



Federal Implementation Guideline for Electronic Data Interchange

ASC X12 003050 Transaction Set 848R
Material Safety Data Sheet
(Request)

Implementation Convention

NIST

U.S. DEPARTMENT OF COMMERCE
Technology Administration
National Institute of
Standards and Technology

QC
100

U57

.881-61

998

The National Institute of Standards and Technology was established in 1988 by Congress to “assist industry in the development of technology . . . needed to improve product quality, to modernize manufacturing processes, to ensure product reliability . . . and to facilitate rapid commercialization . . . of products based on new scientific discoveries.”

NIST, originally founded as the National Bureau of Standards in 1901, works to strengthen U.S. industry's competitiveness; advance science and engineering; and improve public health, safety, and the environment. One of the agency's basic functions is to develop, maintain, and retain custody of the national standards of measurement, and provide the means and methods for comparing standards used in science, engineering, manufacturing, commerce, industry, and education with the standards adopted or recognized by the Federal Government.

As an agency of the U.S. Commerce Department's Technology Administration, NIST conducts basic and applied research in the physical sciences and engineering, and develops measurement techniques, test methods, standards, and related services. The Institute does generic and precompetitive work on new and advanced technologies. NIST's research facilities are located at Gaithersburg, MD 20899, and at Boulder, CO 80303. Major technical operating units and their principal activities are listed below. For more information contact the Publications and Program Inquiries Desk, 301-975-3058.

Office of the Director

- National Quality Program
- International and Academic Affairs

Technology Services

- Standards Services
- Technology Partnerships
- Measurement Services
- Technology Innovation
- Information Services

Advanced Technology Program

- Economic Assessment
- Information Technology and Applications
- Chemical and Biomedical Technology
- Materials and Manufacturing Technology
- Electronics and Photonics Technology

Manufacturing Extension Partnership Program

- Regional Programs
- National Programs
- Program Development

Electronics and Electrical Engineering Laboratory

- Microelectronics
- Law Enforcement Standards
- Electricity
- Semiconductor Electronics
- Electromagnetic Fields¹
- Electromagnetic Technology¹
- Optoelectronics¹

Chemical Science and Technology Laboratory

- Biotechnology
- Physical and Chemical Properties²
- Analytical Chemistry
- Process Measurements
- Surface and Microanalysis Science

Physics Laboratory

- Electron and Optical Physics
- Atomic Physics
- Optical Technology
- Ionizing Radiation
- Time and Frequency¹
- Quantum Physics¹

Materials Science and Engineering Laboratory

- Intelligent Processing of Materials
- Ceramics
- Materials Reliability¹
- Polymers
- Metallurgy
- NIST Center for Neutron Research

Manufacturing Engineering Laboratory

- Precision Engineering
- Automated Production Technology
- Intelligent Systems
- Fabrication Technology
- Manufacturing Systems Integration

Building and Fire Research Laboratory

- Structures
- Building Materials
- Building Environment
- Fire Safety Engineering
- Fire Science

Information Technology Laboratory

- Mathematical and Computational Sciences²
- Advanced Network Technologies
- Computer Security
- Information Access and User Interfaces
- High Performance Systems and Services
- Distributed Computing and Information Services
- Software Diagnostics and Conformance Testing

¹At Boulder, CO 80303.

²Some elements at Boulder, CO.

Federal Implementation Guideline for Electronic Data Interchange

ASC X12 003050 Transaction Set 848R Material Safety Data Sheet (Request)

Implementation Convention

Electronic Commerce Acquisition Program Management Office
Standard Management Committee - Secretariat
National Institute of Standards and Technology
Gaithersburg, MD 20899-0001

Editor: Dr. Jean-Philippe Favreau

February 1998



U.S. DEPARTMENT OF COMMERCE
William M. Daley, Secretary

Technology Administration
Gary R. Bachula, Acting Under Secretary for Technology

National Institute of Standards and Technology
Raymond G. Kammer, Director

Reports on Information Technology

The National Institute of Standards and Technology (NIST)'s Information Technology Laboratory (ITL) develops standards and guidelines, provides technical assistance, and conducts research for computers and resources. As part of the overall federal effort to establish a single face to industry for conducting electronic commerce, ITL has been designated as the organization responsible for coordinating the development of Federal Implementation Conventions (ICs) for Electronic Data Interchange (EDI). ICs are defined by functional-area experts who create and select options from standard EDI Transaction Sets to yield the implementations to be used for practical EDI. These ICs are made available to federal agencies and industry by electronic means and this Special Publication Series.

National Institute of Standards and Technology Special Publication 881-61
Natl. Inst. Stand. Technol. Spec. Publ. 881-61, 22 pages (Feb. 1998)
CODEN: NSPUE2

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1998

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402

848 Material Safety Data Sheet

Functional Group ID=**MS**

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Material Safety Data Sheet Transaction Set (848) for use within an Electronic Data Interchange (EDI) environment. The transaction set can be used to communicate chemical characteristics, hazards, and precautions for the safe handling and use of a material. The transaction set is intended to convey the information required for a Material Safety Data Sheet (MSDS) as defined by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200 in the United States, and Workplace Hazardous Materials Information System (WHIMS) in Canada, and various state, province, and local requirements under right-to-know legislation. The MSDS provides the receiver with detailed information concerning material identity, emergency response, chemical and physical characteristics, toxicology, and industrial hygiene procedures. State and federal law dictate who is obligated to provide the MSDS and to whom it should be issued. In addition, third-party providers or others with no statutory obligation may voluntarily provide an MSDS to anyone. This transaction set allows for transmission of MSDS data in a structured, unstructured, or semi-structured form. CAUTION: With this transaction set, text format is critical due to the MSDS's primary role as a vehicle for hazards communication. The risk if this information is not transmitted clearly and accurately could be harmful to human life, harmful to the environment, could cause mishandling of product, could result in regulatory non-compliance, and could result in liability. Trading partners need to agree on how to interpret, store, and display/print MSDS text, especially text contained in the MSG and SD1 segments. For example, a sender may wish to format text so that one print line is mapped to one MSG segment. Segment terminator and data element delimiter characters shall not appear in any MSDS data. WARNING: Alteration of the original document will occur if the EDI translator or application software converts characters to uppercase. This may adversely affect the appearance, effectiveness, clarity, readability, and communicability of the printed MSDS document.

Notes:

- 1. Organizations use this transaction set to request a Material Safety Data Sheet (MSDS).*
- 2. This transaction set may be used to request multiple MSDSs for items in the same solicitation or award instrument.*
- 3. Requested MSDSs are to be submitted in the English language unless otherwise specified. If the MSDS is to be submitted in a language other than English, the language will be identified in BMS03. Use multiple transactions to request the MSDS in more than one language.*

Heading:

	Pos. <u>No.</u>	Seg. <u>ID</u>	<u>Name</u>	Req. <u>Des.</u>	<u>Max.Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	ST	Transaction Set Header	M	1		
Must Use	020	BMS	Beginning Segment For Material Safety Data Sheet	M	1		
Not Used	030	NTE	Note/Special Instruction	O	>1		
	040	REF	Reference Numbers	O	>1		
	050	DTM	Date/Time Reference	O	>1		
			LOOP ID - N1			>1	
Must Use	060	N1	Name	O	1		

848R - Material Safety Data Sheet (Request)

Not Used	070	N2	Additional Name Information	O	>1
Not Used	080	N3	Address Information	O	>1
Not Used	090	N4	Geographic Location	O	1
Not Used	100	REF	Reference Numbers	O	>1
	110	PER	Administrative Communications Contact	O	>1

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	M	1		n1
	020	PID	Product/Item Description	O	>1		
			LOOP ID - MSS			>1	
Not Used	030	MSS	Material Safety Data Sheet Section Information	O	1		n2
Not Used	040	MEA	Measurements	O	>1		
Not Used	050	MSG	Message Text	O	>1		n3
			LOOP ID - SD1			>1	
Not Used	060	SD1	Safety Data	O	1		n4
Not Used	070	MEA	Measurements	O	>1		
Not Used	072	PKG	Marking, Packaging, Loading	O	>1		
Not Used	074	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	O	>1		
Not Used	080	MSG	Message Text	O	>1		n5
			LOOP ID - CID			>1	
Not Used	100	CID	Characteristic/Class ID	O	1		
Not Used	110	MEA	Measurements	M	>1		
			LOOP ID - LX			>1	
Not Used	115	LX	Assigned Number	O	1		
Not Used	120	CID	Characteristic/Class ID	O	1		
Not Used	130	MEA	Measurements	O	>1		
Not Used	140	STA	Statistics	O	1		
Not Used	150	TMD	Test Method	O	1		
Not Used	160	MSG	Message Text	O	>1		
			LOOP ID - SD1			>1	
Not Used	170	SD1	Safety Data	O	1		
Not Used	180	MEA	Measurements	O	>1		
Not Used	182	PKG	Marking, Packaging, Loading	O	>1		
Not Used	184	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	O	>1		
Not Used	190	MSG	Message Text	O	>1		
			LOOP ID - CID			>1	
Not Used	210	CID	Characteristic/Class ID	O	1		
Not Used	220	MEA	Measurements	M	>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>
--	---------------------	--------------------	-------------	----------------------	----------------	------------------------	-------------------------------

Not Used	010	CTT	Transaction Totals	O	1	n6
Must Use	020	SE	Transaction Set Trailer	M	1	

Transaction Set Notes

1. LIN loop is product level. MSS is section level. The first SD1 loop is safety data relating to the section only. The first CID loop is for complex measurements on safety data. LX loop is used to specify product characteristics, components, or complex measurements (i.e., those with environmental parameters). The second SD1 loop is safety data relating to a particular product characteristic or component. The second CID loop is for complex measurements on safety data, which related to a particular product characteristic or component.
2. Regulation notifications can be contained in MSS or SD1 or both.
3. Trading partners must agree on a convention for text processing that will not split words, and which can convey correct meaning, in successive SD1 or MSG segments.
4. Regulation notifications can be contained in MSS or SD1 or both.
5. Trading partners must agree on a convention for text processing that will not split words, and which can convey correct meaning, in successive SD1 or MSG segments.
6. 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.

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) 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>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set 848 X12.36 Material Safety Data Sheet	M ID 3/3
Must Use	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 <i>A unique number assigned by the originator of the transaction set, or the originator's application program.</i>	M AN 4/9

Segment: **BMS** Beginning Segment For Material Safety Data Sheet
Position: 020
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: Beginning of the Material Safety Data Sheet Transaction Set, to identify the distinct type of report and to transmit key identifying numbers and dates relating to that report
Syntax Notes:
Semantic Notes:

- 1 BMS02 specifies date the report is effective (YYMMDD).
- 2 BMS04 specifies sender's report identifier.
- 3 BMS05 is a number indicating the chronological sequence of this revision.
- 4 BMS08 specifies the state or province for ultimate receipt of this report.
- 5 BMS09 specifies the country for ultimate receipt of this report.

Comments:

- 1 If BMS01 is code "05" and BMS04 is used, then BMS06, if used, must identify the previous version of this report which is being replaced.
If BMS01 is code "05" and BMS05 is used, then BMS07, if used, must identify the previous version of this report which is being replaced.
- 2 BMS03 specifies the language of the text information in the Material Safety Data Sheet (MSDS).

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	BMS01	353	Transaction Set Purpose Code Code identifying purpose of transaction set	M ID 2/2
			00 Original <i>Use to indicate an original request for an MSDS.</i>	
			01 Cancellation <i>Use to indicate a cancellation of a previous request for an MSDS</i>	
			07 Duplicate <i>Use to indicate a duplicate transmission of a previously transmitted request for an MSDS.</i>	
Must Use	BMS02	373	Date Date (YYMMDD) <i>Use to identify the date of the request</i>	M DT 6/6
	BMS03	819	Language Code Code designating the language used in text, from a standard code list maintained by the International Standards Organization (ISO 639) <i>Use to identify a language other than English in which the requested MSDS is to be submitted.</i>	O ID 2/3
	BMS04	127	Reference Number Reference number or identification number as defined for a particular Transaction Set, or as specified by the Reference Number Qualifier. <i>Use to provide a unique reference number that identifies this transaction set.</i>	O AN 1/30
Not Used	BMS05	691	Revision Number A number which indicates the chronological sequence of revisions and updates to a ratemaking docket	O N0 1/4
Not Used	BMS06	127	Reference Number Reference number or identification number as defined for a particular Transaction Set, or as specified by the Reference Number Qualifier.	O AN 1/30

Not Used	BMS07	691	Revision Number A number which indicates the chronological sequence of revisions and updates to a ratemaking docket	O	N0 1/4
Not Used	BMS08	156	State or Province Code Code (Standard State/Province) as defined by appropriate government agency	O	ID 2/2
Not Used	BMS09	26	Country Code Code identifying the country	O	ID 2/3

Segment: **REF** Reference Numbers
Position: 040
Loop:
Level: Heading
Usage: Optional
Max Use: >1
Purpose: To specify identifying numbers.
Syntax Notes: 1 At least one of REF02 or REF03 is required.
Semantic Notes:
Comments:
Notes:

Use this segment to provide reference numbers applicable to this request.

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	REF01	128	Reference Number Qualifier Code qualifying the Reference Number.	M ID 2/2
			2G Amendment <i>Use to indicate an amendment to a solicitation. When used, another REF segment must be transmitted citing code KS in REF01.</i>	
			C4 Change Number <i>Use to cite the contract modification number, as required. When used, another REF segment must be transmitted citing code CT in REF01. If the modification is to a call, release or delivery order, additionally transmit a REF segment citing code DO in REF01.</i>	
			CR Customer Reference Number <i>Use to identify a control number other than a contract instrument. Cite the type of number in REF03.</i>	
			CT Contract Number <i>Use to indicate the award instrument number. This is always the Procurement Instrument Identification Number (PIIN) for DoD or an equivalent number for Civilian Agencies.</i>	
			DO Delivery Order Number <i>Use to indicate a call, release or delivery order number. When used, another REF segment must be transmitted citing code CT in REF01.</i>	
			KS Solicitation A discreet number assigned by the purchasing activity to differentiate between different solicitations <i>Use to indicate the solicitation number which contains the item for which the MSDS is requested.</i>	
			PR Price Quote Number <i>Use to indicate the contractor's price quote number applicable to the solicitation.</i>	
	REF02	127	Reference Number Reference number or identification number as defined for a particular Transaction Set, or as specified by the Reference Number Qualifier. <i>Cite all numbers as continuous numbers without extraneous characters.</i>	X AN 1/30

REF03

352

Description

X AN 1/80

A free-form description to clarify the related data elements and their content

Use to identify the type of control number when REF01 is code CR.

Segment: **DTM** Date/Time Reference
Position: 050
Loop:
Level: Heading
Usage: Optional
Max Use: >1
Purpose: To specify pertinent dates and times
Syntax Notes: 1 At least one of DTM02 DTM03 or DTM06 is required.
 2 If either DTM06 or DTM07 is present, then the other is required.
Semantic Notes:
Comments:
Notes:

Use this segment to identify the date by which the MSDS must be received. This segment can also be used to identify the date of issuance of a specific MSDS that is being requested.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	DTM01	374	Date/Time Qualifier Code specifying type of date or time, or both date and time	M ID 3/3
		102	Issue <i>Use to indicate the date of issuance of a specific MSDS that is being requested.</i>	
		106	Required By <i>Use to indicate the date by which the MSDS must be received.</i>	
		600	As Of <i>Use only to indicate a request for a previous version of an MSDS when the exact date of preparation is unknown. The date represents a request for MSDSs prepared on or before the given date.</i>	
	DTM02	373	Date Date (YYMMDD)	X DT 6/6
Not Used	DTM03	337	Time 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)	X TM 4/8
Not Used	DTM04	623	Time Code 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
	DTM05	624	Century The first two characters in the designation of the year (CCYY)	O NO 2/2
Not Used	DTM06	1250	Date Time Period Format Qualifier Code indicating the date format, time format, or date and time format	X ID 2/3
Not Used	DTM07	1251	Date Time Period Expression of a date, a time, or range of dates, times or dates and times	X AN 1/35

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.
Notes:	<i>Two iterations of this loop are REQUIRED to identify the "From" party (requester) and the "To" party (recipient). Use additional iterations of this loop as needed to identify parties to receive the MSDS (if other than the "From" party).</i>

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, or an individual	M ID 2/2
			FR Message From <i>Use to indicate the party sending the request.</i>	
			PK Party to Receive Copy <i>Use to identify the recipient activities in addition to the requesting activity (Code FR).</i>	
			TO Message To <i>Use to indicate the party to whom the request is being sent.</i>	
			ZD Party to Receive Reports The organization designated to receive reports <i>Use to identify the recipient activities if other than the requesting activity (Code FR). Do not provide copies to the requesting activity.</i>	
Not Used	N102	93	Name Free-form name	X AN 1/35
	N103	66	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67) <i>While the federal EDI program uses the DUNS number, some government users of this implementation convention may require the use of other numbers for a transition period in order to cross reference existing data bases.</i>	X ID 1/2
			1 D-U-N-S Number, Dun & Bradstreet <i>Use of the DUNS or DUNS+4 number is preferred over any other coded number to identify an entity.</i>	
			9 D-U-N-S+4, D-U-N-S Number with Four Character Suffix <i>Use of the DUNS or DUNS+4 number is preferred over any other coded number to identify an entity.</i>	

		10	Department of Defense Activity Address Code (DODAAC)		
			<i>Use to indicate either a Department of Defense Activity Address Code or a Civilian Agency Activity Address Code.</i>		
		33	Commercial and Government Entity (CAGE)		
		FI	Federal Taxpayer's Identification Number		
	N104	67	Identification Code	X	AN 2/20
			Code identifying a party or other code		
Not Used	N105	706	Entity Relationship Code	O	ID 2/2
			Code describing entity relationship		
Not Used	N106	98	Entity Identifier Code	O	ID 2/2
			Code identifying an organizational entity, a physical location, or an individual		

Segment: **PER** Administrative Communications Contact
Position: 110
Loop: N1 Optional (Must Use)
Level: Heading
Usage: Optional
Max Use: >1
Purpose: To identify a person or office to whom administrative communications should be directed
Syntax Notes:

- 1 If either PER03 or PER04 is present, then the other is required.
- 2 If either PER05 or PER06 is present, then the other is required.
- 3 If either PER07 or PER08 is present, then the other is required.

Semantic Notes:**Comments:**

Notes: *When N101 is code FR, use to identify a contact to whom inquiries regarding this request can be directed.*

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
Must Use	PER01	366 Contact Function Code Code identifying the major duty or responsibility of the person or group named IC Information Contact	M ID 2/2
	PER02	93 Name Free-form name <i>Use to indicate the name of the person or office. Last name first, followed by first name is preferred. If the whole name exceeds 35 characters, use the initial of the first name.</i>	O AN 1/35
	PER03	365 Communication Number Qualifier Code identifying the type of communication number EM Electronic Mail FX Facsimile IT International Telephone TE Telephone <i>Use to indicate the commercial telephone number of the party cited in PER02.</i>	X ID 2/2
	PER04	364 Communication Number Complete communications number including country or area code when applicable <i>1. When PER03 is code FX, IT, or TE, include the area code.</i> <i>2. Cite all numbers, other than those qualified by code EM, as continuous numbers without extraneous characters.</i>	X AN 1/80
	PER05	365 Communication Number Qualifier Code identifying the type of communication number <i>Use to identify a second communications number for the party cited in PER02. For example, if PER03/04 cites a commercial telephone number, PER05/06 can be used to cite an Electronic Mail address.</i> EM Electronic Mail EX Telephone Extension <i>Use only if PER03 is code TE or IT.</i> FX Facsimile IT International Telephone	X ID 2/2

		TE	Telephone	
			<i>Use to indicate the commercial telephone number of the party cited in PER02.</i>	
PER06	364	Communication Number	X	AN 1/80
		Complete communications number including country or area code when applicable		
		1. <i>When PER05 is code FX, IT, or TE, include the area code.</i>		
		2. <i>Cite all numbers, other than those qualified by code EM, as continuous numbers without extraneous characters.</i>		
PER07	365	Communication Number Qualifier	X	ID 2/2
		Code identifying the type of communication number		
		<i>Use to identify a third communications number for the party cited in PER02.</i>		
		EM	Electronic Mail	
		EX	Telephone Extension	
			<i>Use only if PER05 is code TE or IT.</i>	
		FX	Facsimile	
		IT	International Telephone	
		TE	Telephone	
			<i>Use to indicate the commercial telephone number of the party cited in PER02.</i>	
PER08	364	Communication Number	X	AN 1/80
		Complete communications number including country or area code when applicable		
		1. <i>When PER07 is code FX, IT, or TE, include the area code.</i>		
		2. <i>Cite all numbers, other than those qualified by code EM, as continuous numbers without extraneous characters.</i>		
PER09	443	Contact Inquiry Reference	O	AN 1/20
		Additional reference number or description to clarify a contact number		
		<i>Use, if necessary, to identify the title of the party cited in PER02.</i>		

Segment:	LIN Item Identification
Position:	010
Loop:	LIN Mandatory
Level:	Detail
Usage:	Mandatory
Max Use:	1
Purpose:	To specify basic item identification data
Syntax Notes:	<ol style="list-style-type: none"> 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:	1 LIN01 is the line item identification
Comments:	<ol style="list-style-type: none"> 1 See the Data Dictionary for a complete list of ID's. 2 LIN02 through LIN31 provide for fifteen (15) different product/service ID's for each item. For Example: Case, Color, Drawing No., UPC No., ISBN No., Model No., SKU.
Notes:	<i>Use to identify the line item for which the MSDS is requested.</i>

Data Element Summary

Ref.	Data	Element	Name	Attributes
Des.				
LIN01		350	Assigned Identification	O AN 1/11
			Alphanumeric characters assigned for differentiation within a transaction set	
			<ol style="list-style-type: none"> 1. <i>When applicable, use to identify the Contract Line Item Number (CLIN) or Subcontract Line Item Number (SUBCLIN), within the solicitation or award instrument, that identifies the item for which the MSDS is requested.</i> 2. <i>If a CLIN or SUBCLIN is not applicable, do not use this data element.</i> 	
Must Use	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)	
			<ol style="list-style-type: none"> 1. <i>Use to identify the product for which the MSDS is requested.</i> 2. <i>Use one of the following codes in the LIN02/03 data element pair to identify the material. Use any code in subsequent data element pairs to further identify the material as needed.</i> 	
			A2	Department of Defense Identification Code (DoDIC)
				Qualifies a code that uniquely identifies a type of explosive or ammunition
			BN	Bar-Coded Serial Number
			BP	Buyer's Part Number
			CN	Commodity Name
			<i>Use to indicate a plain text name or description of the</i>	

		<i>item.</i>
CO		Chemical Abstract Service (CAS) Registry Number
FS		National Stock Number
		<i>The National Stock Number (NSN) shall be transmitted without dashes.</i>
IN		Buyer's Item Number
LT		Lot Number
MF		Manufacturer
		<i>When used, cite the DUNS number of the manufacturer in the following data element.</i>
MG		Manufacturer's Part Number
		<i>When used a second 235/234 pair must be used citing either code MF or ZB.</i>
MN		Model Number
UK		U.P.C./EAN Shipping Container Code (1-2-5-5-1)
		A 14-digit code that uniquely identifies the manufacturer's shipping unit, including the packaging indicator and check digit; the first digit is the packaging indicator, the next two digits are the number system characters, the next five digits are the manufacturer ID number, the second five digits are the item code, and the final digit is the check digit
UP		U.P.C. Consumer Package Code (1-5-5-1)
VB		Vendor's Engineering Change Level Number
VN		Vendor's (Seller's) Item Number
VP		Vendor's (Seller's) Part Number
		<i>Use to indicate a part number assigned by a contractor other than a manufacturer.</i>
ZB		Commercial and Government Entity (CAGE) Code
		A code that identifies a commercial contractor authorized to do business with the U.S. government
		<i>Use to indicate a manufacturer who can be identified by a CAGE code.</i>

Must Use	LIN03	234	Product/Service ID	M	AN 1/40
			Identifying number for a product or service		
	LIN04	235	Product/Service ID Qualifier	X	ID 2/2
			Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
			Refer to 003050 Data Element Dictionary for acceptable code values.		
	LIN05	234	Product/Service ID	X	AN 1/40
			Identifying number for a product or service		
	LIN06	235	Product/Service ID Qualifier	X	ID 2/2
			Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
			Refer to 003050 Data Element Dictionary for acceptable code values.		
	LIN07	234	Product/Service ID	X	AN 1/40
			Identifying number for a product or service		
	LIN08	235	Product/Service ID Qualifier	X	ID 2/2
			Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
			Refer to 003050 Data Element Dictionary for acceptable code values.		

LIN09	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN10	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN11	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN12	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN13	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN14	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN15	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN16	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN17	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN18	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN19	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN20	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN21	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN22	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN23	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN24	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN25	234	Product/Service ID	X	AN 1/40

LIN26	235	Identifying number for a product or service		
		Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234) Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN27	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN28	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234) Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN29	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		
LIN30	235	Product/Service ID Qualifier	X	ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234) Refer to 003050 Data Element Dictionary for acceptable code values.		
LIN31	234	Product/Service ID	X	AN 1/40
		Identifying number for a product or service		

Segment:	PID Product/Item Description
Position:	020
Loop:	LIN Mandatory
Level:	Detail
Usage:	Optional
Max Use:	>1
Purpose:	To describe a product or process in coded or free-form format
Syntax Notes:	<ol style="list-style-type: none"> 1 If PID04 is present, then PID03 is required. 2 At least one of PID04 or PID05 is required. 3 If PID07 is present, then PID03 is required. 4 If PID08 is present, then PID03 is required.
Semantic Notes:	<ol style="list-style-type: none"> 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. 3 PID08 describes the physical characteristics of the product identified in PID04. A ``Y" indicates that the specified attribute applies to this item. A ``N" indicates it does not apply. Any other value is indeterminate.
Comments:	<ol style="list-style-type: none"> 1 If PID01 = ``F", then PID05 is used. If PID01 = ``S", then PID04 is used. If PID01 = ``X", then both PID04 and PID05 are used. 2 Use PID06 when necessary to refer to the product surface or layer being described in the segment. 3 PID07 specifies the individual code list of the agency specified in PID03.
Notes:	<i>Use this segment only if the product applicable to the MSDS cannot be adequately identified by a code value cited in the LIN segment.</i>

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	PID01	349	Item Description Type Code indicating the format of a description F Free-form	M ID 1/1
	PID02	750	Product/Process Characteristic Code Code identifying the general class of a product or process characteristic 08 Product <i>Use to indicate a complete set or kit. When used, provide a general description, including the intended use, of the set or kit in PID05.</i> 09 Sub-product <i>Use to indicate a component of a kit and provide a description of the component in PID05.</i> SYN Synonym <i>Use to indicate another name under which the product is sold.</i> TRN Trade Name <i>Use to indicate the brand name under which the product is sold.</i>	O ID 2/3
Not Used	PID03	559	Agency Qualifier Code Code identifying the agency assigning the code values	X ID 2/2
Not Used	PID04	751	Product Description Code A code from an industry code list which provides specific data about a product characteristic	X AN 1/12
	PID05	352	Description A free-form description to clarify the related data elements and their content	X AN 1/80

Use to identify, in free form text, the product applicable to the requested MSDS.

Not Used	PID06	752	Surface/Layer/Position Code	O	ID 2/2
			Code indicating the product surface, layer or position that is being described		
Not Used	PID07	822	Source Subqualifier	O	AN 1/15
			A reference that indicates the table or text maintained by the Source Qualifier		
Not Used	PID08	1073	Yes/No Condition or Response Code	O	ID 1/1
			Code indicating a Yes or No condition or response		

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

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M N0 1/10
Must Use	SE02	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 <i>Cite the same number as the one cited in ST02.</i>	M AN 4/9

NIST Technical Publications

Periodical

Journal of Research of the National Institute of Standards and Technology—Reports NIST research and development in those disciplines of the physical and engineering sciences in which the Institute is active. These include physics, chemistry, engineering, mathematics, and computer sciences. Papers cover a broad range of subjects, with major emphasis on measurement methodology and the basic technology underlying standardization. Also included from time to time are survey articles on topics closely related to the Institute's technical and scientific programs. Issued six times a year.

Nonperiodicals

Monographs—Major contributions to the technical literature on various subjects related to the Institute's scientific and technical activities.

Handbooks—Recommended codes of engineering and industrial practice (including safety codes) developed in cooperation with interested industries, professional organizations, and regulatory bodies.

Special Publications—Include proceedings of conferences sponsored by NIST, NIST annual reports, and other special publications appropriate to this grouping such as wall charts, pocket cards, and bibliographies.

National Standard Reference Data Series—Provides quantitative data on the physical and chemical properties of materials, compiled from the world's literature and critically evaluated. Developed under a worldwide program coordinated by NIST under the authority of the National Standard Data Act (Public Law 90-396). NOTE: The Journal of Physical and Chemical Reference Data (JPCRD) is published bimonthly for NIST by the American Chemical Society (ACS) and the American Institute of Physics (AIP). Subscriptions, reprints, and supplements are available from ACS, 1155 Sixteenth St., NW, Washington, DC 20056.

Building Science Series—Disseminates technical information developed at the Institute on building materials, components, systems, and whole structures. The series presents research results, test methods, and performance criteria related to the structural and environmental functions and the durability and safety characteristics of building elements and systems.

Technical Notes—Studies or reports which are complete in themselves but restrictive in their treatment of a subject. Analogous to monographs but not so comprehensive in scope or definitive in treatment of the subject area. Often serve as a vehicle for final reports of work performed at NIST under the sponsorship of other government agencies.

Voluntary Product Standards—Developed under procedures published by the Department of Commerce in Part 10, Title 15, of the Code of Federal Regulations. The standards establish nationally recognized requirements for products, and provide all concerned interests with a basis for common understanding of the characteristics of the products. NIST administers this program in support of the efforts of private-sector standardizing organizations.

Order the following NIST publications—FIPS and NISTIRs—from the National Technical Information Service, Springfield, VA 22161.

Federal Information Processing Standards Publications (FIPS PUB)—Publications in this series collectively constitute the Federal Information Processing Standards Register. The Register serves as the official source of information in the Federal Government regarding standards issued by NIST pursuant to the Federal Property and Administrative Services Act of 1949 as amended, Public Law 89-306 (79 Stat. 1127), and as implemented by Executive Order 11717 (38 FR 12315, dated May 11, 1973) and Part 6 of Title 15 CFR (Code of Federal Regulations).

NIST Interagency Reports (NISTIR)—A special series of interim or final reports on work performed by NIST for outside sponsors (both government and nongovernment). In general, initial distribution is handled by the sponsor; public distribution is by the National Technical Information Service, Springfield, VA 22161, in paper copy or microfiche form.

U.S. Department of Commerce
National Institute of Standards
and Technology
Gaithersburg, MD 20899-0001

Official Business
Penalty for Private Use \$300