Recommendations on the Transport of Dangerous Goods
Model Regulations
(Twentieth revised edition)

Corrigendum

NOTE: Corrigenda to the Recommendations on the Transport of Dangerous Goods are also made available on the website of the United Nations Economic Commission for Europe at the following address:
http://www.unece.org/trans/danger/publi/unrec/mr_pubdet.html

Volume I

1. Chapter 1.2, 1.2.1 definitions
   Not applicable to English.

2. Chapter 1.4, 1.4.3.2.1, in the Note, last sentence
   For markings read marks

3. Chapter 2.0, 2.0.0.1
   Not applicable to English.

4. Chapter 2.0, 2.0.5, heading
   For the existing text, substitute
   2.0.5 Classification of articles as articles containing dangerous goods, N.O.S.

5. Chapter 2.0, 2.0.5.1, first sentence
   For may be transported read may be classified

6. Chapter 2.0, 2.0.5.6
   For the existing text, substitute
   2.0.5.6 Subsidiary hazards shall be representative of the primary hazard posed by the other dangerous goods contained within the article. When only one item of dangerous goods is present in the article, the subsidiary hazard(s), if any, shall be the subsidiary
hazard(s) identified in column (4) of the Dangerous Goods List. If the article contains more than one item of dangerous goods and these could react dangerously with one another during transport, each of the dangerous goods shall be enclosed separately (see 4.1.1.6).

7. Chapter 2.1, 2.1.3.5.5, Note 2
   For firework read fireworks

8. Chapter 2.2, 2.2.1.2 (c), at the end
   Delete or

9. Chapter 2.3, 2.3.1.3
   Not applicable to English.

10. Chapter 2.4, 2.4.2.3.1.2 (e)
    For Aromatic sulphohydrazides read Aromatic sulphonylhydrazides

11. Chapter 2.6, Note under 2.6.2.2.4.1
    For 2.8.2.3 read 2.8.2.4

12. Chapter 2.8, 2.8.3.2
    For the grouping shall be based read the assignment shall be based

13. Chapter 2.8, 2.8.4.3.3, at the end
    Add For this calculation method, generic concentration limits apply where 1% is used in the first step for the assessment of the packing group I substances, and where 5% is used for the other steps respectively.

14. Chapter 2.8, 2.8.4.3.4, last sentence
    Delete

15. Chapter 2.8, 2.8.4.3.5
    For \( \frac{PG_x_1}{GCL} + \frac{PG_x_2}{SCL_2} + \cdots + \frac{PG_x_i}{SCL_i} \geq 1 \)
    read \( \frac{PG_x_1}{GCL} + \frac{PG_x_2}{SCL_2} + \cdots + \frac{PG_x_i}{SCL_i} \geq 1 \)
    For PG xi read PGx_i
    For SCLi read SCL_i

16. Chapter 2.8, 2.8.4.3.5, Example 2, calculation for packing group III
    For 10 (conc B) read 10 (conc C)

17. Chapter 3.2, Dangerous goods list, for UN Nos. 3090, 3091, 3480 and 3481, in column (8)
    Insert P911
    Insert LP905 LP906
18. Chapter 3.2, Dangerous goods list, for UN Nos. 3101 to 3120, in column (6)
   Delete 323

19. Chapter 3.2, 3.2.1, Dangerous Goods List, for UN 3543, in column (2)
   For ARTICLES CONTAINING A SUBSTANCE WHICH EMITS FLAMMABLE GAS IN CONTACT WITH WATER, N.O.S.
   read ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.

20. Chapter 3.3, special provision 188 (c)
   For 2.9.4 (a) and (e) read 2.9.4 (a), (e), (f) if applicable and (g)

21. Chapter 3.3, special provision 188 (g) and (h)
   For Except when batteries read Except when cells or batteries

22. Chapter 3.3, special provision 251, third paragraph
   Not applicable to English.

23. Chapter 3.3, special provision 301, first paragraph, last sentence
   For the existing text, substitute
   When it is required to ensure liquid dangerous goods remain in their intended orientation, orientation arrows shall be displayed on at least two opposite vertical sides with the arrows pointing in the correct direction in accordance with 5.2.1.7.1.

24. Chapter 3.3, special provision 323
   For the existing text, substitute
   323 Deleted.

25. Chapter 3.3, special provision 341
   Not applicable to English.

26. Chapter 3.3, special provision 388, in the second, third and seventh paragraphs
   For consigned under the entries read assigned to the entries

27. Chapter 3.3, special provision 388, fourth paragraph
   Not applicable to English.

28. Chapter 3.3, special provision 389, first paragraph
   For 2.9.4 (a) to (e) read 2.9.4 (a) to (g)

29. Chapter 3.3, special provision 392 (a), in the table, for ECE Regulation No. 110, in the second column
   For the existing text, substitute
   Uniform provisions concerning the approval of:
I. Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system

II. Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system

30. Chapter 3.3, special provision 392 (a), in the table, for ECE Regulation No. 134

For Hydrogen and fuel cell vehicles (HFCV) read Uniform provisions concerning the approval of motor vehicles and their components with regards to the safety-related performance of hydrogen-fuelled vehicles (HFCV)

31. Chapter 3.3, special provision 392 (c), second sentence
For the existing text, substitute:

If only one valve exists or only one valve works, all openings with the exception of the opening of the pressure relief device shall be closed as to be gastight under normal conditions of transport;

32. Appendix A, table, for Division 2.1, last row
For GAZ read GAS

33. Appendix A, table, for Division 4.3, for UN 3543, in column “Proper shipping name”
For ARTICLES CONTAINING A SUBSTANCE WHICH EMITS FLAMMABLE GAS IN CONTACT WITH WATER, N.O.S. read ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.

34. Appendix B, for “ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)”
For Articles that contain only extremely insensitive substances read Articles that predominantly contain extremely insensitive substances

35. Appendix B, for “Initiation, means of”
For significant hazard read significant risk

36. Alphabetical index
For ARTICLES CONTAINING A SUBSTANCE WHICH EMITS FLAMMABLE GAS IN CONTACT WITH WATER, N.O.S. read ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.
Volume II

37. Chapter 4.1, 4.1.4.1, packing instruction P006, (3) (c)
Not applicable to English.

38. Chapter 4.1, 4.1.4.1, packing instruction P200, (3) (a)
For (4) read (5)

39. Chapter 4.1, 4.1.4.1, packing instruction P200, (3) (b), (3) (b) (i) and (3) (d)
For (4) read (5)

40. Chapter 4.1, 4.1.4.1, packing instruction P410, table note d
For the existing text substitute

\[ d \quad \text{For packing group II substances, these packagings may only be used when transported in a closed cargo transport unit.} \]

41. Chapter 4.1, 4.1.4.1, packing instruction P520, PP94, 4.
For grammes read grams

42. Chapter 4.1, 4.1.4.1, packing instruction P520, PP95, 5.
For grammes read grams

43. Chapter 4.1, 4.1.4.1, packing instruction P907, after the heading row
Insert the following new row

| This instruction applies to UN 3363. |

44. Chapter 4.1, 4.1.4.1, packing instruction P907, second paragraph, second sentence
For filling density read filling ratio

45. Chapter 4.1, 4.1.4.1, packing instruction P911, (1)
For the packaging has to read the packaging shall

46. Chapter 4.1, 4.1.4.1, packing instruction P911, (1) (b)
For No flame will occur read No flame shall occur

47. Chapter 4.1, 4.1.4.1, packing instruction P911, (1) (c)
For No projectiles will exit read No projectiles shall exit

48. Chapter 4.1, 4.1.4.1, packing instruction P911, table note a, in (b), last sentence
For this hazards read these hazards

49. Chapter 4.1, 4.1.4.1, packing instruction P911, table note a, in (c), at the beginning
For mitigations effects read mitigating effects
50. Chapter 4.1, 4.1.4.1, packing instruction P911, table note a, in (e)
   For the higher possible SOC read the highest possible SOC

51. Chapter 4.1, 4.1.4.1, packing instruction P911, table note a, (h)
   For the existing text, substitute
   (h) These scenarios shall be assessed over a period of time long enough to allow all the
   possible consequences to occur (e.g. 24 hours).

52. Chapter 4.1, packing instruction LP03, (2), (c)
   Not applicable to English.

53. Chapter 4.1, 4.1.4.3, packing instruction LP903, second sentence
   For the existing text, substitute
   The following large packagings are authorized for a single battery and for a single item of
   equipment containing batteries, provided that the general provisions of 4.1.1 and 4.1.3 are
   met:

54. Chapter 4.1, 4.1.4.3, packing instruction LP904, first sentence
   For the existing text, substitute
   This instruction applies to single damaged or defective batteries and to single items of
   equipment containing damaged or defective cells and batteries of UN Nos. 3090, 3091,
   3480 and 3481.

55. Chapter 4.1, 4.1.4.3, packing instruction LP904, second sentence
   For the existing text, substitute
   The following large packagings are authorized for a single damaged or defective battery
   and for a single item of equipment containing damaged or defective cells and batteries,
   provided the general provisions of 4.1.1 and 4.1.3 are met.

56. Chapter 4.1, 4.1.4.3, packing instruction LP905, introductory sentence
   For “cells and batteries” read “cells or batteries” (twice).

57. Chapter 4.1, 4.1.4.3, packing instruction LP905, second row after the heading row
   For the existing text, substitute
   The following large packagings are authorized for a single battery and for a single item of
   equipment containing cells or batteries, provided that the general provisions of 4.1.1 and
   4.1.3 are met:

58. Chapter 4.1, 4.1.4.3, packing instruction LP905, (2), first sentence
   For the existing text, substitute
   For a single item of equipment containing cells or batteries:

59. Chapter 4.1, 4.1.4.3, packing instruction LP906, first paragraph
   Delete single
60. Chapter 4.1, 4.1.4.3, packing instruction LP906, second sentence after the first paragraph

For the existing text, substitute
For a single battery and for a single item of equipment containing batteries:

61. Chapter 4.1, 4.1.4.3, packing instruction LP906, (1), at the beginning

For The large packaging has to be capable read The large packaging shall be capable

62. Chapter 4.1, 4.1.4.3, packing instruction LP906, table note a, in (b), last sentence

For this hazards read these hazards

63. Chapter 4.1, 4.1.4.3, packing instruction LP906, table note a, in (c), at the beginning

For mitigations effects read mitigating effects

64. Chapter 4.1, 4.1.4.3, packing instruction LP906, table note a, in (e)

For the higher possible SOC read the highest possible SOC

65. Chapter 4.1, 4.1.4.3, packing instruction LP906, table note a, in (f), at the end

For the packaging read the large packaging

66. Chapter 4.1, 4.1.4.3, packing instruction LP906, table note a, (h)

For the existing text, substitute
(h) These scenarios shall be assessed over a period of time long enough to allow all the possible consequences to occur (e.g. 24 hours).

67. Chapter 4.2, 4.2.5.3, portable tank special provision TP10, second sentence

For beyond the date of expiry of the last testing read beyond that date

68. Chapter 5.2, 5.2.1.7.1, indents

For the existing text, substitute
- Combination packagings having inner packagings containing liquid dangerous goods;
- Single packagings fitted with vents;
- Cryogenic receptacles intended for the transport of refrigerated liquefied gases; and
- Machinery or apparatus containing liquid dangerous goods when it is required to ensure the liquid dangerous goods remain in their intended orientation (see special provision 301 of chapter 3.3),

69. Chapter 5.2, 5.2.2.1.12.1, third sentence

Delete

70. Chapter 5.2, 5.2.2.1.13.1, at the beginning

For Packages containing dangerous goods in articles and dangerous goods in articles transported unpackaged read Packages containing articles or articles transported unpackaged
71. **Chapter 5.2, 5.2.2.2.2, table, for label model No 2.1, second column**
   
   *Delete* (except as provided for in 5.2.2.2.1.6 d))

72. **Chapter 5.2, 5.2.2.2.2, table, for label model No 2.1, third column**

   *For Flame: black or white* read Flame: black or white (except as provided for in 5.2.2.2.1.6 d))

73. **Chapter 5.2, 5.2.2.2.2, table, for label model No 2.1, fifth column**

   *For* 2 (black or white) read 2 (black or white) (except as provided for in 5.2.2.2.1.6 d))

74. **Chapter 5.2, 5.2.2.2.2, table, for label model No 4.1, second column**

   *For Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives* read Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives

75. **Chapter 5.2, 5.2.2.2.2, table, for label model No 7A, second column**

   *For Category I* read Category I – WHITE

76. **Chapter 5.2, 5.2.2.2.2, table, for label model No 7B, second column**

   *For Category II* read Category II – YELLOW

77. **Chapter 5.2, 5.2.2.2.2, table, for label model No 7C, second column**

   *For Category III* read Category III – YELLOW

78. **Chapter 5.3, 5.3.1.1.2 (b)**

   *Delete* and bulk containers

79. **Chapter 5.3, 5.3.2.2, second paragraph, second sentence**

   Not applicable to English

80. **Chapter 5.4, 5.4.1.5.5, at the beginning**

   *Delete* of Division 4.1

81. **Chapter 6.2, 6.2.2.1.8, table, Note for ISO 21172-1:2015**

   *For* irrespective section read irrespective of section

82. **Chapter 7.1, 7.1.5.3.5, in the table, for “Portable tanks”, second column**

   *For* ≤ 50 °C read ≤ 45 °C