

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 the context of 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. This implementation convention provides the fully unstructured format for submission of a "text like" Material Safety Data Sheet (MSDS). The Federal Government seeks to maximize the use of the structured convention where possible.*
- 2. This data requirement conforms to the Chemical Manufacturer's Association ANSI standard for MSDS preparation (ANSI Z400.1) and provides for hazard communication (HAZCOM) warning label information. Non-ANSI Z400.1 format MSDS can also be accommodated within this structure, but suppliers should ensure the format used preserves data clarity and readability.*
- 3. Strict version control of each MSDS for unique products and formulations is required. The primary method for MSDS identification is through a linkage between a unique MSDS reference number, a revision number if applicable, a manufacturer's part number, a CAGE (commercial and government entity), and MSDS effective date. Priority should be given to this data when identifying a unique product.*
- 4. Send only one MSDS per transaction.*

5. For any section when information is not available or not applicable, cite the section heading and provide an indicative message such as, for example, "Not Available."

Heading:

<u>Page No.</u>	<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>
4	010	ST	Transaction Set Header	M	1		
5	020	BMS	Beginning Segment For Material Safety Data Sheet	M	1		
Not Used	030	NTE	Note/Special Instruction	O	>1		
7	040	REF	Reference Identification	O	>1		
9	050	DTM	Date/Time Reference	O	>1		
LOOP ID - N1						>1	
11	060	N1	Name	O	1		
13	070	N2	Additional Name Information	O	>1		
14	080	N3	Address Information	O	>1		
15	090	N4	Geographic Location	O	1		
16	100	REF	Reference Identification	O	>1		
18	110	PER	Administrative Communications Contact	O	>1		

Detail:

<u>Page No.</u>	<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	
20	010	LIN	Item Identification	M	1		n1
25	020	PID	Product/Item Description	O	>1		
LOOP ID - MSS						>1	
27	030	MSS	Material Safety Data Sheet Section Information	O	1		n2
Not Used	040	MEA	Measurements	O	>1		
29	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		

848U - Material Safety Data Sheet (Unstructured)

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>Page No.</u>	<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
30	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) 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

	Ref.	Data	Attributes
	<u>Des.</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 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: To indicate the beginning of the Material Safety Data Sheet Transaction Set, identify the distinct type of report, and 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 indicates 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.	Data			Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>		
Must Use	BMS01	353	Transaction Set Purpose Code	M ID 2/2
			Code identifying purpose of transaction set	
		00	Original	
			<i>Use to identify an original MSDS transaction submission</i>	
		01	Cancellation	
			<i>Use only to indicate the cancellation of a previously submitted MSDS when the MSDS is found to be inaccurate and a new original (or replacement) MSDS has been submitted.</i>	
		05	Replace	
			<i>Use to identify the original submission of a MSDS which replaces an existing MSDS, whether previously submitted or not. Submission of a replacement MSDS is considered to be advisory information for the recipient and is not associated with an on-going acquisition action. This encompasses MSDS's superseded, replaced, or revised.</i>	
Must Use	BMS02	373	Date	M DT 8/8

Date expressed as CCYYMMDD

1. Cite the date on which the MSDS content is in effect.

2. For MSDS request transactions, cite the date of request.

	BMS03	819	Language Code	O ID 2/3
			Code designating the language used in text, from a standard code list maintained by the International Standards Organization (ISO 639)	
			<i>Use to specify a language if other than English.</i>	
	BMS04	127	Reference Identification	O AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
			<i>Cite the MSDS reference number which uniquely identifies any individual MSDS in original and cancellation submissions. For replacement MSDS submissions, cite the reference number of the MSDS which is replacing the obsolete MSDS.</i>	
	BMS05	796	Revision Value	O AN 1/30
			Revision or engineering change level of the data items referred to by the specification number	
			<i>Use to identify the unique revision number associated with the MSDS reference number as assigned by the developer of the MSDS. This is the most recent version of the MSDS.</i>	
	BMS06	127	Reference Identification	O AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
			<i>Use only in MSDS replacement submissions to identify the MSDS reference number of the MSDS being replaced.</i>	
	BMS07	796	Revision Value	O AN 1/30
			Revision or engineering change level of the data items referred to by the specification number	
			<i>Use only in MSDS replacement submissions to identify the MSDS revision number applicable to the MSDS being replaced.</i>	
Not Used	BMS08	156	State or Province Code	O ID 2/2
			Code (Standard State/Province) as defined by appropriate government agency	
Not Used	BMS09	26	Country Code	O ID 2/3
			Code identifying the country	

Segment: **REF** Reference Identification

Position: 040

Loop:

Level: Heading

Usage: Optional (Must Use)

Max Use: >1

Purpose: To specify identifying information

- Syntax Notes:**
- 1 At least one of REF02 or REF03 is required.
 - 2 If either C04003 or C04004 is present, then the other is required.
 - 3 If either C04005 or C04006 is present, then the other is required.

Semantic Notes: 1 REF04 contains data relating to the value cited in REF02.

Comments:

Notes:

1. Use of the original and cancellation submissions to identify the appropriate reference number associated with the MSDS submission requirement. Use multiple repetitions of the 1/REF/040 segment as needed to identify contract number and associated release or delivery order number.

2. Use for replacement submissions, if known, to identify the applicable contract, purchase order, or other number associated with the original submission.

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	REF01	128 Reference Identification Qualifier	M ID 2/3
		Code qualifying the Reference Identification	
		2G Amendment	
		C4 Change Number	
		<i>Use to cite the contract modification number, as required</i>	
		CT Contract Number	
		DO Delivery Order Number	
		<i>Use to cite the delivery order number against requirements or indefinite quantity contracts.</i>	
		KS Solicitation	
		A discreet number assigned by the purchasing activity to differentiate between different solicitations	
		<i>Use to indicate the solicitation number under which the MSDS is submitted. This is the primary method for cross reference to purchase prior to contract award.</i>	
		PR Price Quote Number	
		TN Transaction Reference Number	
		<i>Use to cite the MSDS request number given in 1/BMS04/020 of the MSDS request transaction, if</i>	

applicable.

Must Use	REF02	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30
	REF03	352	Description A free-form description to clarify the related data elements and their content	X AN 1/80
Not Used	REF04	C040	Reference Identifier To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier	O
Not Used	C04001	128	Reference Identification Qualifier Code qualifying the Reference Identification Refer to 004010 Data Element Dictionary for acceptable code values.	M ID 2/3
Not Used	C04002	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	M AN 1/30
Not Used	C04003	128	Reference Identification Qualifier Code qualifying the Reference Identification Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/3
Not Used	C04004	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30
Not Used	C04005	128	Reference Identification Qualifier Code qualifying the Reference Identification Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/3
Not Used	C04006	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30

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 DTM05 is required.
 - 2 If DTM04 is present, then DTM03 is required.
 - 3 If either DTM05 or DTM06 is present, then the other is required.

Semantic Notes:

Comments:

Notes: *Use in MSDS original, cancellation, and replacement transactions to identify the MSDS date of preparation.*

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	DTM01	374 Date/Time Qualifier	M ID 3/3
		Code specifying type of date or time, or both date and time	
		042 Superseded	
			<i>Use in replacement submissions only to identify the preparation date of MSDS being replaced.</i>
		102 Issue	
			<i>Use in original and cancellation transactions to identify the date of preparation for the MSDS being submitted or canceled. Use in replacement submissions to identify the original date of preparation for the new MSDS.</i>
	DTM02	373 Date	X DT 8/8
		Date expressed as CCYYMMDD	
Not Used	DTM03	337 Time	X TM 4/8
		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)	
Not Used	DTM04	623 Time Code	O ID 2/2
		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	
		Refer to 004010 Data Element Dictionary for acceptable code values.	

Not Used	DTM05	1250	Date Time Period Format Qualifier	X ID 2/3
			Code indicating the date format, time format, or date and time format Refer to 004010 Data Element Dictionary for acceptable code values.	
Not Used	DTM06	1251	Date Time Period	X AN 1/35
			Expression of a date, a time, or range of dates, times or dates and times	

Segment: **N1** Name
Position: 060
Loop: N1 Optional
Level: Heading
Usage: Optional
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: 1. *Multiple iterations of the 1/N1/060 loop are permitted to identify the party(ies) associated with the development and submission of the MSDS.*
 2. *If possible, use only N101 and the N103/N104 combination to provide the appropriate entity and address information.*

Data Element Summary

Ref.	Data		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N101	98 Entity Identifier Code	M ID 2/3
		Code identifying an organizational entity, a physical location, property or an individual	
		DS Distributor	<i>Use as needed to identify the entity in the material chain-of-custody responsible for distributing the material and which did not alter product information.</i>
		MF Manufacturer of Goods	<i>Use to identify the product manufacturer and entity responsible for determining the final product formulation.</i>
		R6 Requester	<i>Use to identify the entity initiating the MSDS request or requirement.</i>
		SU Supplier/Manufacturer	<i>Use as needed to identify the entity providing the material if other than distribution or manufacturer of goods.</i>
		YE Third Party	<i>Use to identify the MSDS submitter when other than the manufacturer or party providing the</i>

			material.	
		ZD	Party to Receive Reports The organization designated to receive reports <i>Use to indicate the party to receive the MSDS if other than the requester or entity initiating the requirement (R6).</i>	
N102	93	Name		X AN 1/60
		Free-form name		
			<i>Use only when no coded identification for the entity is available</i>	
N103	66	Identification Code Qualifier		X ID 1/2
		Code designating the system/method of code structure used for Identification Code (67)		
		1	D-U-N-S Number, Dun & Bradstreet	
		9	D-U-N-S+4, D-U-N-S Number with Four Character Suffix	
		10	Department of Defense Activity Address Code (DODAAC) <i>Use to identify a government activity within the Department of Defense</i>	
		33	Commercial and Government Entity (CAGE)	
		FI	Federal Taxpayer's Identification Number	
N104	67	Identification Code		X AN 2/80
		Code identifying a party or other code		
Not Used	N105	706 Entity Relationship Code		O ID 2/2
		Code describing entity relationship Refer to 004010 Data Element Dictionary for acceptable code values.		
N106	98	Entity Identifier Code		O ID 2/3
		Code identifying an organizational entity, a physical location, property or an individual		
		FR	Message From <i>Use as needed in conjunction with appropriate I/N101/060 code to identify the party originating the transaction.</i>	
		TO	Message To <i>Use as needed in conjunction with the appropriate I/N101/060 code to identify the party to receive the transaction set.</i>	

Segment: **N2** Additional Name Information

Position: 070

Loop: N1 Optional

Level: Heading

Usage: Optional

Max Use: >1

Purpose: To specify additional names or those longer than 35 characters in length

Syntax Notes:

Semantic Notes:

Comments:

Notes: *Use only as required in conjunction with 1/N102/060 to further identify the entity when the 1/N103/060 and 1/N014/060 combination is not sufficient. For example, use to identify a specific division or office of the organization cited in 1/N102/060.*

Data Element Summary

	Ref.	Data		Attributes
	Des.	Element	Name	
Must Use	N201	93	Name Free-form name	M AN 1/60
	N202	93	Name Free-form name	O AN 1/60

Segment: **N3** Address Information
Position: 080
Loop: N1 Optional
Level: Heading
Usage: Optional
Max Use: >1
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:

Notes: *Use only as required in conjunction with 1/N102/060 to further identify the entity's address when the 1/N103/060 and 1/N104/060 combination is not sufficient.*

Data Element Summary

	Ref.	Data		Attributes
	Des.	Element	Name	
Must Use	N301	166	Address Information Address information	M AN 1/55
	N302	166	Address Information Address information	O AN 1/55

Segment: **N4 Geographic Location**
Position: 090
Loop: N1 Optional
Level: Heading
Usage: Optional
Max Use: 1
Purpose: To specify the geographic place of the named party
Syntax Notes: 1 If N406 is present, then N405 is required.
Semantic Notes:
Comments: 1 A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
 2 N402 is required only if city name (N401) is in the U.S. or Canada.
Notes: *Use only as required in conjunction with 1/N102/060 to further identify the entity location when the 1/N103/060 and 1/N104/060 combination is not sufficient.*

Data Element Summary

Ref.	Data		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
N401	19	City Name	O AN 2/30
		Free-form text for city name	
N402	156	State or Province Code	O ID 2/2
		Code (Standard State/Province) as defined by appropriate government agency	
N403	116	Postal Code	O ID 3/15
		Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	
N404	26	Country Code	O ID 2/3
		Code identifying the country	
		<i>Use only in transactions identifying the location of an entity as outside the fifty United States or its territories or possessions.</i>	
Not Used	N405	309 Location Qualifier	X ID 1/2
		Code identifying type of location	
		Refer to 004010 Data Element Dictionary for acceptable code values.	
Not Used	N406	310 Location Identifier	O AN 1/30
		Code which identifies a specific location	

Segment: **REF** Reference Identification

Position: 100

Loop: N1 Optional

Level: Heading

Usage: Optional

Max Use: >1

Purpose: To specify identifying information

- Syntax Notes:**
- 1 At least one of REF02 or REF03 is required.
 - 2 If either C04003 or C04004 is present, then the other is required.
 - 3 If either C04005 or C04006 is present, then the other is required.

Semantic Notes: 1 REF04 contains data relating to the value cited in REF02.

Comments:

Notes: *Use as needed in all transactions to further identify the entity cited in 1/N101/060.*

Data Element Summary

	<u>Ref.</u>	<u>Data</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element Name</u>	
Must Use	REF01	128 Reference Identification Qualifier	M ID 2/3
		Code qualifying the Reference Identification	
		W7 Commercial and Government Entity (CAGE) Code	
		Code that identifies a commercial contractor authorized to do business with the U.S. Government	
		<i>Use to indicate the CAGE code of the organization (other than government) cited in 1/N101/060 if 1/N103/060 is other than code 33.</i>	
Must Use	REF02	127 Reference Identification	X AN 1/30
		Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
Not Used	REF03	352 Description	X AN 1/80
		A free-form description to clarify the related data elements and their content	
Not Used	REF04	C040 Reference Identifier	O
		To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier	
Not Used	C04001	128 Reference Identification Qualifier	M ID 2/3
		Code qualifying the Reference Identification	
		Refer to 004010 Data Element Dictionary for acceptable code values.	
Not Used	C04002	127 Reference Identification	M AN 1/30
		Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
Not Used	C04003	128 Reference Identification Qualifier	X ID 2/3
		Code qualifying the Reference Identification	
		Refer to 004010 Data Element Dictionary for acceptable code values.	

Not Used	C04004	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30
Not Used	C04005	128	Reference Identification Qualifier Code qualifying the Reference Identification Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/3
Not Used	C04006	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30

Segment: **PER Administrative Communications Contact**
Position: 110
Loop: N1 Optional
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:**
1. *Suppliers must, as a minimum, identify the emergency contact and telephone number and provide an information contact and telephone number.*
 2. *Use PER05/PER06 and PER07/PER08 to provide a second and third, respectively, contact number associated with the named contact.*
 3. *Repeat the use of 1/PER/110 as needed to provide all applicable points of contact foreach entity identified by an iteration of the 1/N1/060 loop.*

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	PER01	366 Contact Function Code	M ID 2/2
		Code identifying the major duty or responsibility of the person or group named	
		AT Material Safety Data Sheet Contact	
		EM Emergency Contact	
		<i>Use to identify point of contact for emergency situations. Cite the office or third party representative (e.g., CHEMTREC) in PER02.</i>	
		HM Hazardous Material Contact	
		<i>Use as needed to identify the general point of contact from which information regarding the hazards of the material may be obtained.</i>	
		TR Technical Marketing Representative	
		<i>Use as needed to identify the point of contact for general product information.</i>	
PER02	93	Name	O AN 1/60
		Free-form name	
		<i>Use to indicate the name of the person or office, Last name followed by first name is preferred. If the whole name exceeds 35 characters, use the initial of the first name.</i>	

PER03	365	Communication Number Qualifier	X ID 2/2
		Code identifying the type of communication number	
		<i>When citing a telephone or facsimile number, do not include dashes.</i>	
		EM	Electronic Mail
		FX	Facsimile
		IT	International Telephone
		<i>Include the country code.</i>	
		TE	Telephone
PER04	364	Communication Number	X AN 1/80
		Complete communications number including country or area code when applicable	
PER05	365	Communication Number Qualifier	X ID 2/2
		Code identifying the type of communication number	
		EM	Electronic Mail
		EX	Telephone Extension
		<i>Use only if PER03 is used citing either TE or IT.</i>	
		FX	Facsimile
		IT	International Telephone
		<i>Include the country code.</i>	
		TE	Telephone
PER06	364	Communication Number	X AN 1/80
		Complete communications number including country or area code when applicable	
PER07	365	Communication Number Qualifier	X ID 2/2
		Code identifying the type of communication number	
		EM	Electronic Mail
		EX	Telephone Extension
		<i>Use only if PER05 is used citing either TE or IT.</i>	
		FX	Facsimile
		IT	International Telephone
		<i>Include the country code.</i>	
		TE	Telephone
PER08	364	Communication Number	X AN 1/80
		Complete communications number including country or area code when applicable	
PER09	443	Contact Inquiry Reference	O AN 1/20
		Additional reference number or description to clarify a contact number	
		<i>Use as needed to further identify the point of contact or communications method. For example, use to cite "24-hours" or "Mon-Fri" as needed.</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:**
- 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: 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.

- Notes:**
1. *Use only the 2/LIN/010 segment in cancellation transactions to identify the material associated with the canceled MSDS.*
 2. *Use all additional necessary segments in the 2/LIN/010 loop in original and replacement transactions to identify the specific MSDS content.*
 3. *Use data element 235/234 pairs to identify data pertinent to the transaction. Unless otherwise specified, the multiple codes listed for a single qualifier data element identify the range of possible data requirements. When needed, use the next available combination of data element 235.234 pairs to provide the necessary data.*
 4. *The most desirable means of item identification is manufacturer's part number and CAGE Code. However, MSDS submitters may use other authorized coding alternatives to identify the material for which the MSDS is prepared. This information will be used in conjunction with an MSDS reference number, MSDS revision number, and MSDS effective date to uniquely identify any individual MSDS.*
 5. *Manufacturers should use one data element 235/234 pair to identify the product by manufacturer's part number (code MG) and immediately follow with*

another data element 235/234 pair identifying the associated manufacturer CAGE Code (code ZB).

6. Distributors and repackagers should use one data element 235/234 pair to identify the product by vendor's part number (code VP) and follow immediately with a data element 235/234 pair identifying the associated distributor or repackagers CAGE Code (code ZB). Distributors and repackagers should then use two additional data element 235/234 pairs to identify the product manufacturer's part number (code MG) and CAGE Code (code ZB), if known.

7. Suppliers should identify the product by manufacturer's part number (code MG) in one data element 235/234 pair and follow immediately with a data element 235/234 pair identifying the associated manufacturer CAGE Code (code ZB).

8. All submitters shall provide the National Stock Number (NSN), if known, but NOT as a substitute for part number and CAGE Code. The use of code FS may be repeated in successive data element 235/234 pairs to identify multiple NSN's corresponding to the product.

9. Provide other identifying information, as required, to adequately identify the material for which the MSDS applies.

Data Element Summary

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
LIN01	350	Assigned Identification	O AN 1/20
		Alphanumeric characters assigned for differentiation within a transaction set	
		<i>Use to identify the Contract Line Item Number (CLIN), Sub Contract Line Item Number (SUBCLIN), or the Exhibit Line Item Number (ELIN), if one is assigned.</i>	
Must Use	LIN02	Product/Service ID Qualifier	M ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)	
		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	
		CO Chemical Abstract Service (CAS) Registry Number	
		FS National Stock Number	
		IN Buyer's Item Number	
		LT Lot Number	

MG	Manufacturer's Part Number <i>Use to identify a manufacturer's or supplier's part number.</i>
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)
VN	Vendor's (Seller's) Item Number
VP	Vendor's (Seller's) Part Number <i>Use to identify a distributor's or repackager's part number.</i>
VX	Vendor's Specification Number
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 in conjunction with the code MG (or VP) to identify the manufacturer (or distributor).</i>

Must Use	LIN03	234	Product/Service ID	M AN 1/48
			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 004010 Data Element Dictionary for acceptable code values.	
	LIN05	234	Product/Service ID	X AN 1/48
			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 004010 Data Element Dictionary for acceptable code values.	
	LIN07	234	Product/Service ID	X AN 1/48
			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 004010 Data Element Dictionary for acceptable code values.		
LIN09	234	Product/Service ID	X AN 1/48	
		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 004010 Data Element Dictionary for acceptable code values.		
LIN11	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN13	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN15	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN17	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN19	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN21	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.		
LIN23	234	Product/Service ID	X	AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.	
LIN25	234	Product/Service ID	X AN 1/48
		Identifying number for a product or service	
LIN26	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 004010 Data Element Dictionary for acceptable code values.	
LIN27	234	Product/Service ID	X AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.	
LIN29	234	Product/Service ID	X AN 1/48
		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 004010 Data Element Dictionary for acceptable code values.	
LIN31	234	Product/Service ID	X AN 1/48
		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:

- 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 PID04 is required.
- 5 If PID09 is present, then PID05 is required.

Semantic Notes:

- 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; an "N" indicates it does not apply. Any other value is indeterminate.
- 4 PID09 is used to identify the language being used in PID05.

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.
- 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: *Use this segment only if the product applicable to the MSDS cannot be adequately identified by a code value cited in the 2/LIN/010 segment.*

Data Element Summary

Ref.	Data			Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>		
Must Use	PID01	349	Item Description Type	M ID 1/1
			Code indicating the format of a description	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
Must Use	PID02	750	Product/Process Characteristic Code	O ID 2/3
			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>	
		80	MILSPEC (Military Specification)	
			<i>Use to identify a Military Specification (MILSPEC) or Military Standard (MILSTD).</i>	

81 FEDSPEC (Federal Specification)
 82 FED-STD (Federal Standard)
 83 CID (Commercial Item Description)
 84 Special Specification
Use in conjunction with PID04 to identify an industry specification.

CCN Common Chemical Name
 CHF Chemical Family
 SYN Synonym
Use to indicate another name under which the product is sold.

TRN Trade Name
Use to indicate the brand name under which the product is sold.

	PID03	559	Agency Qualifier Code	X	ID 2/2
			Code identifying the agency assigning the code values		
			<i>Use any code.</i>		
			Refer to 004010 Data Element Dictionary for acceptable code values.		
	PID04	751	Product Description Code	X	AN 1/12
			A code from an industry code list which provides specific data about a product characteristic		
	PID05	352	Description	X	AN 1/80
			A free-form description to clarify the related data elements and their content		
			<i>Use to identify, in free form text, the product applicable to the MSDS.</i>		
Not Used	PID06	752	Surface/Layer/Position Code	O	ID 2/2
			Code indicating the product surface, layer or position that is being described		
			Refer to 004010 Data Element Dictionary for acceptable code values.		
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		
			Refer to 004010 Data Element Dictionary for acceptable code values.		
	PID09	819	Language Code	O	ID 2/3
			Code designating the language used in text, from a standard code list maintained by the International Standards Organization (ISO 639)		

Segment:	MSS Material Safety Data Sheet Section Information
Position:	030
Loop:	MSS Optional
Level:	Detail
Usage:	Optional
Max Use:	1
Purpose:	To identify the report section
Syntax Notes:	<ol style="list-style-type: none"> 1 At least one of MSS01 MSS02 or MSS06 is required. 2 Only one of MSS01 or MSS06 may be present.
Semantic Notes:	<ol style="list-style-type: none"> 1 MSS02 is a text description of the report section. 2 MSS03 indicates the state or province issuing the regulations that determine what is reported in this section of the Material Safety Data Sheet (MSDS). 3 MSS04 identifies the country issuing the regulations that determine what is reported in this section.
Comments:	<ol style="list-style-type: none"> 1 MSS05 indicates whether any data in this report section has changed since the last revision of this report. 2 MSS07 indicates that the safety characteristics or hazard name is included in the name of the MSDS section or subsection.
Notes:	<i>Use only in original and replacement submissions. Only a single iteration of the 2/MSS/030 loop is used. Multiple repetitions of 2/MSG/050 convey the MSDS text stream.</i>

Data Element Summary

Ref.	Data	Attributes
<u>Des.</u>	<u>Element</u> <u>Name</u>	<u>Attributes</u>
MSS01	820 Report Section Name Code Code identifying the name of the section of the report MS Material Safety Data Sheet	X ID 2/2
Not Used	MSS02 352 Description A free-form description to clarify the related data elements and their content	X AN 1/80
Not Used	MSS03 156 State or Province Code Code (Standard State/Province) as defined by appropriate government agency	O ID 2/2
Not Used	MSS04 26 Country Code Code identifying the country	O ID 2/3
Not Used	MSS05 259 Change Type Code Code indicating change type Refer to 004010 Data Element Dictionary for acceptable code values.	O ID 1/1
Not Used	MSS06 1472 Report Section Number Number identifying a specified section or subsection of a report	X AN 1/15
Not Used	MSS07 821 Safety Characteristic/Hazard Code Code indicating precautionary measures, means of treatment and hazard information and warnings	O ID 3/3

Refer to 004010 Data Element Dictionary for acceptable code values.

Segment: **MSG** Message Text
Position: 050
Loop: MSS Optional
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To provide a free-form format that allows the transmission of text information
Syntax Notes: 1 If MSG03 is present, then MSG02 is required.
Semantic Notes: 1 MSG03 is the number of lines to advance before printing.
Comments: 1 MSG02 is not related to the specific characteristics of a printer, but identifies top of page, advance a line, etc.
 2 If MSG02 is "AA - Advance the specified number of lines before print" then MSG03 is required.

Notes:

1. *Multiple repetitions as necessary to convey all MSDS content data.*
2. *Identify section and subsection headings prior to conveying any applicable data to ensure clarity and readability.*
3. *Federal Acquisition Regulation (FAR) requires labeling information in conjunction with the submission of an MSDS for all government purchases. Use the subsection heading "HAZCOM Warning Label." Data required include:*
 - *Identity of hazardous chemical(s)*
 - *Appropriate hazard warnings to include target organ information; and*
 - *Name and address of chemical manufacturer, importer or responsible party.*

Data Element Summary

Ref.	Data			<u>Attributes</u>
<u>Des.</u>	<u>Element</u>	<u>Name</u>		
Must Use	MSG01	933	Free-Form Message Text	M AN 1/264
			Free-form message text	
Must Use	MSG02	934	Printer Carriage Control Code	X ID 2/2
			A field to be used for the control of the line feed of the receiving printer	
			AT Advanced Three Lines Before Print	
			DS Advance two lines before print	
			LC Line Continuation	
			NP Advance to next page before print	
			NS No advance before print	
			SS Advance to new line before print	
	MSG03	1470	Number	O N0 1/9
			A generic number	

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		
	Des.	Element	Name	Attributes
Must Use	SE01	96	Number of Included Segments	M N0 1/10
			Total number of segments included in a transaction set including ST and SE segments	
Must Use	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	
			<i>Cite the same number as used in the 1/ST02/010 segment.</i>	