full metal (tip or cap)
H	Notched, half-metal (tip or cap)
I	Insert or sleeve
B	Bridge or half-notch
V	Beveled
T	Tapered
Skid 1	Position 1, Material
C	Compressed wood chip, as used in USPS
P	Plastic
W	Wood
Skid 2	Position 2, Construction
2	Two sides
4	Four sides

Syntax:

R040506 - PKG04 is required.

C0403 - If PKG04 is present, then PKG03 is required

Semantics:

1. PKG04 should be used for industry-specific packaging description codes.

Comments:

1. Use the MEA (Measurements) segment to define dimensions of the core, i.e. inside and outside diameters.
2. Use PKG03 to indicate the organization that publishes the code list being referred to.

TD5

Carrier Details (Routing Sequence/Transit Time)

Pos: 120	Max: 12
Detail - Optional	
Loop: N/A	Elms: 5

To specify the carrier and sequence of routing and provide transit time information

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
TD501	133	Routing Sequence Code Description: Code describing the relationship of a carrier to a specific shipment movement	O	ID	1/2

Code	Name
1	1st Carrier after Origin Carrier
2	2nd Carrier after Origin Carrier
A	Origin Carrier Agent's Routing (Rail)

TD502	66	Identification Code Qualifier Description: Code designating the system/method of code structure used for Identification Code (67)	C	ID	1/2
-------	----	--	---	----	-----

Code	Name
1	D-U-N-S Number, Dun & Bradstreet
2	Standard Carrier Alpha Code (SCAC)
9	D-U-N-S+4,D-U-N-S Number with Four Character Suffix
20	Standard Point Location Code (SPLC)
91	Assigned by Seller or Seller's Agent
92	Assigned by Buyer or Buyer's Agent

TD503	67	Identification Code Description: Code identifying a party or other code	C	AN	2/80
-------	----	--	---	----	------

TD504	91	Transportation Method/Type Code Description: Code specifying the method or type of transportation for the shipment	C	ID	1/2
-------	----	---	---	----	-----

Code	Name
A	Air
B	Barge
M	Motor (Common Carrier)
O	Containerized Ocean
R	Rail
X	Intermodal (Piggyback)
CE	Customer Pickup/ Customer's Expense
LT	Less Than Trailer Load (L TL)
VE	Vessel,Ocean
VL	Vessel,Lake

Ref	ID	Element Name	Reg	Type	MinMax
TD505	387	Routing Description: Free-form description of the routing or requested routing for shipment, or the originating carrier's identity	C	AN	1/35

Syntax:

R0204050612 -At least one of TD502, TD504, or TD505 is required.
 C0203 - If TD502 is present, then TD503 is required

Comments:

1. When specifying a routing sequence to be used for the shipment movement in lieu of specifying each carrier within the movement, use TD502 to identify the party responsible for defining the routing sequence, and use TD503 to identify the actual routing sequence, specified by the party identified in TD502.

TD3 Carrier Details (Equipment)

Pos: 130	Max: 12
Detail - Optional	
Loop: N/A	Elms: 3

To specify transportation details relating to the equipment used by the carrier

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
TD301	40	Equipment Description Code Description: Code identifying type of equipment used for shipment	C	ID	2/2

Code	Name
AF	Air Freight (Break Bulk)
BR	Barge
BX	Boxcar
CN	Container
RF	Flat Car
RR	Rail Car
TL	Trailer (not otherwise specified)
TV	Truck, Van
VE	Vessel, Ocean
VL	Vessel, Lake
VT	Vessel, Containership

TD302	206	Equipment Initial Description: Prefix or alphabetic part of an equipment unit's identifying number	O	AN	1/4
TD303	207	Equipment Number Description: Sequencing or serial part of an equipment unit's identifying number (pure numeric form for equipment number is preferred)	C	AN	1/10

Syntax:

C0203 - If TD302 is present, then TD303 is required

REF

Reference Identification

Pos: 150	Max: >1
Detail - Optional	
Loop: N/A	Elms: 3

To specify identifying information

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
REF01	128	Reference Identification Qualifier Description: Code qualifying the Reference Identification	M	ID	2/3

Code	Name
97	Package Number
AP	Accounts Receivable Number
BM	Bill of Lading Number
EQ	Equipment Number
MI	Mill Order Number
SN	Seal Number
SO	Shipper's Order (Invoice Number)
VP	Vendor Product Number

REF02	127	Reference Identification Description: Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	C	AN	1/30
REF03	352	Description Description: A free-form description to clarify the related data elements and their content	C	AN	1/80

Syntax:

- I. REF02 R0203 - At least one of REF02 or REF03 is required

MAN Marks and Numbers

Pos: 190	Max: >1
Detail - Optional	
Loop: N/A	Elms: 2

To indicate identifying marks and numbers for shipping containers

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax												
MAN01	88	Marks and Numbers Qualifier Description: Code specifying the application or source of Marks and Numbers (87)	M	ID	1/2												
<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>Line Item Only</td> </tr> <tr> <td>S</td> <td>Entire Shipment</td> </tr> <tr> <td>SM</td> <td>Shipper Assigned</td> </tr> <tr> <td>SR</td> <td>Shipper Assigned Roll Number</td> </tr> <tr> <td>SS</td> <td>Shipper Assigned Skid Number</td> </tr> </tbody> </table>						Code	Name	L	Line Item Only	S	Entire Shipment	SM	Shipper Assigned	SR	Shipper Assigned Roll Number	SS	Shipper Assigned Skid Number
Code	Name																
L	Line Item Only																
S	Entire Shipment																
SM	Shipper Assigned																
SR	Shipper Assigned Roll Number																
SS	Shipper Assigned Skid Number																
MAN02	87	Marks and Numbers Description: Marks and numbers used to identify a shipment or parts of a shipment	M	AN	1/48												

DTM

Date/Time Reference

Pos: 200	Max: 10
Detail - Optional	
Loop: N/A	Elms: 2

To specify identifying information

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax								
DTM01	374	Date/Time Qualifier Description: Code specifying type of date	M	ID	3/3								
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>004</td> <td>Purchase Order</td> </tr> <tr> <td>094</td> <td>Manufacture</td> </tr> <tr> <td>096</td> <td>Discharge (from port)</td> </tr> </tbody> </table>	Code	Name	004	Purchase Order	094	Manufacture	096	Discharge (from port)			
Code	Name												
004	Purchase Order												
094	Manufacture												
096	Discharge (from port)												
DTM02	373	Date Description: Date expressed as CCYYMMDD	C	DT	8/8								

Syntax:

- DTM02 R020305 - DTM02 is required.

N1

Name

Pos: 220	Max: 1
Detail - Optional	
Loop: N1	Elms: 4

To identify a party by type of organization, name, and code

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
N101	98	Entity Identifier Code Description: Code identifying an organizational entity, a physical location, property or an individual	M	ID	2/3

Code	Name
BO	Broker or Sales Office
BY	Buying Party (Purchaser)
CA	Carrier
CB	Customs Broker
MA	Party for whom Item is Ultimately Intended
MP	Manufacturing Plant
SD	Sold To and Ship To
SE	Selling Party
SF	Ship From
SO	Sold To If Different From Bill To
ST	Ship To
SU	Supplier/Manufacturer
UC	Ultimate Consignee
VN	Vendor
WH	Warehouse

N102	93	Name Description: Free-form name	C	AN	1/60
N103	66	Identification Code Qualifier Description: Code designating the system/method of code structure used for Identification Code (67)	C	ID	1/2

Code	Name
1	D-U-N-S Number, Dun & Bradstreet
9	D-U-N-S+4,D-U-N-S Number with Four Character Suffix
15	Standard Address Number (SAN)

N104	67	Identification Code Description: Code identifying a party or other code	C	AN	2/80
------	----	--	---	----	------

Syntax:

1. N102 R0203 - At least one of N102 or N103 is required.
2. NI03 P0304 - If either N103 or N104 are present, then the others are required.

Comments:

1. This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

N3

Address Information

Pos: 240	Max: 2
Detail - Optional	
Loop: N/A	Elms: 2

To specify the location of the named party

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
N301	166	Address Information Description: Address information	M	AN	1/55
N302	166	Address Information Description: Address information	O	AN	1/55

N4

Geographic Location

Pos: 250	Max: 1
Detail - Optional	
Loop: N/A	Elms: 4

To specify the geographic place of the named party

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
N401	19	City Name Description: Free-form text for city name	O	AN	2/30
N402	156	State or Province Code Description: Code (Standard State/Province) as defined by appropriate government agency	O	ID	2/2
N403	116	Postal Code Description: Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O	ID	3/15
N404	26	Country Code Description: Code identifying the country	O	ID	2/3

Comments:

1. The combination of N401 through N404 specifies a location.
2. N402 is required only if city name (N401) is in the U.S. or Canada.

REF

Reference Identification

Pos: 260	Max: 12
Detail - Optional	
Loop: N/A	Elms: 3

To specify identifying information

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
REF01	128	Reference Identification Qualifier Description: Code qualifying the Reference Identification	M	ID	2/3

Code	Name
CG	Consignee's Order Number
CO	Customer Order Number
CT	Contract Number
JB	Job (Project) Number
MI	Mill Order Number
PO	Purchase Order Number

REF02	127	Reference Identification Description: Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	C	AN	1/30
REF03	352	Description Description: A free-form description to clarify the related data elements and their content	C	AN	1/80

Syntax:

- I. REF02 R0203 - At least one of REF02 or REF03 is required.

PER

Administrative Communications Contact

Pos: 270	Max: 3
Detail - Optional	
Loop: N/A	Elms: 4

To identify a person or office to whom administrative communications should be directed

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax				
PER01	366	Contact Function Code Description: Code identifying the major duty or responsibility of the person or group named	M	ID	2/2				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>IC</td> <td>Information Contact</td> </tr> </tbody> </table>	Code	Name	IC	Information Contact			
Code	Name								
IC	Information Contact								
PER02	93	Name Description: Free-form name	O	AN	1/60				
PER03	365	Communication Number Qualifier Description: Code identifying the type of communication number	C	ID	2/2				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>TE</td> <td>Telephone</td> </tr> </tbody> </table>	Code	Name	TE	Telephone			
Code	Name								
TE	Telephone								
PER04	364	Communication Number Description: Complete communications number including country or area code when applicable	C	AN	1/80				

Syntax:

- I. PER03 P0304 - If either PER03 or PER04 are present, then the others are required.

CTT

Transaction Totals

Pos: 010	Max: 1
Summary - Optional	
Loop: N/A	Elms: 4

To transmit a hash total for a specific element in the transaction set

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
CTT01	354	Number of Line Items Description: Total number of line items in the transaction set	M	N0	1/6

Comments:

1. This segment is intended to provide hash totals to validate transaction completeness and correctness.
2. Number of line items (CTT01) is the accumulation of the number of HL segments.

SE

Transaction Set Trailer

Pos: 020	Max: 1
Summary - Mandatory	
Loop: N/A	Elms: 2

To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
SE01	96	Number of Included Segments Description: Total number of segments included in a transaction set including ST and SE segments	M	N0	1/10
SE02	329	Transaction Set Control Number Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9

Comments:

- I. SE is the last segment of each transaction set.

EMBARC/X12

Roll paper example

Manifest with multiple products, and single and multi-roll packages

Manifest and shipment information

Transaction control number	1234560
Manifest number	1234567
Manifest date and time	November 1, 2000 9:05 am
Shipment date and time	October 31 , 2000 1:05 pm
Sold to: ABC Publishers	DUNS+4: 123456789-0001
Purchase order number	1122233A
Ship to: XYZ Printers, ABC plant	DUNS+4: 234567891-0001
Consignee purchase order number	234567
Seller: ZZZ Paper Company	DUNS+4: 345678912-0001
Ship from: AAA mill	DUNS+4: 345678912-0002
AF&PA/CPPA mill code	ZZ2
Mill order number	654321
Carrier: BBB Transport	DUNS+4: 456789123-0001
Transportation mode	Truck
Vehicle ID	XTL 14803
Seal number	576579
Bill of lading	BOL974672

Shipment details

Product 1. Grade name	Quality Web Offset
Grade code	WO40
Stock keeping unit (SKU) code	WP26635
Basis weight	40 lb
Color code (white)	WHT
Roll width	33.5 in
Roll diameter	40.0 in
Core weight	18 lb
Roll core type and dimensions	Iron core, plain end Inside diameter = 3 in Thickness = 1 in
Number of rolls in package	1

Product in shipment, by roll ID	Net weight
ZZ240K2025300	893 lbs
ZZ240K2025325	869
ZZ240K2025350	877
ZZ240K2025399	889
ZZ240K2026100	896
ZZ240K2026133	879
Total number of rolls for product 1	6
Gross weight	5,411 lbs
Tare weight	108
Net weight	5,303
Product 2, Grade name	Quality Web Offset
Grade code	WO36
Stock keeping unit (SKU) code	WO43633540-2
Basis weight	36 lb
Color code (white)	WHT
Roll width	27.0 in
Roll diameter	40.0 in
Core weight	5 lb
Roll core type and dimensions	Fiber core/high strength, tapered end Inside diameter = 3 in Thickness = 1 in
Number of rolls in package	2
Product in shipment, by package and roll ID	Net weight
Package ID: ZZ210K2510100	
ZZ210K2510100	897 lbs
ZZ210K2510133	897
Package ID: ZZ210K2510167	
ZZ210K2510167	896
ZZ210K2510199	895
Package ID: ZZ210K2410250	
ZZ210K2410250	879
ZZ210K2410275	879
Total packages for product 2	3
Total number of rolls for product 2	6
Gross weight	5,373 lbs
Tare weight	30
Net weight	5,343

Multiple product example in X12 format

Header information

Transaction set header ST*856*1234560 n/l
 Manifest number, date and time BSN*00*1234567*20001101*0905 n/l
 Shipment date and time DTM*011*20001031 *1305 n/l

Shipment detail

Total rolls in shipment HL*1**S*1 n/l
 Total packages in shipment MEA*CT**12*RL n/l
 Total gross weight MEA*CT**9*PK n/l
 Total tare weight MEA*WT*G*10784*LB n/l
 Total net weight MEA*WT*I*138*LB n/l
 MEA*WT*N*10646*LB n/l

Transportation:

Carrier initial and trailer number TD3*TL*XTL*14803 n/l
 Seal number REF*SN*576579 n/l
 Bill of lading number REF*BM* BOL974672 n/l
 Carrier name and DUNS number N1*CA*BBB Transport*9*4567891230001 n/l

Parties in the transaction and references:

Sold-to name and DUNS number N1*SO*ABC Publishers*9*1234567890001 n/l
 Buyer's purchase order REF*PO*1122233A n/l
 Ship-to name and DUNS number N1*ST*XYZ Printers, ABC plant*9*2345678910001 n/l
 Consignee (ship-to) order reference REF*CG*234567 n/l
 Supplier's name and DUNS number N1*SU*ZZZ Paper*9*3456789120001 n/l
 Ship-from mill name and DUNS number N1*SF*AAA mill*9*3456789120002 n/l
 Mill order number REF*MI*654321 n/l

Product detail, product 1

HL*2*1*D*1 n/l
 Grade code, grade name, SKU, color LIN**GC*WO40*GN*Quality Web Offset*SK* WP26635*CL *WHT n/l
 No. of rolls in package, width, diameter PO4*1*33.5*IN*ROL76*****40*IN n/l
 Basis weight size (code G) PID*S*BW*PA*G n/l
 Basis weight, product 1 MEA*WT*BW*40*LB n/l
 Total number of rolls product 1 MEA*CT**6*RL n/l
 Total gross weight for product 1 MEA*WT*G*5411*LB n/l
 Total tare weight for product 1 MEA*WT*I*108*LB n/l
 Total net weight for product 1 MEA*WT*N*5303*LB n/l
 Individual core weight MEA*CS*WT*18*LB n/l
 Roll core inside diameter MEA*CS*ID*3*IN n/l
 Roll core thickness MEA*CS*TH*1*IN n/l
 Roll core type PKG*S*65*GC*IC n/l

Item detail, product 1	HL*3*2*I n/l
Roll number	LIN**RO* ZZ240K2025300 n/l
Net weight	MEA*WT*N*893*LB n/l
Item detail, product 1	HL*4*2*I n/l
Roll number	LIN**RO* ZZ240K2025325 n/l
Net weight	MEA*WT*N*869*LB n/l
Item detail, product 1	HL*5*2*I n/l
Roll number	LIN**RO*ZZ240K2025350 n/l
Net weight	MEA*WT*N*877*LB n/l
Item detail, product 1	HL*6*2*I n/l
Roll number	LIN**RO*ZZ240K2025399 n/l
Net weight	MEA*WT*N*889*LB n/l
Item detail, product 1	HL*7*2*I n/l
Roll number	LIN**RO*ZZ240K2026100 n/l
Net weight	MEA*WT*N*896*LB n/l
Item detail, product 1	HL*8*2*I n/l
Roll number	LIN**RO*ZZ240K2026133 n/l
Net weight	MEA*WT*N*879*LB n/l
Product detail, product 2	HL*9*1*D*I n/l
Grade code, grade name, SKU, color	LIN**GC*WO36*GN*QualityWeb Offset *SK*WO3633540-2*CL *WHT n/l
No. of rolls in package, width, diameter	PO4*2*27*IN*ROL76*****40*IN n/l
Basis weight size, product 2 (Code G)	PID*S*BW*PA*G n/l
Basis weight, product 2	MEA*WT*BW*36*LB n/l
Individual core weight	MEA*CS*WT*5*LB n/l
Total number of packages for product 2	MEA*CT**3*PK n/l
Total number of rolls for product 2	MEA*CT**6*RL n/l
Total gross weight for product 2	MEA*WT*G*5373 *LB n/l
Total tare weight for product 2	MEA*WT*T*30*LB n/l
Total net weight for product 2	MEA*WT*N*5343*LB n/l
Roll core inside diameter	MEA*CS*ID*3*IN n/l
Roll core thickness	MEA*CS*TH*1*IN n/l
Roll core type	PKG*S*65*GC*HT n/l
Item detail, product 2	HL*10*9*1*I n/l
Package ID, roll number	LIN**PG*ZZ210K2510100*RO* ZZ210K2510100 n/l
Net weight	MEA*WT*N*897*LB n/l
Item detail, product 2	HL*11*10*I n/l
Roll number	LIN**RO*ZZ210K2510133 n/l
Net weight	MEA*WT*N*897*LB n/l
Item detail, product 2	HL*12*9*1*I n/l
Package ID, roll number	LIN**PG*ZZ210K2510167*RO*ZZ210K2510167 n/l
Net weight	MEA*WT*N*896*LB n/l
Item detail, product 2	HL*13*12*I n/l
Roll number	LIN**RO*ZZ210K2510199 n/l
Net weight	MEA*WT*N*895*LB n/l

Item detail, product 2	HL*14*9*I*1 n/l
Package ID, roll number	LIN**PG*ZZ210K2401250*RO*ZZ210K2410250 n/l
Net weight	MEA*WT*N*879*LB n/l

Item detail, product 2	HL*15*14*1 n/l
Roll number	LIN**RO*ZZ210K2410275 n/l
Net weight	MEA*WT*N*879*LB n/l

Summary:

Number of HL segments in transaction	CTT*15 n/l
Transaction set trailer	SE*86*1234560 n/l

Roll paper manifest with multiple orders

Manifest and shipment information

Transaction control number	765432
Manifest number	20001101-2
Manifest date and time	November 1, 2000 11:05 pm

Shipment date and time	November 1, 2000 10:00 pm
------------------------	------------------------------

Sold to: ABC Publishers	DUNS+4: 123456789-0001
Ship to: XYZ Printers, ABC plant	DUNS+4: 234567891-0001
Seller: ZZZ Paper Company	DUNS+4: 345678912-0001
Ship from: AAA mill	DUNS+4: 345678912-0002
AF&PA/CPPA mill code	ZZ2

Carrier: BBB Transport	DUNS+4: 456789123-0001
Transportation mode	Truck
Vehicle ID	XTL 14803
Seal number	975675
Bill of lading	LAD659823

Shipment details

Order 1.	
Purchase order number and date	97531, 10 October 2000
Mill order number	102938

Product data, order 1	Quality Web Offset
Grade name	WO40
Grade code	40 lb
Basis weight	25 x 38 in (Code G)
Basis weight size	WHT
Color code (white)	33.5 in
Roll width	40.0 in
Roll diameter	18lb
Core weight	Iron core, plain end
Roll core type and dimensions	Inside diameter= 3 in Thickness = 1 in
Number of rolls in package	1

Product in shipment, by roll ID	Net weight
ZZ240K2025300	893 lbs
ZZ240K2025325	869
ZZ240K2025350	877
ZZ240K2025399	889
ZZ240K2026100	896
ZZ240K2026133	879
Total number of rolls for order 1	6
Gross weight	5,411 lbs
Tare weight	108
Net weight	5,303
Order 2	
Purchase order number and date	97539, 14 October 2000
Mill order number	102985
Product data, order 2	Quality Web Offset
Grade name	WO40
Grade code	40 lb
Basis weight	25 x 38 in (Code G)
Basis weight size	WHT
Color code (white)	27.0 in
Roll width	40.0 in
Roll diameter	18 lb
Core weight	Iron core, plain end
Roll core type and dimensions	Inside diameter = 3 in Thickness = 1 in
Number of rolls in package	2
Product in shipment, by package and roll ID	Net weight
Package1D:ZZ210K2510100	
ZZ210K2510100	897 lbs
ZZ210K2510133	897
Package1D:ZZ210K2510167	
ZZ210K2510167	896
ZZ210K2510199	895
Package1D:ZZ210K2410250	
ZZ210K2410250	879
ZZ210K2410275	879
Total packages for order 2	3
Total number of rolls for order 2	6
Gross weight	5,451 lbs
Tare weight	108
Net weight	5,343

Multiple order example in X12 format

Header information

Transaction set header ST*856*765432 n/l
 Manifest number, date and time BSN*00*20001101-2*20001101*2305 n/l
 Shipment date and time DTM*011*20001101*2200 n/l

Shipment detail

Total rolls in shipment HL*1**1 n/l
 MEA*CT**12*RL n/l
 Total packages in shipment MEA*CT**9*PK n/l
 Total gross weight MEA*WT*G*10862*LB n/l
 Total tare weight MEA*WT*T*216*LB n/l
 Total net weight MEA*WT*N*10646*LB n/l

Transportation:

Carrier initial and trailer number TD3*TL*XTL*14803 n/l
 Seal number REF*SN*576579 n/l
 Bill of lading number REF*BM*LAD659823 n/l
 Carrier name and DUNS number N1*CA*BBB Transport*9*4567891230001 n/l

Parties in the transaction:

Sold-to name and DUNS number N1*SO*ABC Publishers*9*1234567890001 n/l
 Ship-to name and DUNS number N1*ST*XYZ Printers, ABC plant*9* 2345678910001 n/l

Supplier's name and DUNS number N1*SU*ZZZ Paper*9*3456789120001 n/l
 Ship-from mill name and DUNS number N1*SF*AAA mill*9*3456789120002 n/l

Order 1 detail

Purchase order number and date HL*2*1*O*1 n/l
 PRF*97531**20001010 n/l
 Total number of rolls order 1 MEA*CT**6*RL n/l
 Total gross weight for order 1 MEA*WT*G*5411 *LB n/l
 Total tare weight for order 1 MEA*WT*T*108*LB n/l
 Total net weight for order 1 MEA*WT*N*5303*LB n/l
 Mill order number REF*MI*102938 n/l

Product data, order 1

Grade code, grade name, color HL3*2*D*1 n/l
 LIN**GC*W040*GN*Quality Web Offset* CL *WHT n/l
 No. of rolls in package, width, diameter PO4*1*33.5*IN*ROL76*****40*IN n/l
 Basis weight size (code G) PID*S*BW*PA*G n/l
 Basis weight, product 1 MEA*WT*BW*40*LB n/l
 Individual core weight MEA*CS*WT*18*LB n/l
 Roll core inside diameter MEA*CS*ID*3*IN n/l
 Roll core thickness MEA*CS*TH*1*IN n/l
 Roll core type PKG*S*65*GC*IC n/l

Item detail, order 1

Roll number HL*4*3*I n/l
 LIN**RO* ZZ240K2025300 n/l
 Net weight MEA*WT*N*893*LB n/l

Item detail, order 1

Roll number HL*5*3*I n/l
 LIN**RO* ZZ240K2025325 n/l
 Net weight MEA*WT*N*869*LB n/l

Item detail, order 1

Roll number HL*6*3*1 n/l
 LIN**RO*ZZ240K2025350 n/l
 Net weight MEA*WT*N*877*LB n/l

Item detail, order 1

Roll number HL*7*3 *I n/l
 LIN**RO*ZZ240K2025399 n/l
 Net weight MEA*WT*N*889*LB n/l

Item detail, order 1

Roll number HL*8*3*I n/l
 LIN**RO*ZZ240K2026100 n/l
 Net weight MEA*WT*N*896*LB n/l

Item detail, order 1

Roll number HL*9*3*I n/l
 LIN**RO*ZZ240K2026133 n/l
 Net weight MEA*WT*N*879*LB n/l

Order 2 detail

Purchase order number and date HL*10*1*O*1
 PRF*97539**20001014 n/l
 Total number of packages for order 2 MEA*CT**3*PK n/l
 Total number of rolls for order 2 MEA*CT**6*RL n/l
 Total gross weight for order 2 MEA*WT*G*5451*LB n/l
 Total tare weight for order 2 MEA*WT*T*108*LB n/l
 Total net weight for order 2 MEA*WT*N*5343*LB n/l
 Mill order number REF*MI*102985 n/l

Product data, order 2

Grade code, grade name, color HL*11*10*D*1 n/l
 LIN**GC*W040*GN*Quality Web Offset* CL *WHT n/l
 No. of rolls in package, width, diameter PO4*2*27*IN*ROL76*****40*IN n/l
 Basis weight size, product 2 (Code G) PID*S*BW*PA*G n/l
 Basis weight, product 2 MEA*WT*BW*36*LB n/l
 Individual core weight MEA*CS*WT*18*LB n/l
 Roll core inside diameter MEA*CS*ID*3*IN n/l
 Roll core thickness MEA*CS*TH*1*IN n/l
 Roll core type PKG*S*65*GC*IC n/l

Item data, order 2

 Package ID, roll number
 Net weight

 HL*12*11*I*1 n/l
 LIN**PG*ZZ210K2510100*RO* ZZ210K2510100 n/l
 MEA*WT*N*897*LB n/l

Item detail, order 2

 Roll number
 Net weight

 HL*13*12*I n/l
 LIN**RO*ZZ210K2510133 n/l
 MEA*WT*N*897*LB n/l

Item detail, order 2

 Package ID, roll number
 Net weight

 HL*14*11*I*1 n/l
 LIN**PG*ZZ210K2510167*RO*ZZ210K2510167 n/l
 MEA*WT*N*896*LB n/l

Item detail, order 2

 Roll number
 Net weight

 HL*15*14*I n/l
 LIN**RO*ZZ210K2510199 n/l
 MEA*WT*N*895*LB n/l

Item detail, order 2

 Package ID, roll number
 Net weight

 HL*16*11*I*1 n/l
 LIN**PG*ZZ210K2410250*RO* 22210K2410250 n/l
 MEA*WT*N*879*LB n/l

Item detail, order 2

 Roll number
 Net weight

 HL*17*16*I n/l
 LIN**RO*ZZ210K2410275 n/l
 MEA*WT*N*879*LB n/l

Summary:

 Number of HL segments in transaction
 Transaction set trailer

 CTT*17 n/l
 SE*90*765432 n/l

EMBARC/X12 - 1998

Manifest with sheeted paper example

Transaction control number 07654321
Date of transmission July 24, 1999
Time of transmission 10:12 pm

Parties in the transaction

Seller: Top Notch Paper Co.
Sycamore, Division DUNS number: 135792468-0001
Contact: Joe Dimaggio, Tel. 101-555-9999

Sold to: World Class Books Standard Address Number (SAN): 864-2975
Contact: Lou Gehrig, Tel. 105-555-8888

Ship to: Quality Printers
Northern Plant DUNS number: 975318642-0003
Contact: George H. Ruth, Tel. 108-555-7777

Shipment information

Carrier CommCarr Trucking, DUNS 224466889
Route Transource 485158
Seal number 46295
Shipment date July 24, 1999
Bill of lading number 77985
Manifest number 01Y18657-579641
Invoice number 74102

Order information

Customer purchase order E877 D2982C
Mill order number 579641

Description of paper

Company grade code ENX700
Grade name Enamel Book Offset
Basis weight 70 lb
Sheet width 24in
Sheet length 36 in
Shade Eggshell
Bulk 360 ppi
Nominal ream weight 63.6 lb
Total (billed) ream weight 11,130 lb
Packaging Skid
Skid type Wood, runners, two-way entry

Item	Skid Identifier*	No. of Reams	Gross Weight	Tare Weight	Net Weight	Sheet Count
1	TNSA4BG239790	39	2,600	96	2,504	19,500
2	TNSA4BG239791	22	1,466	53	1,413	11,000
3	TNSA4BG239792	38	2,534	96	2,438	19,000
4	TNSA4BG239793	38	2,571	96	2,475	19,000
5	TNSA4BG239794	38	2,600	96	2,504	19,000
Total		175	11,771	437	11,334	87,500

Nominal ream weight	63.6 Lb
Total nominal (billed) ream wt	11130.0 Lb

*Using the Sheeted Paper Identifiers Specification

Sheeted Paper Example Mapped to X12 Standard

	Header
Transaction set header	ST*856*07654321 n/l
Manifest number, date and time created	BSN*00*01Y18657-579641*19990724*2212 n/l
Shipment date	DTM*011*19990724 n/l
	Detail
Shipment	HL*1**S*1 n/l
Total number of reams	MEA*CT**175*RM n/l
Total number of sheets	MEA*CT**87500* SH n/l
Gross weight	MEA*WT*G*11771*LB n/l
Net weight	MEA*WT*N*11334*LB n/l
Nominal ream weight	MEA*WT*RE*63.6*LB n/l
Total nominal (billed) ream weight	MEA*WT*B*11130*LB n/l
Transportation:	
Motor and routing	TD5****M* TRANSOURCE 485158 n/l
Seal number	REF*SN*46295 n/l
Bill of lading number	REF*BM*77985 n/l
Carrier name and DUNS	N1*CA*COMMCARR TRUCK*1*224466B89 n/l
Parties in the transaction:	
Sold-to customer and SAN	N1*SO*WORLD CLASS BKS*15*8642975 n/l
Sold-to contact	PER*IC*LOU GEHRIG*TE*105-555-8888 n/l
Customer purchase order	REF*PO*E877 D2982C n/l
Ship-to customer and DUNS+4	N1*ST*QUALITY PRNTRS, NORTHERN DIV*9*9753186420003 n/l
Ship-to contact	PER*IC*GEO H RUTH*TE*108-555-7777 n/l
Ship-from and DUNS+4	N1*SF*TOP NOTCH PPR, SYCAMORE DIV*9*135792468-0001 n/l
Ship-from contact	PER*IC*JOE DIMAGGIO*TE*101-555-9999 n/l
Mill order number	REF*MI*579641 n/l
Product description	HL*2*1*D*1 n/l
Company grade code and name	LIN**GC*ENX700*GN*ENAMEL BOOK OFFSET n/l
Shade	PID*F*40*AS**Eggshell n/l
Basis weight size	PID*S*BW*PA*B n/l
Basis weight	MEA*WT*BW*70*LB n/l
Sheet width	MEA*PD*WD*24*IN n/l
Sheet length	MEA*PD*LN*36*IN n/l
Bulk	MEA*PD*BK*360*PQ n/l
Shipping tare	HL*3*2*T*1 n/l
Number of skids	MEA*CT**5*SV n/l
Total tare weight	MEA*WT*T*437*LB n/l
Skid type	PKG*S*68*GC*W2 n/l

Item 1

Item number, skid identifier
 Number of reams
 Gross weight
 Tare weight
 Net weight
 Sheet count

HL*4*3*1 n/l
 LIN*1*VN*TNSA4BG239790 n/l
 MEA*CT**39*RM n/l
 MEA*WT**G*2600*LB n/l
 MEA*WT*T*96*LB n/l
 MEA*WT*N*2504*LB n/l
 MEA*CT**19500*SH n/l

Item 2

Item number, skid identifier
 Number of reams
 Gross weight
 Tare weight
 Net weight
 Sheet count

HL*5*3*1 n/l
 LIN*2*VN*TNSA4BG239791 n/l
 MEA*CT**22*RM n/l
 MEA*WT**G*1466*LB n/l
 MEA*WT*T*53*LB n/l
 MEA*WT*N*1413*LB n/l
 MEA*CT**11000*SH n/l

Item 3

Item number, skid identifier
 Number of reams
 Gross weight
 Tare weight
 Net weight
 Sheet count

HL*6*3*1 n/l
 LIN*3*VN*TNSA4BG239792 n/l
 MEA*CT**38*RM n/l
 MEA*WT**G*2534 LB n/l
 MEA*WT*T*96 LB n/l
 MEA*WT*N*2438*LB n/l
 MEA*CT**19000*SH n/l

Item 4

Item number, skid identifier
 Number of reams
 Gross weight
 Tare weight
 Net weight
 Sheet count

HL*7*3*1 n/l
 LIN*4*VN*TNSA4BG239793 n/l
 MEA*CT**38*RM n/l
 MEA*WT**G*2571 LB n/l
 MEA*WT*T*96 LB n/l
 MEA*WT*N*2475*LB n/l
 MEA*CT**19000*SH n/l

Item 5

Item number, skid identifier
 Number of reams
 Gross weight
 Tare weight
 Net weight
 Sheet count

HL*8*3*1 n/l
 LIN*5*VN*TNSA4BG239794 n/l
 MEA*CT**38*RM n/l
 MEA*WT**G*2600*LB n/l
 MEA*WT*T*96*LB n/l
 MEA*WT*N*2504*LB n/l
 MEA*CT**19000*SH n/l

Summary

Total number of HL segments
 Total number of segments

CTT*8 n/l
 SE*71*07654321 n/l

GCA Standard 1998 -134 Receiving Advice/Acceptance Certificate for Paper Used in Publishing and Printing

This document contains the format and establishes the data contents of the Receiving Advice/Acceptance Certificate Transaction Set (861) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business and industry practice relative to the notification of receipt or formal acceptance of goods and services.

Heading:

Pos	ID	Segment Name	Req	Max Use	Repeat	Notes	Page number
010	ST	Transaction Set Header	M	1			50
020	BRA	Beginning Segment for Receiving Advice or Acceptance Certificate	M	1			51
070	DTM	Date/Time Reference	M	10			52
080	PRF	Purchase Order Reference	O	25			53
110	TD3	Carrier Details (Equipment)	O	12			54
LOOP ID		N1	200				
130	N1	Name	O	1			55
170	REF	Reference Identification	O	100			56
180	PER	Administrative Communications Contact	O	3			57

Detail:

Pos	ID	Segment Name	Req	Max Use	Repeat	Notes	Page number
LOOP ID		RCD	200000				
010	RCD	Receiving Conditions	O	1			58
040	LIN	Item Identification	O	100			61
050	PID	Product/Item Description	O	1000			62
090	DTM	Date/Time Reference	O	10			64
110	MEA	Measurements	O	>1			65

Summary:

Pos	ID	Segment Name	Req	Max Use	Repeat	Notes	Page number
010	CTT	Transaction Totals	O	1			67
020	SE	Transaction Set Trailer	M	1			68

ST

Transaction Set Header

Pos: 010	Max: 1
Heading - Mandatory	
Loop: N/A	Elms: 2

To indicate the start of a transaction set and to assign a control number

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax				
ST01	143	Transaction Set Identifier Code Description: Code uniquely identifying a Transaction Set	M	ID	3/3				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>861</td> <td>Receiving Advice/Acceptance Certificate</td> </tr> </tbody> </table>	Code	Name	861	Receiving Advice/Acceptance Certificate			
Code	Name								
861	Receiving Advice/Acceptance Certificate								
ST02	329	Transaction Set Control Number Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9				

Semantics:

1. The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 861 selects the Receiving Advice/Acceptance Certificate Transaction Set).

BRA

Beginning Segment for Receiving Advice or Acceptance Certificate

Pos: 020	Max: 1
Heading - Mandatory	
Loop: N/A	Elms: 6

To indicate the beginning of a Receiving Advice or Acceptance Certificate Transaction Set and transmit an identifying number, date, and time

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
BRA01	127	Reference Identification: Description: Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	M	AN	1/30
BRA02	373	Date Description: Date expressed as CCYYMMDD	M	DT	8/8
BRA03	353	Transaction Set Purpose Code Description: Code identifying purpose of transaction set	M	ID	2/2

Code	Name
00	Original
01	Cancellation
05	Replace

BRA04	962	Receiving Advice or Acceptance Certificate Type Code Description: Code specifying type of receiving advice	M	ID	1/1
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Code	Name
1	Receiving Dock Advice
8	Acceptance Certificate

BRA05	337	Time Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00- 23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00*99)	O	TM	4/8
BRA06	412	Receiving Condition Code Description: Code designating physical condition or status of units received in a specific shipment	O	ID	2/2

Code	Name
07	Good Condition
08	Rejected
09	Hold

Semantics:

- BRA02 is the date that the receiving advice transaction set is created.
- BRA05 is the time that the receiving advice transaction set is created.

Notes:

This transaction set is a Receiving Advice unless BRA04 contains a value of "8". When BRA04 contains a value of "8", the transaction set is an Acceptance Certificate and the units received is the units accepted.

DTM Date/Time Reference

Pos: 070	Max: 10
Heading - Mandatory	
Loop: N/A	Elms: 4

To specify pertinent dates and times, in this case, dates of shipment and receiving

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
DTM01	374	Date/Time Qualifier Description: Code specifying type of date or time. or both date and time	M	ID	3/3

Code	Name
011	Shipped
019	Unloaded Use this code and code 035 if the receiving location unloaded the shipment at a later date than the delivery.
035	Delivered Use this code and code 019 if the receiving location unloaded the shipment at a later date than the delivery.
050	Received Use this code if the receiving location unloaded the shipment immediately upon delivery.

DTM02	373	Date Description: Date expressed as CCYYMMDD	C	DT	8/8
DTM03	337	Time Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD= decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	C	TM	4/8
DTM04	623	Time Code Description: Code identifying the time	O	ID	2/2

Code	Name
CT	Central Time
ET	Eastern Time
LT	Local Time Use for times outside the continental USA
MT	Mountain Time
PT	Pacific Time

Syntax:

R020305 - At least one of DTM02 or DTM03 is required.

C0403 - If DTM04 is present, then DTM03 is required.

PRF Purchase Order Reference

Pos: 080	Max: 25
Heading - Optional	
Loop: N/A	Elms: 4

To provide reference to a specific purchase order. Recommended for lot-based inventory.

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PRF01	374	Purchase Order Number Description: Identifying number for Purchase Order assigned by the orderer:/purchaser	M	AN	1/22
PRF02	328	Release Number Description: Number identifying a release against a Purchase Order previously placed by the parties involved in the transaction	O	AN	1/30
PRF03	327	Change Order Sequence Number Description: Number assigned by the orderer identifying a specific change or revision to a previously transmitted transaction set	O	AN	1/8
PRF04	373	Date Description: Date expressed as CCYYMMDD	O	DT	8/8

Semantics:

1. PRF04 is the date assigned by the purchaser to purchase order.

TD3 Carrier Details (Equipment)

Pos: 110	Max: 12
Heading - Optional	
Loop: N/A	Elms: 6

To specify transportation details relating to the equipment used by the carrier. Recommended for lot-based inventory.

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
TD301	40	Equipment Description Code Description: Code identifying type of equipment used for shipment	C	ID	2/2

Code	Name
AF	Air Freight (Break Bulk)
BR	Barge
BX	Boxcar
CN	Container
RF	Flat Car
RR	Rail Car
TL	Trailer (not otherwise specified)
TV	Truck, Van
VE	Vessel, Ocean
VL	Vessel, Lake
VT	Vessel, Containership

TD302	206	Equipment Initial Description: Prefix or alphabetic part of an equipment unit's identifying number	O	AN	1/4
TD303	207	Equipment Number Description: Sequencing or serial part of an equipment unit's identifying number (pure numeric form for equipment number is preferred)	C	AN	1/10
TD304	187	Weight Qualifier Description: Code defining the type of weight	O	ID	1/2

Code	Name
G	Gross Weight
N	Actual Net Weight
T	Tare Weight

TD305	81	Weight Description: Numeric value of weight	C	R	1/10
TD306	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	C	ID	2/2

Code	Name
KG	Kilogram
LB	Pound
MP	Metric Ton
NS	Short Ton

Syntax:

C0203 - If TD302 is present, then TD303 is required.

C0405 - If TD304 is present, then TD305 is required.

P0506 - If either TD305 or TD306 are present, then the others are required.

N1

Name

Pos: 130	Max: 1
Heading - Optional	
Loop: N1	Elms: 4

To identify a party by type of organization, name, and code

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
N101	98	Entity Identifier Code Description: Code identifying an organizational entity, a physical location, property or an individual	M	ID	2/3

Code	Name
BO	Broker or Sales Officer
BY	Buying Party (Purchaser)
CA	Carrier
MA	Party for Whom Item is Ultimately Intended End User
MP	Manufacturing Plant
SD	Sold to and Ship To
SE	Selling Party
SF	Ship From
SO	Sold To If Different From Bill To
SU	Supplier/Manufacturer
VN	Vendor
WH	Warehouse

N102	93	Name Description: Free-form name	O	AN	1/60
N103	66	Identification Code Qualifier Description: Code designating the system/method of code structure used for Identification Code (67)	C	ID	1/2

Code	Name
1	D-U-N-S Number, Dun & Bradstreet
9	D-U-N-S+4, D U-N-S Number with Four Character Suffix
15	Standard Address Number (SAN)

N104	67	Identification Code Description: Code identifying a party or other code	C	AN	2/80
------	----	--	---	----	------

Syntax:

1. N102 R0203 - At least one of N102 or N103 is required.
2. N103 P0304 - If either N103 or N104 are present, then the others are required.

Comments:

1. This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

REF

Reference Identification

Pos: 170	Max: 100
Heading - Optional	
Loop: N/A	Elms: 2

To specify identifying information

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax										
REF01	128	Reference Identification Qualifier Description: Code qualifying the Reference Identification	M	ID	2/3										
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>BM</td> <td>Bill of Lading Number</td> </tr> <tr> <td>LT</td> <td>Lot Number</td> </tr> <tr> <td>MA</td> <td>Ship Notice/Manifest Number</td> </tr> <tr> <td>MI</td> <td>Mill Order Number</td> </tr> </tbody> </table>	Code	Name	BM	Bill of Lading Number	LT	Lot Number	MA	Ship Notice/Manifest Number	MI	Mill Order Number			
Code	Name														
BM	Bill of Lading Number														
LT	Lot Number														
MA	Ship Notice/Manifest Number														
MI	Mill Order Number														
REF02	127	Reference Identification Description: Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	C	AN	1/30										

Syntax:

- REF02 R0203 - REF02 is required.

PER

Administrative Communications Contact

Pos: 180	Max: 3
Heading - Optional	
Loop: N/A	Elms: 4

To identify a person or office to whom administrative communications should be directed

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax				
PER01	366	Contact Function Code Description: Code identifying the major duty or responsibility of the person or group named	M	ID	2/2				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>IC</td> <td>Information Contact</td> </tr> </tbody> </table>	Code	Name	IC	Information Contact			
Code	Name								
IC	Information Contact								
PER02	93	Name Description: Free-form name	O	AN	1/60				
PER03	365	Communication Number Qualifier Description: Code identifying the type of communication number	C	ID	2/2				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>TE</td> <td>Telephone</td> </tr> </tbody> </table>	Code	Name	TE	Telephone			
Code	Name								
TE	Telephone								
PER04	364	Communication Number Description: Complete communications number including country or area code when applicable	C	AN	1/80				

Syntax:

- PER03 P0304 - If either PER03 or PER04 are present, then the others are required.

RCD Receiving Conditions

Pos: 010	Max: 1
Detail - Optional	
Loop: RCD	Elms: 8

To report receiving conditions and specify contested quantities

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
RCD01	350	Assigned Identification Description: Alphanumeric characters assigned for differentiation within a transaction set	O	AN	1/20
RCD02	663	Quantity Units Received or Accepted Description: Number of Units Received or Accepted	C	R	1/9
RCD03	C001	Composite Unit of Measure Description: To identify a composite unit of measure	C	Comp	
	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M	ID	2/2

Code	Name
BX	Box
CT	Carton
FT	Foot
IN	Inch
KG	Kilogram
LB	Pound
MP	Metric Ton
NS	Short Ton
PK	Package
PL	Pallet/Unit Load
RL	Roll
RM	Ream
SH	Sheet
SV	Skid
UN	Unit

RCD04	664	Quantity Units Returned Description: Number of units returned	C	R	1/9
-------	-----	--	---	---	-----

Ref	ID	Element Name	Reg	Type	MinMax
RCD05	C001	Composite Unit of Measure Description: To identify a composite unit of measure	C	Comp	
	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M	ID	2/2

Code	Name
BX	Box
CT	Carton
FT	Foot
IN	Inch
KG	Kilogram
LB	Pound
MP	Metric Ton
NS	Short Ton
PK	Package
PL	Pallet/Unit Load
RL	Roll
RM	Ream
SH	Sheet
SV	Skid
UN	Unit

RCD06	667	Quantity in Question Description: Number of units contested because of physical condition or status of units	C	R	1/9
RCD07	C001	Composite Unit of Measure Description: To identify a composite unit of measure	C	Comp	
	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M	ID	2/2

Code	Name
BX	Box
CT	Carton
FT	Foot
IN	Inch
KG	Kilogram
LB	Pound
MP	Metric Ton
NS	Short Ton
PK	Package
PL	Pallet/Unit Load
RL	Roll
RM	Ream
SH	Sheet
SV	Skid
UN	Unit

Ref	ID	Element Name	Reg	Type	MinMax
RCD08	412	Receiving Condition Code Description: Code designating physical condition or status of units received in a specific shipment	C	ID	2/2

Code	Name
01	Damaged Product or Container
02	Quantity Short
03	Quantity Over
04	Quality Problem
05	Incorrect Product
07	Good Condition
08	Rejected
09	Hold
10	Material Scrapped
11	Adjust Supplier Shipped Cumulative Quantity
12	Quantity Over - Returned to Supplier
13	Quantity Received, But Cannot Process Because No Matching Ship Notice
14	Quantity Received and Processed with No Matching Ship Notice/Manifest

Syntax:

1. RCD02 R020406 - At least one of RCD02, RCD04 or RCD06 is required.
2. RCD02 P0203 - If either RCD02 or RCD03 are present, then the others are required.
3. RCD04 P0405 - If either RCD04 or RCD05 are present, then the others are required.
4. RCD06 P060708 - If either RCD06, RCD07 or RCD08 are present, then the others are required.

Semantics:

1. RCD01 is the receiving advice line item identification.

LIN

Item Identification

Pos: 040	Max: 100
Detail - Optional	
Loop: N/A	Elms: 5

To specify basic item identification data

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
LIN01	350	Assigned Identification Description: Alphanumeric characters assigned for differentiation within a transaction set	O	AN	1/20
LIN02	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)	M	ID	2/2

Code	Name
BP	Buyer's Part Number
CL	Color
GC	Grade Code
GN	Grade Name
PG	Packaging Specification Number - Use for identifiers on multi#roll packages
RO	Roll Number
SK	Stock Keeping Unit (SKU)
VN	Vendor's (Seller's) Item Number - Use for the Sheeted Paper Identifier

LIN03	234	Product/Service ID Description: Identifying number for a product or service	M	AN	1/48
LIN04	235	Product/Service ID Qualifier Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234). See LIN02 for codes.	C	ID	2/2
LIN05	234	Product/Service ID Description: Identifying number for a product or service	C	AN	1/48

Syntax:

- LIN04 P0405 - If either LIN04 or LIN05 are present, then the others are required.

Semantics:

- LIN01 is the line item identification

PID

Product/Item Description

Pos: 050	Max: 1000
Detail - Optional	
Loop: N/A	Elms: 5

To describe a product or process in coded or free-form format

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
PID01	349	Item Description Type Description: Code indicating the format of a description	M	ID	1/1

Code	Name
F	Free-form
S	Structured (From Industry Code List)
X	Semi-structured (Code and Text)

PID02	750	Product/Process Characteristic Code Description: Code identifying the general class of a product or process characteristic	O	ID	2/3
-------	-----	---	---	----	-----

Code	Name
08	Product
35	Color
38	Grade
40	Shade
BW	Basis Weight Size
GD	Grain Direction

PID03	559	Agency Qualifier Code Description: Code identifying the agency assigning the code values	C	ID	2/2
-------	-----	---	---	----	-----

Code	Name
AS	Assigned by Seller Use for color and shade codes/descriptions
GC	Graphic Communications Association Use for grain direction codes
PA	American Forest & Paper Assn. Use for basis weight size and recommended grade categories

PID04	751	Product Description Code Description: A code from an industry code list which provides specific data about a product characteristic	C	AN	1/12
-------	-----	--	---	----	------

Code	Name
BASIS WEIGHT SIZE CODES	
A	17 x 22 in
B	20 x 26 in
C	20 x 30 in
D	22.5 x 28.5 in
E	25.5 x 30.5 in
F	24 x 36 in
G	25 x 38 in
H	1,000 sq ft
J	Grams per sq meter
GRAIN DIRECTION CODES	
L	Grain direction, Long
S	Grain direction, Short
See Appendix for recommended grade categories	

PID05	352	Description Description: A free-form description to clarify the related data elements and their content	C	AN	1/80
-------	-----	--	---	----	------

Semantics:

1. Use PID03 to indicate the organization that publishes the code list being referred to.
2. PID04 should be used for industry specific product description codes.

Comments:

1. If PID01 equals "F", then PID05 is used. If PID01 equals "S", then PID04 is used. If PID01 equals "X", then both PID04 and PID05 are used.

DTM Date/Time Reference

Pos: 090	Max: 10
Detail - Optional	
Loop: N/A	Elms: 4

To specify pertinent dates and times

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
DTM01	374	Date/Time Qualifier Description: Code specifying type of date or time, or both date and time	M	ID	3/3

Code	Name
002	Delivery Requested
019	Unloaded
035	Delivered Use this code and code 019 if the receiving location unloaded the items at a later date than their delivery.
050	Received Use this code if the receiving location unloaded the items immediately upon delivery.

DTM02	373	Date Description: Date expressed as CCYYMMDD	C	DT	8/8
DTM03	337	Time Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD= decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	C	TM	4/8
DTM04	623	Time Code Description: Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or - and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and - are substituted by P and M in the codes that follow	O	ID	2/2

Code	Name
LT	Local Time

Syntax:

1. DTM02 R020305 - At least one of DTM02 or DTM03 is required.
2. DTM04 C0403 - If DTM04 is present, then DTM03 is required

MEA Measurements

Pos: 110	Max: >1
Detail - Optional	
Loop: N/A	Elms: 4

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights(See Figures Appendix for example of use of C001)

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
MEA01	737	Measurement Reference ID Code Description: Code identifying the broad category to which a measurement applies	O	ID	2/2

Code	Name
CS	Core Size
CT	Counts
PD	Physical Dimensions
WT	Weights

MEA02	738	Measurement Qualifier Description: Code identifying a specific product or process characteristic to which a measurement applies	O	ID	1/3
-------	-----	--	---	----	-----

Code	Name
B	Billed Weight
G	Gross Weight
N	Actual Net Weight
T	Tare Weight
BK	Bulk
BW	Basis Weight
CA	Caliper
DI	Diameter
ID	Inside Diameter
OD	Outside Diameter
TH	Thickness
WT	Weight

MEA03	739	Measurement Value Description: The value of the measurement	C	R	1/20
-------	-----	--	---	---	------

Ref	ID	Element Name	Reg	Type	MinMax
MEA04	C001	Composite Unit of Measure Description: To identify a composite unit of measure	C	Comp	
	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M	ID	2/2

Code	Name
BX	Box
CM	Centimeter
CT	Carton
FT	Foot
GR	Gram
IN	Inch
KG	Kilogram
LB	Pound
LM	Linear Meter
LR	Layer(s)
MM	Millimeter
MP	Metric Ton
NS	Short Ton
PK	Package
PL	Pallet/Unit Load
PQ	Pages Per Inch
RL	Roll
RM	Ream
SH	Sheet
SV	Skid
UN	Unit

Syntax:

1. MEA03 R03050608 - MEA03 is required.

Semantics:

1. MEA04 defines the unit of measure for MEA03.

CTT

Transaction Totals

Pos: 010	Max: 1
Summary - Optional	
Loop: N/A	Elms: 4

To transmit a hash total for a specific element in the transaction set

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
CTT01	354	Number of Line Items Description: Total number of line items in the transaction set	M	N0	1/6
CTT02	347	Hash Total Description: Sum of values of the specific data. element. All values in the data element will be summed without regard to decimal points (explicit or implicit) or signs. Truncation will occur on the left most digits if the sum is greater than the maximum size of the hash total of the data element. Example: -.0018 First occurrence of value beinghashed. .18 Second occurrence of value beinghashed .1.8 Third occurrence of value beinghashed. -----1855 Hash total prior to truncation.855 Hash total after truncation to three-digit field.	O	R	1/10
CTT03	81	Weight Description: Numeric value of weight	C	R	1/10
CTT04	355	Unit or Basis for Measurement Code Description: Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	C	ID	2/2

Code	Name
KG	Kilogram
LB	Pound
MP	Metric Ton
NS	Short Ton

Syntax:

1. CTT03 P0304 - If either CTT03 or CTT04 are present, then the others are required

Comments:

1. This segment is intended to provide hash totals to validate transaction completeness and correctness.
2. The number of line items (CTT01) is the accumulation of the number of RCD segments. If used, hash total (CTT02) is the sum of the value of quantities received (RCD02) for each RCD segment.

SE

Transaction Set Trailer

Pos: 020	Max: 1
Summary - Mandatory	
Loop: N/A	Elms: 2

To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)

Element Summary:

Ref	ID	Element Name	Reg	Type	MinMax
SE01	96	Number of Included Segments Description: Total number of segments included in a transaction set including ST and SE segments	M	N0	1/10
SE02	329	Transaction Set Control Number Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9

Comments:

- SE is the last segment of each transaction set.

EMBARC/X12 - Receiving Advice Roll paper example

Header information

Transaction control number	54321
Receiving advice number	20001102-002
Transaction creation date and time	2 November 2000, 9:30 a.m.
Date and time of delivery	1 November 2000, 11:45 p.m.
Date and time of unloading	2 November 2000, 7:30 a.m.

Sold to: ABC Publishers	DUNS+4: 123456789-0001
Purchase order number	1122233A

Ship to: XYZ Printers, ABC plant	DUNS+4: 234567891-0001
----------------------------------	------------------------

Seller: ZZZ Paper Company	DUNS+4: 345678912-0001
---------------------------	------------------------

Ship from: AAA mill	DUNS+4: 345678912-0002
AF&PA/CPPA mill code	ZZ2
Manifest number	1234567
Mill order number	654321

Carrier: BBB Transport	DUNS+4: 456789123-0001
Transportation mode	Truck
Vehicle ID	XTL 14803

<i>Product 1, Grade name</i>	Quality Web Offset
Grade code	WO40
Stock keeping unit (SKU) code	WP26635
Basis weight	40 lb
Color code (white)	WHT
Roll width	33.5 in
Roll diameter	40.0 in

Roll detail information, product 1

Number of rolls received	6
Good rolls received, by roll ID	ZZ240K2025300
	ZZ240K2025325
	ZZ240K2025350
	ZZ240K2025399
	ZZ240K2026100

Number of rolls in question/rejected	1
Rejected rolls, by ID	ZZ240K2026133

<i>Product 2, Grade name</i>	Quality Web Offset
Grade code	WO36
Stock keeping unit (SKU) code	WO43633540-2
Basis weight	36 lb
Color code (white)	WHT
Roll width	27.0 in
Roll diameter	40.0 in

Number of rolls received 6
 Good rolls received, by roll ID
 ZZ210K2510133 ZZ210K2510100
 ZZ210K2510167
 ZZ210K2510199
 ZZ210K2410250
 ZZ210K2410275

Number of rolls returned/incorrect product
 Returned/incorrect roll by ID number 1
 ZZ230K2510100

Roll paper example in X12 format

Header

Transaction set header ST*861*54321 n/l
 Transaction number, date, purpose, time BRA*20001102002*20001102*00*1*0930 n/l
 Delivery date/time DTM*035*20001101 *2345*LT n/l
 Unloading date/time DTM*019*20001102*0730*LT n/l

Purchase order number PRF*1122233A n/l
 Carrier initial and trailer number TD3*TL*XTL *14803 n/l
 Carrier name and DUNS number N1*CA*BBB Transport*9*4567891230001 n/l

Parties in the transaction and references:
 Sold-to name and DUNS number N1*SO*ABC Publishers*9*1234567890001 n/l
 Ship-to name and DUNS number N1*ST*XYZ Printers, ABC plant*9* 2345678910001 n/l
 Supplier's name and DUNS number N1*SU*ZZZ Paper*9*3456789120001 n/l
 Ship-from mill name and DUNS number N1*SF*AAA mill*9*3456789120002 n/l
 Mill order number REF*MI*654321 n/l
 Manifest/ship notice number REF*MA*1234567 n/l

Detail

Product 1:
 Total rolls unloaded, product 1 RCD*1*6*RL n/l
 Grade code, grade name, color LIN**GC*W023*GN*Quality Web Offset* CL *WHT n/l
 Basis weight size (code G) PID*S*BW*PA*G n/l
 Basis weight MEA*WT*BW*40*LB n/l
 Roll width MEA*PD*WD*33.5*1N n/l
 Roll diameter MEA*PD*DI*40*1N n/l

Total number of good rolls received RCD*2*5*RL*****07 n/l
 Identifiers for good condition rolls received
 LIN**RO* ZZ240K2025300 n/l
 LIN**RO* ZZ240K2025325 n/l
 LIN**RO* ZZ240K2025350 n/l
 LIN**RO* ZZ240K2025399 n/l
 LIN**RO* ZZ240K2026100 n/l

Rolls in question/rejected RCD*3*****1*RL*08 n/l
 Identifier for rejected roll
 LIN**RO* ZZ240K2026133 n/l

Product 2:

Total rolls unloaded, product 2	RCD*4*6*RL n/l
Grade code, grade name, color	LIN**GC*WO36*GN*QualityWeb Offset *CL *WHT n/l
Basis weight size (Code G)	PID*S*BW*PA*G n/l
Basis weight	MEA*WT*BW*36*LB n/l
Roll width	MEA*PD*WD*27*IN n/l
Roll diameter	MEA*PD*DI*40*IN n/l

Total number of good rolls received	RCD*5*6*RL****07 n/l
Identifiers for good condition rolls received	LIN**RO*ZZ201K2510100 n/l
	LIN**RO*ZZ201K2510133 n/l
	LIN**RO*ZZ201K2510167 n/l
	LIN**RO*ZZ201K2510199 n/l
	LIN**RO*ZZ201K2410250 n/l
	LIN**RO*ZZ201K2410275 n/l

Rolls returned/incorrect product	RCD*6***1*RL***05 n/l
Identifier for returned/incorrect roll	LIN**RO* ZZ230K2510100 n/l

Summary

Number of line items/RCD segments	CTT*6 n/l
Transaction set trailer	SE*44*54321 n/l

EMBARC/X12 - Receiving Advice Sheeted paper example

Header information

Transaction control number 07654321
 Receiving advice number RC99007893
 Transaction creation date and time 26 July 1999, 8:30 a.m.
 Date and time of delivery 25 July 1999, 5:00 p.m.
 Date and time of unloading 25 July 1999, 6:00 p.m.

Parties in the transaction:

Sold to: World Class Books Standard Address Number (SAN): 864-2975
 Customer purchase order E877D2982C

Ship to: Quality Printers
 Northern Plant

DUNS number: 975318642-0003

Seller: Top Notch Paper Co.,
 Sycamore Division
 Manifest number
 Mill order number

DUNS number: 135792468-0001
 01Y18657-579641
 579641

Carrier

CommCarr Trucking , DUNS 224466889

Description of paper

Company grade code ENX700
 Grade name Enamel Book Offset
 Basis weight 70 lb
 Sheet width 24 in
 Sheet length 36 in
 Shade Eggshell
 Bulk 360 ppi

Skid detail information

Item	Skid Identifier*	Reams on manifest	Reams on skid	Reams on accepted	Reams damaged	Reams missing
1	TNSA4BG239790	39	39	39		
2	TNSA4BG239791	22	22	12	10	
3	TNSA4BG239792	38	38	38		
4	TNSA4BG239793	38	30	30		8
5	TNSA4BG239794	38	38	38		
Total		175	167	157	10	8

*Using the Sheeted Paper Identifiers Specification

Example in X12 format

Header

Transaction set header	ST*861*07654321 n/l
Transaction number, date, purpose, time	BRA*RC99007893*19990726*00*1 *0830 n/l
Receiving (unload) date/time	DTM*050*990725*1800**19 n/l
Purchase order number	PRF*E877D2982 n/l
Parties in the transaction and references:	
Sold-to name and SAN	N1*SO*WORLD CLASS BOOKS*15*8642975 n/l
Ship-to name and DUNS	N1*ST*QUALITY PRTS, NORTHERN PLANT *9*9753186420003 n/l
Supplier's name and DUNS	N1*SU*TOP NOTCH PAPER *1*135792468 n/l
Ship-from plant name and DUNS	N1*SF*SYCAMORE DIV*9*1357924680001 n/l
Mill order number	REF*MI*579641 n/l
Manifest/ship notice number	REF*MA*01Y18657-579641 n/l
Carrier name and DUNS number	N1*CA*COMMCARR TRK*1*224466889 n/l
Detail	
Total number of skids unloaded	RCD*1*5*SV n/l
Company grade code and name	LIN**GC*ENX700*GN*ENAMEL BOOK OFFSET n/l
Shade	PID*F*40*AS**Eggshell n/l
Basis weight	MEA*WT*BW*70*LB n/l
Sheet width	MEA*PD*WD*24*IN n/l
Sheet length	MEA*PD*LN*36*IN n/l
Bulk	MEA*PD*BK*360*PQ n/l
Good reams accepted, skid #1	RCD*2*39*RM*****07 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239790 n/l
Good reams, accepted, skid #2	RCD*3*12*RM*****07 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239791 n/l
Damaged reams, unloaded, skid #2	RCD*4*****10*RM*01 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239791 n/l
Good reams accepted, skid #3	RCD*5*38*RM*****07 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239792 n/l
Good reams accepted, skid #4	RCD*6*30*RM*****07 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239793 n/l
Missing reams, skid #4	RCD*7*****8*RM*02 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239793 n/l
Good reams accepted, skid #5	RCD*8*38*RM*****07 n/l
Skid number, using SPI	LIN**VN* TNSA4BG239794 n/l
Summary	
Number of line items/RCD segments	CTT*8 n/l
Transaction set trailer	SE*30*07654321 n/l

Mapping Guide: EMBARC to EMBARC/X12 - 1998

EMBARC record	Transmission header, 1T	Manual Pages	16-17
		Update pages	4

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Transmission name	ST	01	143	856	
Release	ISA	11	I10		
Version	ISA	12	I11		
Month transmission created Day transmission created Year transmission created	ISA	09	I08		YYMMDD Recommend duplicating in header DTM segment for Year 2000 compliance
Receiver's transmission number	ISA	13	I12		Must match IEA02
Sender company code	ISA	05	I05		
	ISA	06	I06		
or					
	N1	01	98		
	N1	03	66	1 or 9	
	N1	04	93		
Sender company name	N1	01	98		
	N1	02	93		
Transmission description					Not applicable

EMBARC record
Manifest header, 1M
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Update pages 4-5

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Transaction code	ST	01	143	856	
Manifest number	BSN	02	396		
Month manifest created	BSN	03	373		CCYYMMDD
Day manifest created					
Year manifest created					
Sold-to customer code	N1	01	98	BY	Buyer
				SO	Sold-to, if different from ship-to
	N1	03	66	1 or 9	
	N1	04	93		
Ship-to customer code	N1	01	98		
	N1	03	66		
	N1	04	93		
Transmit-to indicator	ISA	08	I07		
Transportation mode	TD5	04	91		
First vehicle number	TD3	03	207		
Second vehicle or first container number	TD3	03	207		
Second container number	TD3	03	207		
Standard Carrier Alpha Code	TD5	02	66	2	
	TD5	03	67		
Standard Point Location Code	TD5	02	66	20	
	TD5	03	67		
Seal number	REF	01	128	SN	
	REF	02	127		
Company code	N1	01	98	SF	
	N1	03	66	1 or 9	
	N1	04	93		
Manufacturing mill code	N1	01	98	MP	
	N1	03	66	1 or 9	
	N1	04	93		
Time manifest created or released	DTM	01	374	011	
	DTM	02	373		CCYYMMDD
	DTM	03	337		HHMM 24 hour format

EMBARC record
Transmission record/export, 1E
Manual Pages 22-23

Update pages 5

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Port of entry	N1	01	98	CB	Customs broker
	N1	02	93		
Port of exit	N1	01	98		
	N1	02	93		
Discharge port	N1	01	98		
	N1	02	93		
Discharge month	DTM	01	374	096	
Discharge day	DTM	02	373		CCYYMMDD
Discharge year					
Customs broker	N1	01	98		
	N1	02	93		

EMBARC record
Common ship-to information, 2A
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Update pages 5

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Ship to lines 1-3					
Name	N1	01	98	ST	
	N1	02	93		
Address	N3	01	166		
	N3	02	166		
City name	N4	01	19		
State/province	N4	02	156		
Postal code	N4	03	116		
Country	N4	04	26		

EMBARC record
Common ship-to information, 2B
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Update pages 5

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Ship to lines 4-6					
Name	N1	01	98	ST	
	N1	02	93		
Address	N3	01	166		
	N3	02	166		
City name	N4	01	19		
State/province	N4	02	156		
Postal code	N4	03	116		
Country	N4	04	26		

EMBARC record
Common ship-to information, 2C
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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Route description	TD5	05	387		
Route code	TD5	01	133		
	TD5	02	66		
	TD5	03	67		
	TD5	04	91		
Freight invoice number	REF	01	128	FR	
	REF	02	127		

EMBARC record
Common ship-to information, 3A
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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Ship to lines 1-3					
Name	N1	01	98	BY	
	N1	02	93		
Address	N3	01	166		
	N3	02	166		
City name	N4	01	19		
State/province	N4	02	156		
Postal code	N4	03	116		
Country	N4	04	26		

EMBARC record
Common ship-to information, 3B
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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Ship to lines 4-6					
Name	N1	01	98	ST	
	N1	02	93		
Address	N3	01	166		
	N3	02	166		
City name	N4	01	19		
State/province	N4	02	156		
Postal code	N4	03	116		
Country	N4	04	26		

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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Manifest special marks and handling instructions	MAN	01	88	L or S	
	MAN	02	87		

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Metric/English flag	Indicated by qualifier for each measurement value provided				
Bar coded unit	Indicated by qualifier in the appropriate line-item data elements				
Roll core or skid type	PKG	01	349	S	
	PKG	02	753		
	PKG	03	348	GC	
	PKG	04	754		
Packaging unit ID code	Indicated by qualifier in the appropriate line-item data elements				
Items per unit (e.g., rolls per pack)	PO4	01	357		
Color code	LIN	02	235	CL	
	LIN	03	234		
Caliper of a single sheet	MEA	01	737	PD	
	MEA	02	738	CA	
	MEA	03	739		
	MEA	04	355		
Shipping order number	REF	01	128	MI	
	REF	02	127		
Purchase order number	PRF	01	324		
Bill of lading number	REF	01	128	BM	
	REF	02	127		
Stock/grade code	LIN	02	235	GC	
	LIN	03	234		
Mill invoice number	REF	01	128	MI	
	REF	02	127		
Basis Weight	MEA	01	737	PD	
	MEA	02	738	BW	
	MEA	03	739		
	MEA	04	355		

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Basis size code	PID	01	349	S	
	PID	03	348	PA	
	PID	04	751		
Roll width	PO4	02	357		
	PO4	03	355		
Sheet length	MEA	01	737	PD	
	MEA	02	738	LN	
	MEA	03	739		
	MEA	04	355		
Roll diameter	PO4	15	65		
	PO4	16	355		
Ordered lineal measure	MEA	01	737	PD	
	MEA	02	738	LN	
	MEA	03	739		
	MEA	04	355		
Core, inside diameter	MEA	01	737	CS	
	MEA	02	738	ID	
	MEA	03	739		
	MEA	04	355		
Individual core weight	MEA	01	737	CS	
	MEA	02	738	WT	
	MEA	03	739		
	MEA	04	355		

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Item description, 4D
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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Stock/grade name	LIN	02	235	GN	
	LIN	03	234		
Color description	PID	01	349	F	
	PID	02	750	08	
	PID	03	348	AS	
	PID	05	352		
Special item information	MAN	01	88	L	
	MAN	02	87		

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Bar coded unit identification	LIN	02	235	RO, PG, VN	
	LIN	03	234		
Packaging unit ID code	Indicated by qualifier in the appropriate line-item data elements				
Number of rolls per package	PO4	01	357		
Number of splices per package	MEA	01	737	SP	
	MEA	02	738	NA	
	MEA	03	739		
	MEA	04	355	UN	
Actual linear measure	MEA	01	737	PD	
	MEA	02	738	LN	
	MEA	03	739		
	MEA	04	355		
Number of sheets per unit	MEA	01	737	CT	
	MEA	02	738	NU	
	MEA	03	739		
	MEA	04	355	SH	
Gross Weight	MEA	01	737	WT	
	MEA	02	738	G	
	MEA	03	739		
	MEA	04	355		
Tare Weight	MEA	01	737	WT	
	MEA	02	738	T	
	MEA	03	739		
	MEA	04	355		
Invoice/net weight	MEA	01	737	WT	
	MEA	02	738	N	
	MEA	03	739		
	MEA	04	355		
Second roll/skid	Repeat above entries				
Third roll/skid	Repeat above entries				

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Date of manufacture	DTM	01	374	094	
	DTM	02	373		CCYYMMDD
Machine number	LIN	02	235	MA	
	LIN	03	234		
Reel number	LIN	02	235	RD	
	LIN	03	234		
Set number	LIN	02	235	RS	
	LIN	03	234		
Position	LIN	02	235	PS	
	LIN	03	234		
Number of positions across machine	LIN	02	235	PM	
	LIN	03	234		
Shift	DTM	01	374	094	
	DTM	02	373		CCYYMMDD
	DTM	03	337		HHMM 24 hour format
Side-up/side-out	LIN	02	235	SU	
	LIN	03	234		

Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Total units shipped	MEA	01	737	CT	
	MEA	03	739		
	MEA	04	355		
Total rolls shipped	MEA	01	737	CT	
	MEA	03	739		
	MEA	04	355	RL	
Total gross weight	MEA	01	737	WT	
	MEA	02	738	G	
	MEA	03	739		
	MEA	04	355		
Total tare weight	MEA	01	737	WT	
	MEA	02	738	T	
	MEA	03	739		
	MEA	04	355		
Total invoice/net weight	MEA	01	737	WT	
	MEA	02	738	N	
	MEA	03	739		
	MEA	04	355		
Total lineal measure	MEA	01	737	PD	
	MEA	02	738	LN	
	MEA	03	739		
	MEA	04	355		
Total square measure	MEA	01	737	PD	
	MEA	03	739		
	MEA	04	355		
Bar coded unit	Indicated by qualifier in the appropriate line-item data elements				
Consignee purchase order number	REF	01	128	CG	
	REF	02	127		
Customer accounts receivable number	REF	01	128	AP	
	REF	02	127		
Pallet unit identification	LIN	02	235	VN	Sheeted Paper Identifier
	LIN	03	234		

EMBARC record
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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Total units shipped	CTT	02	347		
Total number of records	SE	01	96		
Total gross weight of shipment	MEA	01	737	WT	
	MEA	02	738	G	
	MEA	03	739		
	MEA	04	355		
Total tare weight of shipment	MEA	01	737	WT	
	MEA	02	738	T	
	MEA	03	739		
	MEA	04	355		
Total net/invoice weight of shipment	MEA	01	737	WT	
	MEA	02	738	N	
	MEA	03	739		
	MEA	04	355		

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Item/field name	X12 segment	Data element number	Reference number	Value	Comments
Transmission name	ST	01	143	856	
Release	ISA	11	I10		
Version	ISA	12	I11		
Month transmission created	ISA	09	I08		YYMMDD
Day transmission created					Recommend duplicating in header DTM segment for Year 2000 compliance
Year transmission created					
Receiver's transmission number	ISA	13	112		Must match IEA02
Sender company code	ISA	05	105		
	ISA	06	106		
	or				
	N1	01	98		
	N1	03	66	1 or 9	
	N1	04	93		
Sender company name	N1	01	98		
	N1	02	93		
Transmission description					Not applicable
Total number of logical records	SE	01	96		

Appendix Recommended Newsprint Product Codes

Product Code	Description	Note	Color Code	Description	Basis Weight	Percent recycled content
SN	Standard newsprint		W	White	as grammage	Two digits, 00-99
RN	Rotonews		Y	Yellow, canary		Or blank
PN	Premium newsprint		G	Green	Three digits with one decimal place assumed	
FN	Flexo newsprint		P	Pink		
HB	Hi-Brite		B	Blue		
LW	Lightweight	1	C	Cream		
BN	Bulky/novel	2	N	Brown		
SA	Supercalendered - A		H	Peach		
SB	Supercalendered - B					
RP	Repulping paper					
ON	Off-grade					
Notes	1 Grammage less than 40					
	2 Grammage greater than 57					

Description

The product/grade code structure has two alpha characters for the product, one alpha character for color, three digits for the metric basis weight/grammage or grams per square meter, and two digits for recycled content.

Examples

White standard newsprint, 48.8 g/m², 30 percent recycled content: SNW48830

Canary flexo newsprint, 48.8 g/m², no recycled content: FNY488

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