

Association of American Railroads Hazardous Materials Shipping Descriptions Data Base

Reference File Layout

Long File Version (3949 Bytes)

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Data base field numbers, positions, and lengths remain the same, but terminology has been updated to reflect that currently used by each regulatory authority.

The phrase “hazardous material” is synonymous with the phrase “dangerous good”. The former is mainly used inside the United States, while the latter is mainly used outside the United States.

Throughout this document, Transport Canada is abbreviated TC, International Maritime Organization is abbreviated IMO, and United States Department of Transportation is abbreviated DOT.

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October 5, 2010	Originally Published
June 25, 2014	OT-55 Flag Revised
September 17, 2014	Emergency Response Assistance Plan Indicator Revised
December 1, 2015	OT-55 Flag Revised
December 1, 2018	Canada Origin US Destination Indicator & US Origin Canada Destination Indicator Revised

March 18, 2021	Field 26 – Revised text for value C for ERAP Indicator Canada. Revised Application Form for New Hazardous Material Response Code
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Section 1: Reference File Layout Structure

Field	Data Description	Position	Field Length	Data Format	Shipping Paper Regulation Reference
1	Hazardous Material Response Code	1-7	7	Text	None
2	Standard Transportation Commodity Code	8-14	7	Text	None
3	Transaction Date	15-22	8	Text	None
4	Transaction Time	23-28	6	Text	None
5	Status Code	29-29	1	Text	None
6	Effective Date	30-37	8	Text	None
7	Header-1	38-39	2	Text	None
8	Header-2	40-42	3	Text	None
9	Header-3	43-46	4	Text	None
10	Header-4	47-51	5	Text	None
11	15 Character STCC Description	52-66	15	Text	None
12	Alternate Number	67-68	2	Text	None
13	Expiration Date	69-76	8	Text	None
14	Additional Descriptive Information US	77-326	250	Text	HMR 172.201(a)(4)
15	Primary Hazard Class or Division International	327-330	4	Text	IMDG Code 5.4.1.4.1.3
16	N.O.S. Indicator International	331-331	1	Text	IMDG Code 5.4.1.4.3.1
17	Technical Name International	332-456	125	Text	IMDG Code 5.4.1.4.3.1
18	UN Number International	457-462	6	Text	IMDG Code 5.4.1.4.1.1
19	Packing Group International	463-463	1	Text	IMDG Code 5.4.1.4.1.5
20	Poison Material Indicator International	464-464	1	Text	Not required by IMO; DOT-related indicator is used instead
21	Primary Placard Notation International	465-466	2	Text	None – railroad specific
22	Proper Shipping Name International	467-591	125	Text	IMDG Code 5.4.1.4.1.2
23	Primary Class Canada	592-595	4	Text	TDGR 3.5(1)(c)(ii)
24	Subsidiary Class(es) Canada	596-604	9	Text	TDGR 3.5(1)(c)(iv)
25	Canada Origin US Destination Indicator	605-605	1	Text	HMR 171.23(b)
26	Emergency Response Assistance Plan Indicator Canada	606-609	4	Text	TDGR 3.6(1)
27	Primary Placard Notation Canada	610-611	2	Text	None – railroad specific

Field	Data Description	Position	Field Length	Data Format	Shipping Paper Regulation Reference
28	Special Commodity Indicator Canada	612-612	1	Text	CRTC Show Cause Decision; September 30, 1981
29	Reserved Canada	613-613	1	Text	Reserved for future
30	N.O.S. Indicator Canada	614-614	1	Text	TDGR 3.5(1)(c)(i)(A)
31	Subsidiary Placard Notation Canada	615-616	2	Text	None – railroad specific
32	Technical Name Canada	617-741	125	Text	TDGR 3.5(1)(c)(i)(A)
33	UN Number Canada	742-747	6	Text	TDGR 3.5(1)(c)(v)
34	Packing Group Canada	748-748	1	Text	TDGR 3.5(1)(c)(vi)
35	Poison Material Indicator Canada	749-749	1	Text	TDGR 3.5(1)(c)(vii)
36	Shipping Name Canada	750-874	125	Text	TDGR 3.5(1)(c)(i)
37	Reserved US	875-877	3	Text	Reserved for future
38	EPA Waste Stream Number(s) US	878-895	18	Text	HMR 172.203(c) & 172.203(k)(2)(i)
39	Hazardous Placard Endorsement US	896-897	2	Text	None – railroad specific
40	Primary Hazard Class or Division US	898-901	4	Text	HMR 172.202(a)(3)
41	Subsidiary Hazard(s) US	902-907	6	Text	HMR 172.202(a)(3)
42	Hazard Zone US	908-908	1	Text	HMR 172.203(m)
43	N.O.S. Indicator US	909-909	1	Text	HMR 172.203(k)
44	Subsidiary Placard Notation US	910-911	2	Text	None – railroad specific
45	Technical Name US	912-1036	125	Text	HMR 172.203(k)
46	UN/NA ID Number US	1037-1042	6	Text	HMR 172.202(a)(1)
47	US Origin Canada Destination Indicator	1043-1043	1	Text	TDGR 10.1
48	Packing Group US	1044-1044	1	Text	HMR 172.202(a)(4)
49	Poison Material Indicator US	1045-1045	1	Text	HMR 172.203(m)
50	Primary Placard Notation US	1046-1047	2	Text	None – railroad specific
51	Proper Shipping Name US	1048-1172	125	Text	HMR 172.202(a)(2)
52	OT-55 Flag	1173-1173	1	Text	None – railroad specific
53	Reserved	1174-1174	1	Text	Reserved for future
54	Reportable Quantity Flag US	1175-1175	1	Text	HMR 172.203(c)
55	Marine Pollutant Flag US	1176-1176	1	Text	HMR 172.203(l)
56	Hazardous Substance Name(s) US	1177-1301	125	Text	HMR 172.203(c)

Field	Data Description	Position	Field Length	Data Format	Shipping Paper Regulation Reference
57	Marine Pollutant Name(s) US	1302-1426	125	Text	HMR 172.203(I)
58	Reserved Canada	1427-1430	4	Text	Reserved for future
59	Special Shipping Name Flag Canada	1431-1431	1	Text	TDGR 1.3(2)(d)(iii)
60	Special Proper Shipping Name Flag International	1432-1432	1	Text	IMDG Code 3.1.2.3
61	Special Proper Shipping Name Flag US	1433-1433	1	Text	HMR 172.101(c)(4)
62	Intermodal Indicator Canada	1434-1434	1	Text	None
63	Intermodal Indicator International	1435-1435	1	Text	None
64	Intermodal Indicator US	1436-1436	1	Text	None
65	Reserved Canada	1437-1438	2	Text	Reserved for future
66	RSSM Indicator US	1439-1440	2	Text	None – railroad specific for compliance with 49 CFR 1580.100(b)
67	Alpha Description	1441-1690	250	Text	None
68	STCC Description	1691-1940	250	Text	None
69	Subsidiary Placard Notation International	1941-1942	2	Text	None – railroad specific
70	Subsidiary Hazard Class(es) or Division(s) International	1943-1951	9	Text	IMDG Code 5.4.1.4.1.4
71	Deletion Date	1952-1959	8	Text	None
72	Alternate Shipping Name(s) Canada	1960-2584	625	Text	Required if TDGR Schedule 1, column 2, lists more than one SN
73	Alternate Proper Shipping Name(s) International	2585-3209	625	Text	Required if IMDG Code Part 3 - Dangerous Goods List, column 2, lists more than one PSN
74	Alternate Proper Shipping Name(s) US	3210-3834	625	Text	Required if HMR 172.101 Hazardous Materials Table, column 2, lists more than one PSN and those instances where a PSN precedes "see".
75	Reserved	3835-3949	114	Text	Reserved for future

Section 2: Data Element Descriptions

1. Hazardous Material Response Code (7 Bytes)

The Hazardous Material Response Code (HMRC) is a unique seven (7) digit code used to identify a hazardous commodity. (See Appendix C.)

The first two digits of the HMRC are either 48 or 49:

- 48 – Hazardous Waste (having no associated Standard Transportation Commodity Code)
- 49 – Hazardous Material (having associated Standard Transportation Commodity Code)

2. Standard Transportation Commodity Code (7 Bytes)

The Standard Transportation Commodity Code (STCC) is a seven (7) digit ARTICLE OR COMMODITY DESCRIPTION code linked to by a 49-HMRC and is used for rating purposes.

3. Transaction Date (8 Bytes)

The Transaction Date (CCYYMMDD) indicates the date that the HMRC was added or changed.

4. Transaction Time (6 Bytes)

The Transaction Time (HHMMSS) indicates the time that the HMRC was added or changed.

5. Status Code (1 Byte)

The Status Code is a code that indicates the most recent transaction to an HMRC, as recorded in the transaction file. This field contains three (3) possible values.

- 1 – Expire
- 2 – Add
- 3 - Change

6. Effective Date (8 Bytes)

The Effective Date (CCYYMMDD) indicates the date that the added or changed HMRC becomes effective.

7. Header-1 (2 Bytes)

Header-1 is a code which indicates the MAJOR INDUSTRY GROUP of all STCCs which begin with the same two (2) digits.

8. Header-2 (3 Bytes)

Header-2 is a code which indicates the MINOR INDUSTRY GROUP of all STCCs which begin with the same three (3) digits.

9. Header-3 (4 Bytes)

Header-3 is a code which indicates the INDUSTRY of all STCCs which begin with the same four (4) digits.

10. Header-4 (5 Bytes)

Header-4 is a code which indicates the PRODUCT CLASS of all STCCs which begin with the same five (5) digits.

11. 15 Character STCC Description (15 Bytes)

The 15 Character STCC Description is a shortened version of the complete STCC Description (as found in Field 68 and continued in Field 75).

12. Alternate Number (2 Bytes)

The Alternate Number is the total number of additional Proper Shipping Names (PSN) allowed by TC, IMO, and DOT.

13. Expiration Date (8 Bytes)

The Expiration Date (CCYYMMDD) indicates the date that HMRC expiration becomes effective. A value of "99991231" indicates that the HMRC is active (i.e. not expired)

14. Additional Descriptive Information US (25 Bytes; repeated 10times)

This field may contain the additional, non-required text in italics found in column 2 of the HMR 172.101 Hazardous Materials Table.

15. Primary Hazard Class or Division International (4 Bytes)

The primary hazard class or division assigned by IMO.

16. N.O.S. Indicator International (1 Byte)

The Not Otherwise Specified (N.O.S.) Indicator is a flag to indicate that IMO requires the Proper Shipping Name(s) be augmented with a Technical Name.

N = The Proper Shipping Name(s) must be augmented
Blank = not applicable

17. Technical Name International (25 Bytes, repeated 5times)

If not blank, the field contains the Technical Name required to augment the N.O.S. flagged Proper Shipping Name(s). (See Field 16) If blank and Field 16 is flagged, then the information must be obtained from the original shipping paper.

18. UN Number International (6 Bytes)

The United Nations (UN) number required by IMO.

19. Packing Group International (1 Byte)

The Packing Group required by IMO.

1 = Packing group I
2 = Packing group II
3 = Packing group III
A = Packing groups I, II or III
B = Packing groups I or II
C = Packing groups II or III
D = Packing groups I or III
Blank – No Packing Group

20. Poison Material Indicator International (1 Byte)

The Poison Material Indicator is a code which indicates specific statements required for a material with an inhalation hazard, when shipped to the US.

I = Inhalation hazard
B = Poison inhalation hazard
Blank = not applicable

21. Primary Placard Notation International (2 Bytes)

The Primary Placard Notation is a code that corresponds to the IMO assigned primary hazard for the commodity. (See Appendix B.)

22. Proper Shipping Name International (25 Bytes, repeated 5times)

The Proper Shipping Name is the first IMO required name of the dangerous good.

23. Primary Class Canada (4 Bytes)

The primary class assigned by TC.

24. Subsidiary Class(es) Canada (3 Bytes; repeated 3times)

The subsidiary class(es) assigned by TC.

25. Canada Origin US Destination Indicator (1 Byte)

This field is used to indicate those dangerous goods that require special shipping information when being shipped from Canada to the United States.

C = The commodity description must include special shipping information

P = The description must include special packaging information specific to the United States

E = The description must include special packaging information specific to both the United States and Canada

Blank = not applicable

26. Emergency Response Assistance Plan Indicator Canada (4 Bytes)

This field is used to indicate that TC requires an Emergency Response Assistance Plan (ERAP) reference number and telephone number to appear on the shipping paper.

E = ERAP requirements apply

P = ERAP requirements apply to Packing Group I commodities only

T = ERAP requirements apply to Packing Group II commodities only

B = ERAP requirements apply to Packing Groups I and II commodities only

C = ERAP requirements apply to this commodity when transported by rail in a loaded tank car (if the quantity exceeds 10,000 L)

Blank = not applicable

E is only used when an ERAP is required for all Packing Groups of a material – whether none, one or multiple. P, T, and B are only used when multiple Packing Groups exist for a material and ERAP requirements apply to only some of these Packing Groups.

ERAP requirements apply when the quantity limits specified in Column 7 of Schedule 1 of Canada's Transportation of Dangerous Goods Regulations are exceeded. See also Part 7 of the Transportation of Dangerous Goods Regulations to determine ERAP requirements.

27. Primary Placard Notation Canada (2 Bytes)

The Primary Placard Notation is a code that corresponds to the TC assigned primary class for the commodity. (See Appendix A.)

28. Special Commodity Indicator Canada (1 Byte)

This field contains a flag to indicate that "SPECIAL COMMODITY" is required to be in the top right-hand corner of the shipping paper.

S = The statement "SPECIAL COMMODITY" must appear

P = The statement "SPECIAL COMMODITY" must appear for Packing Group I commodities.

Blank = not applicable

The requirement stems from a Canadian Railway Transport Committee Show Cause Decision on railway safety dated September 30, 1981 and a subsequent series of Orders that were issued to Canadian railway companies. The SPECIAL COMMODITIES are listed in Appendix 3 of the Show Cause Decision.

29. Reserved Canada (1 Byte)

Reserved for future use.

30. N.O.S. Indicator Canada (1 Byte)

The Not Otherwise Specified (N.O.S.) Indicator is a flag to indicate that TC requires the Shipping Name(s) be augmented with a Technical Name.

N = The Shipping Name(s) must be augmented

Blank – not applicable

31. Subsidiary Placard Notation Canada (2 Bytes)

The Subsidiary Placard Notation is a code that corresponds to the first TC assigned subsidiary class for the commodity. (See Appendix A.)

This field is only populated for those cases required under Part 4 of TC's Transportation of Dangerous Goods Regulations (e.g. TDGR 4.15.1).

32. Technical Name Canada (25 Bytes; repeated 5 times)

If not blank, the field contains the Technical Name required to augment the N.O.S. flagged Shipping Name(s). (See Field 30) If blank and Field 30 is flagged, then the information must be obtained from the original shipping paper.

33. UN Number Canada (6 Bytes)

The United Nations (UN) number required by TC.

34. Packing Group Canada (1 Byte)

The Packing Group required by TC.

1 = Packing Group I

2 = Packing Group II

3 = Packing Group III

A = Packing Groups I, II or III

B = Packing Groups I or II

C = Packing Groups II or III

D = Packing Groups I or III

Blank – No Packing Group

35. Poison Material Indicator Canada (1 Byte)

The Poison Material Indicator is a code which indicates specific statements required for a material with an inhalation hazard.

I = Inhalation hazard

B = Poison inhalation hazard

Blank = not applicable

36. Shipping Name Canada (25 Bytes; repeated 5 times)

The Shipping Name is the first TC required name of the dangerous good.

37. Reserved US (3 Bytes)

Reserved for future use.

38. EPA Waste Stream Number(s) US (6 Bytes; repeated 3times)

This field contains one to three EPA Waste Stream Number(s), each within parentheses, required to augment the N.O.S. flagged Proper Shipping Name(s) of certain manifested hazardous wastes. If not applicable, then this field is left blank.

39. Hazardous Placard Endorsement US (2 Bytes)

This field contains a code identifying a placard endorsement statement that applies to any hazardous material except, per HMR 174.82(a), a Division 1.6 material (without a Division 2.3 subsidiary hazard), a combustible liquid, a Division 6.1 PG III material, a Class 9 material, or an ORM-D material. The code is a mechanism used for rail car placement within a train.

XA – Explosives; applies to a Division 1.1 – 1.5 material without a Division 2.3 subsidiary hazard

EP – Explosives and Poison Gas; applies to a Division 1.1 – 1.6 material with a Division 2.3 subsidiary hazard

DA – Dangerous; used if a placard endorsement statement applies but none of the stricter statements apply

RM – Radioactive Material; applies to a Class 7 material

GZ – Poison Gas Zone A; applies to a Division 2.3 Zone A material

LZ – Poison PG I Zone A; applies to a Division 6.1 PG I Zone A material

40. Primary Hazard Class or Division US (4 Bytes)

The primary hazard class or division assigned by DOT.

41. Subsidiary Hazard(s) US (3 Bytes; repeated 2times)

The subsidiary hazard(s) assigned by DOT.

42. Hazard Zone US (1 Byte)

This field contains the DOT assigned Hazard Zone.

A = Hazard Zone A (Special Provisions code = 1)

B = Hazard Zone B (Special Provisions code = 2)

C = Hazard Zone C (Special Provisions code = 3)

D = Hazard Zone D (Special Provisions code = 4)

Blank = not applicable

43. N.O.S. Indicator US (1 Byte)

The Not Otherwise Specified (N.O.S.) Indicator is a flag to indicate that DOT requires the Proper Shipping Name(s) be augmented with a Technical Name, including EPA Waste Stream Number(s) if applicable.

N = The Proper Shipping Name(s) must be augmented
Blank = not applicable

44. Subsidiary Placard Notation US (2 Bytes)

The Subsidiary Placard Notation is a code that corresponds to the first DOT assigned subsidiary hazard for the commodity. (See Appendix B.)

This field is only populated for those cases required under Part 172 of DOT's Hazardous Materials Regulations (e.g. HMR 172.505).

45. Technical Name US (25 Bytes; repeated 5 times)

If not blank, the field contains the Technical Name required to augment the N.O.S. flagged Proper Shipping Name(s). (See Field 43) If blank and Field 43 is flagged, then the information must be obtained from the original shipping paper.

46. UN/NA ID Number US (6 Bytes)

The United Nations / North American (UN/NA) ID number is the identification number required by DOT.

47. US Origin Canada Destination Indicator (1 Byte)

This field is used to indicate those hazardous materials that require special shipping information when being shipped from the United States to Canada.

U = The commodity description must include special shipping information.

P = The description must include special packaging information specific to Canada

E = The description must include special packaging information specific to both the United States and Canada

Blank = Not applicable.

48. Packing Group US (1 Byte)

The Packing Group required by DOT.

1 = Packing Group I

2 = Packing Group II

3 = Packing Group III

A = Packing Groups I, II or III

B = Packing Groups I or II

C = Packing Groups II or III

D = Packing Groups I or III

Blank – No Packing Group

49. Poison Material Indicator US (1 Byte)

The Poison Material Indicator is a code which indicates specific statements required for a material with an inhalation hazard.

I = Inhalation hazard
B = Poison inhalation hazard
Blank = not applicable

50. Primary Placard Notation US (2 Bytes)

The Primary Placard Notation is a code that corresponds to the DOT assigned primary hazard class or division for the commodity. (See Appendix B).

51. Proper Shipping Name US (25 Bytes; repeated 5 times)

The Proper Shipping Name is the first DOT required name of the hazardous material.

52. OT-55 Flag (1 Byte)

The Operations/Transportation-55 (OT-55) flag is used to identify those commodities for which AAR Circular OT-55 "KEY TRAIN" and "KEY ROUTES" restrictions apply.

A = All other hazardous materials
E = Environmentally sensitive chemical
F = Flammable gas
P = Poison inhalation hazard
R = Radioactive material
T = Canadian only toxic inhalation hazard
X = Division 1.1 or 1.2 explosive
Blank = OT-55 restrictions do not apply

53. Reserved (1 Byte)

Reserved for future use.

54. Reportable Quantity Flag US (1 Byte)

A flag to indicate that DOT has listed the material or any of its constituents in Appendix A to HMR 172.101.

R = listed
Blank = not applicable

55. Marine Pollutant Flag US (1 Byte)

A flag to indicate that DOT has listed the material or any of its constituents in Appendix B to HMR 172.101.

M = listed

Blank = not applicable

56. Hazardous Substance Name(s) US (25 Bytes; repeated 5times)

The name(s) of the material or any of its constituents listed in Appendix A to HMR 172.101 for which Field 54 was flagged with "R".

57. Marine Pollutant Name(s) US (25 Bytes; repeated 5times)

The name(s) of the material or any of its constituent listed in Appendix B to HMR 172.101 for which Field 55 was flagged with "M".

58. Reserved Canada (4 Bytes)

Reserved for future use.

59. Special Shipping Name Flag Canada (1 Byte)

The Special Shipping Name Flag indicates the following per TC:

S = Qualifying words in the SN can appear in any sequence

M = Only one of the modifiers must be used

Blank = not applicable

60. Special Proper Shipping Name Flag International (1 Byte)

The Special Proper Shipping Name Flag indicates the following per IMO:

S = Qualifying words in the PSN can appear in any sequence

M = Only one of the modifiers must be used

Blank = not applicable

61. Special Proper Shipping Name Flag US (1 Byte)

The Special Proper Shipping Name Flag indicates the following per DOT:

S = Qualifying words in the PSN can appear in any sequence

M = Only one of the modifiers must be used

Blank = not applicable

62. Intermodal Indicator Canada (1 Byte)

The Intermodal Indicator denotes that the HMRC is appropriate to use for intermodal shipments. The Intermodal Indicator is typically assigned to only one HMRC per UN number listed in TDGR Schedule 1. An exception to this rule exists for Division 6.1 materials to accommodate certain requirements of some North American railroads. If a Division 6.1 material has multiple Packing Groups, including Packing Group III, then a HMRC with Intermodal Indicator exists for Packing Group III only and another HMRC with Intermodal Indicator exists for the remaining Packing Groups. The Intermodal Indicator is only used for 49-HMRCs.

I = appropriate

Blank = not appropriate

When the Intermodal Indicator was introduced, the following criteria were used to select the appropriate HMRC for existing UN numbers:

When multiple HMRCs existed for a given UN number, then typically only one was designated to serve as Intermodal Indicator, heeding the above-mentioned exception. Regardless of the requirement for Technical Name, the Intermodal Indicator was applied to the HMRC having no Technical Name and its STCC Description (Field 68) most closely matching: the Shipping Name, the general chemical group, or the application.

63. Intermodal Indicator International (1 Byte)

The Intermodal Indicator denotes that the HMRC is appropriate to use for intermodal shipments. The Intermodal Indicator is typically assigned to only one HMRC per UN number listed in IMDG Code Part 3 – Dangerous Goods List. An exception to this rule exists for Division 6.1 materials to accommodate certain requirements of some North American railroads. If a Division 6.1 material has multiple Packing Groups, including Packing Group III, then a HMRC with Intermodal Indicator exists for Packing Group III only and another HMRC with Intermodal Indicator exists for the remaining Packing Groups. The Intermodal Indicator is only used for 49-HMRCs.

I = appropriate

Blank = not appropriate

When the Intermodal Indicator was introduced, the following criteria were used to select the appropriate HMRC for existing UN numbers:

When multiple HMRCs existed for a given UN number, then typically only one was designated to serve as Intermodal Indicator, heeding the above-mentioned exception. Regardless of the requirement for Technical Name, the Intermodal Indicator was applied to the HMRC having no Technical Name and its STCC Description (Field 68) most closely matching: the Proper Shipping Name, the general chemical group, or the application.

64. Intermodal Indicator US (1 Byte)

The Intermodal Indicator denotes that the HMRC is appropriate to use for intermodal shipments. The Intermodal Indicator is typically assigned to only one HMRC per UN/NA identification number listed in HMR 172.101 Hazardous Materials Table. An exception to this rule exists for Division 6.1 materials to accommodate certain requirements of some North American railroads. If a Division 6.1 material has multiple Packing Groups, including Packing Group III, then a HMRC with Intermodal Indicator exists for Packing Group III only and another HMRC with Intermodal Indicator exists for the remaining Packing Groups. There are also some cases where multiple entries in HMR 172.101 Hazardous Materials Table are associated with the same UN/NA identification number. In these instances, if it is feasible to combine them into one HMRC, then this can be done and the Intermodal Indicator applied. If not feasible (e.g. different Hazard Zones), then as many HMRCs as necessary are created and the Intermodal Indicator is applied to each one.

When a material is reclassified as a Combustible Liquid and assigned a HMRC, then the Intermodal Indicator is not applied.

The Intermodal Indicator is only used for 49-HMRCs.

I = appropriate

Blank = not appropriate

When the Intermodal Indicator was introduced, the following criteria were used to select the appropriate HMRC for existing UN/NA identification numbers:

When multiple entries in HMR 172.101 Hazardous Materials Table were associated with the same UN/NA identification number or when materials were reclassified as Combustible Liquids, then the above-mentioned strategies were employed.

When multiple HMRCs existed for a given UN/NA identification number, then typically only one was designated to serve as Intermodal Indicator, heeding the above-mentioned exception. Regardless of the requirement for Technical Name, the Intermodal Indicator was applied to the HMRC having no Technical Name and its STCC Description (Field 68) most closely matching: the Proper Shipping Name, the general chemical group, or the application.

65. Reserved Canada (2 Bytes)

Reserved for future use.

66. RSSM Indicator US (2 Bytes)

The Rail Security Sensitive Material (RSSM) Indicator identifies materials that meet the criteria established by the U.S. Department of Homeland Security's Transportation Security Administration in 49 CFR 1580.100(b).

SP = Security PIH

SX = Security Explosive

SR = Security Radioactive

Blank = Not applicable

67. Alpha Description (25 Bytes; 10 times)

An alternate description provided when the Proper Shipping Name(s) and Technical Name provide inadequate description of the material. This field is provided for publication of the Alpha Index to the Directory of Hazardous Materials Shipping Descriptions and for file look-ups.

68. STCC Description (25 Bytes, 10 times)

This is the exact description for the STCC (Field 2), as found in the STCC 6001 publication.

69. Subsidiary Placard Notation International (2 Bytes)

The Subsidiary Placard Notation is a code that corresponds to the first IMO assigned subsidiary hazard for the commodity. (See Appendix B.)

This field is only populated for those cases required under Part 5 of IMO's International Maritime Dangerous Goods Code (e.g. IMDG Code 5.3.1.1.3).

70. Subsidiary Hazard Class(es) or Division(s) International (3 Bytes; repeated 3 times)

The subsidiary hazard class(es) or division(s) assigned by IMO.

71. Deletion Date (8 Bytes)

The Deletion Date (CCYYMMDD) indicates the date that the HMRC was expired. A value of "99991231" indicates that the HMRC is active (i.e. not expired)

The following fields contain possible additional authorized (Proper) Shipping Names for Canada, International, and US. Each can have a maximum of five additional names.

72. Alternate Shipping Name(s) Canada (125 Bytes, 5times)

Contains the additional dangerous goods shipping name(s) authorized by TC.

73. Alternate Proper Shipping Name(s) International (125 Bytes, 5times)

Contains the additional dangerous goods proper shipping name(s) authorized by IMO.

74. Alternate Proper Shipping Name(s) US (125 Bytes, 5times)

Contains the additional hazardous materials proper shipping name(s) authorized by DOT.

75. Reserved (25 Bytes, 6 times)

Reserved for future use.

Appendix A: Primary and Subsidiary Placard Notation for Canada

1A = PLACARDED CLASS 1.1A	4C = PLACARDED CLASS 1.4C
1B = PLACARDED CLASS 1.1B	4D = PLACARDED CLASS 1.4D
1C = PLACARDED CLASS 1.1C	4E = PLACARDED CLASS 1.4E
1D = PLACARDED CLASS 1.1D	4F = PLACARDED CLASS 1.4F
1E = PLACARDED CLASS 1.1E	4G = PLACARDED CLASS 1.4G
1F = PLACARDED CLASS 1.1F	4S = PLACARDED CLASS 1.4S
1G = PLACARDED CLASS 1.1G	5D = PLACARDED CLASS 1.5D
1J = PLACARDED CLASS 1.1J	6N = PLACARDED CLASS 1.6
1L = PLACARDED CLASS 1.1L	C3 = PLACARDED CLASS 3
2B = PLACARDED CLASS 1.2B	C9 = PLACARDED CLASS 9
2C = PLACARDED CLASS 1.2C	CA = PLACARDED CLASS 2.3
2D = PLACARDED CLASS 1.2D	CC = PLACARDED CLASS 8
2E = PLACARDED CLASS 1.2E	CD = PLACARDED DANGER
2F = PLACARDED CLASS 1.2F	CF = PLACARDED CLASS 2.1
2G = PLACARDED CLASS 1.2G	CN = PLACARDED CLASS 2.2
2H = PLACARDED CLASS 1.2H	CO = PLACARDED CLASS 5.1
2J = PLACARDED CLASS 1.2J	CP = PLACARDED CLASS 6.1
2K = PLACARDED CLASS 1.2K	CR = PLACARDED CLASS 7
2L = PLACARDED CLASS 1.2L	CS = PLACARDED CLASS 4.1
3C = PLACARDED CLASS 1.3C	CW = PLACARDED CLASS 4.3
3F = PLACARDED CLASS 1.3F	OC = PLACARDED CLASS 5.2
3G = PLACARDED CLASS 1.2G	SC = PLACARDED CLASS 4.2
3H = PLACARDED CLASS 1.3H	X1 = PLACARDED CLASS 1.1
3J = PLACARDED CLASS 1.3J	X2 = PLACARDED CLASS 1.2
3K = PLACARDED CLASS 1.3K	X3 = PLACARDED CLASS 1.3
3L = PLACARDED CLASS 1.3L	X4 = PLACARDED CLASS 1.4
4B = PLACARDED CLASS 1.4B	X5 = PLACARDED CLASS 1.5

Appendix B: Primary and Subsidiary Placard Notation for US and International

Hazard Class or Division	Placard Notation and Name	Hazard Class or Division	Placard Notation and Name
Combustible liquid	CL = COMBUSTIBLE	9 and see HMR 172.504(f)(9)	N9 = CLASS 9 or marked with identification number
8	CM = CORROSIVE	6.1 (PGIII)	NF = POISON
See HMR 172.504(b)	DA = DANGEROUS	2.2	NG = NON-FLAMMABLE GAS
4.3	DW = DANGEROUS WHEN WET	6.2, ORM-D, and certain 1.4S [see HMR 172.504(f)(6)]	NP = NO PLACARDS REQUIRED
2.1	FG = FLAMMABLE GAS	4.2	NS = SPONTANEOUSLY COMBUSTIBLE
3	FL = FLAMMABLE	5.1	OM = OXIDIZER
4.1	FS = FLAMMABLE SOLID	5.2	OP = ORGANIC PEROXIDE
	MA = marked with identification number	2.2 [see HMR 172.504(f)(7)]	OX = OXYGEN
1.1	N1 = EXPLOSIVES 1.1	2.3 (Zone A)	PA = POISON GAS
1.2	N2 = EXPLOSIVES 1.2	6.1 (PGI other than Zone A or B, or PGII)	PB = POISON
1.3	N3 = EXPLOSIVES 1.3	6.1 (PGI, Zone B)	PC = POISON INHALATION HAZARD
1.4	N4 = EXPLOSIVES 1.4	6.1 (PGI, Zone A)	PL = POISON INHALATION HAZARD
1.5	N5 = EXPLOSIVES 1.5	2.3 (Zone B, C, or D)	PO = POISON GAS
1.6	N6 = EXPLOSIVES 1.6	7	RM = RADIOACTIVE

Appendix C: Hazardous Material Response Code Classifications**

Division 1.1 (Explosive)	4901001 thru 4901599
Division 1.2 (Explosive)	4901601 thru 4901999
Division 1.3 (Explosive)	4902001 thru 4902899
Division 1.4 (Explosive)	4903001 thru 4903799
Division 1.5 (Explosive)	4903801 thru 4903899
Division 1.6 (Explosive)	4903901 thru 4903999
Division 2.1 (Flammable Gas)	4905001 thru 4905999
Division 2.2 (Nonflammable Gas)	4904001 thru 4904999
Division 2.3 (Poisonous Gas)	
Hazard Zone A.....	4920101 thru 4920199
Other 2.3 Commodities... ..	4920201 thru 4920899
Class 3 (Flammable Liquid)	4906001 thru 4912999
Combustible Liquid... ..	4913001 thru 4915999
Division 4.1 (Flammable Solid)	4916701 thru 4917999
Division 4.2 (Spontaneously Combustible)	4916001 thru 4916299
Division 4.3 (Dangerous When Wet).....	4916301 thru 4916699
Division 5.1 (Oxidizer).....	4918001 thru 4918899
Division 5.2 (Organic Peroxide)	4918901 thru 4919799
Division 6.1 (Poisonous Materials)	
Packing Group, I Hazard Zone A.....	4927001 thru 4927999
Packing Group III.....	4925001 thru 4926999
Other 6.1 Commodities	4921000 thru 4924999
Division 6.2 (Infectious Substance).....	4928001 thru 4928999
Class 7 (Radioactive).....	4929001 thru 4929999
Class 8 (Corrosive Material)	4930001 thru 4939999
Class 9 (Miscellaneous Hazmat) & ORM-D	4940001 thru 4949999
.....	4960001 thru 4968999
Mixed Loads††	4950100 thru 4950199

** 48-series hazardous waste codes have the same structure.

†† Indicates the presence of one or more hazardous materials / dangerous goods in a transport vehicle / freight container and possible non-regulated freight.

Appendix D: Application Form for New Hazardous Material Response Code

STOP: Please review this request with your primary Class 1 Railroad before submitting. Attach their letter/email supporting the creation of the new HMRC.

Please answer questions completely. Failure to include a safety data sheet (SDS) or equivalent will result in the application being returned as incomplete. Be sure to sign the form. If you have any questions regarding proper form execution, or require technical assistance regarding 48 hazardous waste codes or 49 hazardous material codes, please contact Andy Elkins at the AAR: Phone (202) 639-2265, Fax (202) 639-2930, or Email: aelkins@aar.org. Return the form via email, fax, or regular mail to the AAR / Attn. Andy Elkins / 425 Third Street, SW Suite 1000 / Washington, DC 20024.

Company _____

Street Address _____

City _____ State/Province _____

Zip _____ Telephone _____ Fax _____

Email Address _____

Applicant Name _____

Title _____

Signature _____

Which Class 1 Railroad will be your primary transporter of this product? _____

Hazardous Material Identification Information

1. Please attach the SDS or equivalent. If not contained in such documentation, please (i) list the **complete** shipping description from the shipping paper provided to the carrier, and/or (ii) provide emergency response information as required by 49 CFR 172.602(a). Additional attachments can be submitted as necessary.

2. Please indicate the origin(s) of the hazardous material. If Mexico is selected, please respond to question 1 in both English and Spanish.

Canada _____ Mexico _____ United States _____

For any origin(s), is the material poisonous by inhalation, as defined in 49 CFR 171.8?

Yes _____ No _____

If yes, please specify the Hazard Zone to which it belongs.

A, B, C, or D for Division 2.3 per 49 CFR 173.116(a) _____

A or B for Division 6.1 per 49 CFR 173.133(a) _____

3. Please provide the seven-digit Standard Transportation Commodity Code to which this 49-hazardous material code should bridge. (Note: This is not required for 48-hazardous waste code requests.)

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