

852 Product Activity Data

Point of Sale

ANSI X12-4010

Vendor Implementation Guide

Document Version 1.1

November 2025

852 Product Activity Data

Functional Group ID=**PD**

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Product Activity Data Transaction Set (852) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used by a distributor, warehouse, or retailer to advise a trading partner of inventory, sales, and other product activity information. Product activity data enables a trading partner to plan and ship, or propose inventory replenishment quantities, for distribution centers, warehouses or retail outlets. The receiver of the transaction set will maintain some type of inventory/product movement records for its trading partners to enable replenishment calculations based on data provided by the distributor, warehouse or retailer.

Heading:

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max.Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
M	010	ST	Transaction Set Header	M	1		
M	020	XQ	Reporting Date/Action	M	1		
Must Use	040	N9	Reference Identification	O	>1		
LOOP ID - N1						200	
Must Use	060	N1	Name	O	1		n1

Detail:

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max.Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
LOOP ID - LIN						999999	
Must Use	010	LIN	Item Identification	O	1		
Must Use	030	PO4	Item Physical Details	O	1		
LOOP ID - ZA						>1	
M	080	ZA	Product Activity Reporting	M	1		n2
Must Use	100	CTP	Pricing Information	O	25		
Must Use	110	SDQ	Destination Quantity	O	>1		

Summary:

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max.Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
	010	CTT	Transaction Totals	O	1		n3
M	020	SE	Transaction Set Trailer	M	1		

Transaction Set Notes

1. The reporting location is required. The reporting location is specified explicitly in the N1 segment using the code RL in N101, or implicitly using the SDQ segment (Table 2) with the location data elements. They are mutually exclusive (the SDQ and the N1 with N101 containing RL).
2. The quantity for the item identified in the LIN segment is required. Quantity is specified either in the ZA segment (ZA02) or in the SDQ segment.
3. The number of line items (CTT01) is the accumulation of the number of LIN segments. Hash total (CTT02) is not used in this transaction set.

When sending item and activity data in the LIN loop, the CTT segment is required.

Segment: **ST** Transaction Set Header
Position: 010
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To indicate the start of a transaction set and to assign a control number
Syntax Notes:
Semantic Notes: 1 The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).
Comments:

Data Element Summary

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u>		
M	ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set 852 Product Activity Data	M ID 3/3
M	ST02	329	Transaction Set Control Number 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

Segment: **XQ Reporting Date/Action**
Position: 020
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To specify reporting date and action to be taken
Syntax Notes:
Semantic Notes: 1 XQ02 is the reporting date. If reporting a date range, then XQ02 is the start date and XQ03 is the end date.
Comments:

Data Element Summary

Ref.	Data			Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>		
M	XQ01	305	Transaction Handling Code	M ID 1/2
			Code designating the action to be taken by all parties	
			H Notification Only	
M	XQ02	373	Date	M DT 8/8
			Date expressed as CCYYMMDD	
			Start Date - Begin Date of Reporting Period	
	XQ03	373	Date	O DT 8/8
			Date expressed as CCYYMMDD	
			End Date – Ending Date of Reporting Period	

Segment: N9 Reference Identification
Position: 040
Loop:
Level: Heading
Usage: Optional (Must Use)
Max Use: >1
Purpose: To transmit identifying information as specified by the Reference Identification Qualifier
Syntax Notes:

- 1 At least one of N902 or N903 is required.
- 2 If N906 is present, then N905 is required.
- 3 If either C04003 or C04004 is present, then the other is required.
- 4 If either C04005 or C04006 is present, then the other is required.

Semantic Notes:

- 1 N906 reflects the time zone which the time reflects.
- 2 N907 contains data relating to the value cited in N902.

Comments:

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	N901	128	Reference Identification Qualifier Code qualifying the Reference Identification VR Vendor ID Number	M ID 2/3
	N902	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier Vendor Number Assigned by CVS	X AN 1/30

Segment: N1 Name
Position: 060
Loop: N1 Optional (Must Use)
Level: Heading
Usage: Optional (Must Use)
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes:

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

Semantic Notes:
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.
- 2 N105 and N106 further define the type of entity in N101.

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	N101	98 Entity Identifier Code	M ID 2/3
		Code identifying an organizational entity, a physical location, property or an individual	
		RL Reporting Location	
	N102	93 Name	X AN 1/60
		Free-form name	

Segment: **LIN** Item Identification
Position: 010
Loop: LIN Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
Max Use: 1
Purpose: To specify basic item identification data
Syntax Notes:

- 1 If either LIN04 or LIN05 is present, then the other is required.
- 2 If either LIN06 or LIN07 is present, then the other is required.
- 3 If either LIN08 or LIN09 is present, then the other is required.
- 4 If either LIN10 or LIN11 is present, then the other is required.
- 5 If either LIN12 or LIN13 is present, then the other is required.
- 6 If either LIN14 or LIN15 is present, then the other is required.
- 7 If either LIN16 or LIN17 is present, then the other is required.
- 8 If either LIN18 or LIN19 is present, then the other is required.
- 9 If either LIN20 or LIN21 is present, then the other is required.
- 10 If either LIN22 or LIN23 is present, then the other is required.
- 11 If either LIN24 or LIN25 is present, then the other is required.
- 12 If either LIN26 or LIN27 is present, then the other is required.
- 13 If either LIN28 or LIN29 is present, then the other is required.
- 14 If either LIN30 or LIN31 is present, then the other is required.

Semantic Notes:
Comments:

- 1 LIN01 is the line item identification
- 1 See the Data Dictionary for a complete list of IDs.
- 2 LIN02 through LIN31 provide for fifteen different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

Data Element Summary

	<u>Ref.</u>	<u>Data</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	LIN02	235	Product/Service ID Qualifier		M ID 2/2
			Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
			ND	National Drug Code (NDC)	
			UD	U.P.C./EAN Consumer Package Code (2-5-5)	
			UI	U.P.C. Consumer Package Code (1-5-5)	
M	LIN03	234	Product/Service ID		M AN 1/48
			Identifying number for a product or service		
			Item UPC Number		
			EAN		
			If RX – NDC		

Segment:	PO4 Item Physical Details
Position:	030
Loop:	LIN Optional (Must Use)
Level:	Detail
Usage:	Optional (Must Use)
Max Use:	1
Purpose:	To specify the physical qualities, packaging, weights, and dimensions relating to the item
Syntax Notes:	<ol style="list-style-type: none"> 1 If either PO402 or PO403 is present, then the other is required. 2 If PO405 is present, then PO406 is required. 3 If either PO406 or PO407 is present, then the other is required. 4 If either PO408 or PO409 is present, then the other is required. 5 If PO410 is present, then PO413 is required. 6 If PO411 is present, then PO413 is required. 7 If PO412 is present, then PO413 is required. 8 If PO413 is present, then at least one of PO410 PO411 or PO412 is required. 9 If PO417 is present, then PO416 is required. 10 If PO418 is present, then PO404 is required.
Semantic Notes:	<ol style="list-style-type: none"> 1 PO415 is used to indicate the relative layer of this package or range of packages within the layers of packaging. Relative Position 1 (value R1) is the innermost package. 2 PO416 is the package identifier or the beginning package identifier in a range of identifiers. 3 PO417 is the ending package identifier in a range of identifiers. 4 PO418 is the number of packages in this layer.
Comments:	<ol style="list-style-type: none"> 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.

Data Element Summary

<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
PO401	356	Pack	O N0 1/6
		The number of inner containers, or number of eaches if there are no inner containers, per outer container	
		P.O. Case Pack	

Segment: **ZA** Product Activity Reporting
Position: 080
Loop: ZA Mandatory
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To provide activity details concerning product being reported
Syntax Notes:

- 1 If either ZA02 or ZA03 is present, then the other is required.
- 2 If either ZA04 or ZA05 is present, then the other is required.
- 3 If either ZA06 or ZA07 is present, then the other is required.

Semantic Notes:

- 1 ZA08 determines if the product activity code in ZA01 refers to a product that is categorized as In-bond merchandise. A "Y" indicates that the activity code applies to a product that is In-bond; an "N" indicates that the activity code does not refer to a product that is In-bond.

Comments:

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Activity Code</u>	<u>M ID 2/2</u>
M	ZA01	859	
		Code identifying activity details for the product being reported	
		QD	Additional Demand Quantity
		QS	Quantity Sold

- Segment:** **CTP Pricing Information**
- Position:** 100
- Loop:** ZA Mandatory
- Level:** Detail
- Usage:** Optional (Must Use)
- Max Use:** 25
- Purpose:** To specify pricing information
- Syntax Notes:**
- 1 If either CTP04 or CTP05 is present, then the other is required.
 - 2 If CTP06 is present, then CTP07 is required.
 - 3 If CTP09 is present, then CTP02 is required.
 - 4 If CTP10 is present, then CTP02 is required.
 - 5 If CTP11 is present, then CTP03 is required.
- Semantic Notes:**
- 1 CTP07 is a multiplier factor to arrive at a final discounted price. A multiplier of .90 would be the factor if a 10% discount is given.
 - 2 CTP08 is the rebate amount.
- Comments:**
- 1 See Figures Appendix for an example detailing the use of CTP03 and CTP04.
See Figures Appendix for an example detailing the use of CTP03, CTP04 and CTP07.

Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
CTP02	236	Price Identifier Code Code identifying pricing specification UCP Unit cost price	X ID 3/3
CTP03	212	Unit Price Price per unit of product, service, commodity, etc. Unit cost price	X R 1/17

Segment: **SDQ** Destination Quantity
Position: 110
Loop: ZA Mandatory
Level: Detail
Usage: Optional (Must Use)
Max Use: >1
Purpose: To specify destination and quantity detail
Syntax Notes:

- 1 If either SDQ05 or SDQ06 is present, then the other is required.
- 2 If either SDQ07 or SDQ08 is present, then the other is required.
- 3 If either SDQ09 or SDQ10 is present, then the other is required.
- 4 If either SDQ11 or SDQ12 is present, then the other is required.
- 5 If either SDQ13 or SDQ14 is present, then the other is required.
- 6 If either SDQ15 or SDQ16 is present, then the other is required.
- 7 If either SDQ17 or SDQ18 is present, then the other is required.
- 8 If either SDQ19 or SDQ20 is present, then the other is required.
- 9 If either SDQ21 or SDQ22 is present, then the other is required.

Semantic Notes:

- 1 SDQ23 identifies the area within the location identified in SDQ03, SDQ05, SDQ07, SDQ09, SDQ11, SDQ13, SDQ15, SDQ17, SDQ19, and SDQ21.

Comments:

- 1 SDQ02 is used only if different than previously defined in the transaction set.
- 2 SDQ03 is the store number.
- 3 SDQ23 may be used to identify areas within a store, e.g., front room, back room, selling outpost, end aisle display, etc. The value is agreed to by trading partners or industry conventions.

Data Element Summary

Ref.	Data Element	Name	Attributes
M	SDQ01	355 Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken PC Piece	M ID 2/2
	SDQ02	66 Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67) FA Facility Identification	O ID 1/2
M	SDQ03	67 Identification Code Code identifying a party or other code Store Number	M AN 2/80
M	SDQ04	380 Quantity Numeric value of quantity Quantity	M R 1/15
	SDQ05	67 Identification Code Code identifying a party or other code Store Number	X AN 2/80
	SDQ06	380 Quantity Numeric value of quantity Quantity	X R 1/15
	SDQ07	67 Identification Code Code identifying a party or other code Store Number	X AN 2/80
	SDQ08	380 Quantity Numeric value of quantity	X R 1/15

		Quantity		
SDQ09	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ10	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ11	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ12	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ13	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ14	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ15	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ16	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ17	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ18	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ19	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ20	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		
SDQ21	67	Identification Code	X	AN 2/80
		Code identifying a party or other code		
		Store Number		
SDQ22	380	Quantity	X	R 1/15
		Numeric value of quantity		
		Quantity		

Segment: **CTT** Transaction Totals
Position: 010
Loop:
Level: Summary
Usage: Optional
Max Use: 1
Purpose: To transmit a hash total for a specific element in the transaction set
Syntax Notes:

- 1 If either CTT03 or CTT04 is present, then the other is required.
- 2 If either CTT05 or CTT06 is present, then the other is required.

Semantic Notes:
Comments:

- 1 This segment is intended to provide hash totals to validate transaction completeness and correctness.

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	CTT01	354 Number of Line Items	M N0 1/6
		Total number of line items in the transaction set	
		Number of Line Items (Count of LIN Segments)	
	CTT02	347 Hash Total	O R 1/10
		Sum of values of the specified 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 being hashed.	
		.18 Second occurrence of value being hashed.	
		1.8 Third occurrence of value being hashed.	
		18.01 Fourth occurrence of value being hashed.	

		1855 Hash total prior to truncation.	
		855 Hash total after truncation to three-digit field.	
		Quantity Total	

Segment: **SE** Transaction Set Trailer
Position: 020
Loop:
Level: Summary
Usage: Mandatory
Max Use: 1
Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)
Syntax Notes:
Semantic Notes:
Comments: 1 SE is the last segment of each transaction set.

Data Element Summary

	Ref.	Data	Name	Attributes
	<u>Des.</u>	<u>Element</u>		
M	SE01	96	Number of Included Segments	M N0 1/10
			Total number of segments included in a transaction set including ST and SE segments	
M	SE02	329	Transaction Set Control Number	M AN 4/9
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	

852 – Point of Sale Example v4010:

ISA*00* *00* *ZZ*CVSPROD *ZZ*EDIVENDORID
*251101*1939*U*00401*000002114*0*P*^
GS*PD*CVSPROD*EDIVENDORID*20251101*1939*1229*X*004010
ST*852*0001
XQ*H*20251031*20251031
N9*VR*38858
N9*ZZ*38858
N1*RL*CVS
LIN**UI*85002246445
PO4*1
ZA*Q3
CTP**RTL*0
CTP**UCP*0
SDQ*PC*FA*07891*1
LIN**UI*85002246457
PO4*1
ZA*Q2
CTP**RTL*0
CTP**UCP*0
SDQ*PC*FA*02432*1
LIN**UI*85002246464
PO4*1
ZA*Q2
CTP**RTL*0
CTP**UCP*0
SDQ*PC*FA*02432*1*02432*1*02432*1*02432*1*02572*1
LIN**UI*85002246495
PO4*1
ZA*Q3
CTP**RTL*0
CTP**UCP*0
SDQ*PC*FA*07891*2
CTT*4*1
SE*31*0001
GE*1*1229
IEA*1*000002114