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### Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

**Sub-Committee of Experts on the Transport of Dangerous Goods** 

Fifty-fourth session

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Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals: use of the Manual of Tests and Criteria in the context of the GHS

**Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals** 

Thirty-sixth session

Geneva, 5-7 December 2018 Item 3 (a) of the provisional agenda

Classification criteria and related hazard communication: work of the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG) on matters of interest to the GHS Sub-Committee

# Use of the Manual of Tests and Criteria in the context of GHS

Transmitted by the Chairman of the Working Group on Explosives of the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on behalf of the Working Group\*

- 1. This document contains the proposed list of amendments to Part III, Sections 30 to 37 as well as sub-sections 38.1 and 38.2 of the sixth revised edition of the Manual of Tests and Criteria, including Amendment 1, to take account of its use in the context of the GHS, for consideration by both sub-committees.
- 2. For practical reasons, the text of Part III of the Manual of Tests and Criteria with the proposed changes in visible mode is circulated separately, in English only, in informal document INF.4.

In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

#### General table of contents

PART III: Title page:

Replace "CLASS 2, CLASS 3, CLASS 4, DIVISION 5.1, CLASS 8 AND CLASS 9" with "VARIOUS HAZARD CLASSES".

#### CONTENTS OF PART III

- 31 Delete "OF CLASS 2".
- 32 Delete "OF CLASS 3".
- Replace "CLASS 4" by "FLAMMABLE SOLIDS, SOLID DESENSITIZED EXPLOSIVES, SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION AND SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES"
- Delete this line, renumber the old 33.2.1 section and its subsections to become 33.2 and update references accordingly.
- 33.2.2 Delete this line.
- Delete "OF DIVISION 4.1", renumber to become 33.3 and update references accordingly.
- 33.3 Delete this line.
- 33.3.3.1 Add "(PYROPHORIC AND SELF-HEATING SUBSTANCES)" at the end, renumber this section and its subsections from 33.3.1 to become 33.4 and update references accordingly.
- Delete this line, renumber the old 33.4.1 section and its subsections to become 33.5 and update references accordingly.
- 34 Delete "OF DIVISION 5.1"
- Delete "for classification procedures, test methods and criteria relating to Class 7"
- Replace "OF CLASS 8" by "CORROSIVE TO METALS"
- 37.4.1.1 Delete "of Class 8, packing group III"
- Insert "SUBSTANCES AND ARTICLES OF TRANSPORT" before "CLASS 9"

#### Section 30

- 30.1.1 (a) Insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapter 2.3 of the GHS" at the end of the sentence, before the closing bracket.
  - (b) Delete "of Class 3", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapters 2.6 and 2.17 of the GHS" at the end of the sentence, before the closing bracket.
  - (c) Delete "of Division 4.1", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapters 2.7 and 2.17 of the GHS" at the end of the sentence, before the closing bracket.

- (d) Delete "of Division 4.2", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapters 2.9, 2.10 and 2.11 of the GHS" at the end of the sentence, before the closing bracket.
- (e) Delete "of Division 4.3", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapter 2.12 of the GHS" at the end of the sentence, before the closing bracket.
- (f) Delete "of Division 5.1", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapters 2.13 and 2.14 of the GHS" at the end of the sentence, before the closing bracket.
- (g) Delete "properties of" and "of Class 8", insert a comma after "Manual", delete "and" after "Manual" and insert "and Chapters 2.16 of the GHS" at the end of the sentence, before the closing bracket.
- (h) Delete "of Class 9" and insert "and section 39" after "sub-section 38.2".
- (i) Insert "of Class 9" after batteries.
- Delete the first sentence. Amend the beginning of the second sentence to read: "Section 36 is reserved, ..." and delete "for Classes 6 and 7 respectively" at the end of the sentence.
- Amend the end of the first sentence to read: "...undertaken on a new substance or article.".
- **Section 31** Amend the end of the title to read: "... RELATING TO THE FLAMMABILITY OF AEROSOLS".
- In the first sentence delete "flammable" before "aerosols" and insert after that word: "as either flammable (Divisions 2.1 / Category 1 or 2) or non-flammable (Division 2.2 / Category 3)".

In the second sentence, insert: "Chapter 2.3 of the GHS," after "Regulations,"

- 31.1.2 Replace "relative hazard of flammable aerosols" by "flammability hazards of aerosols".
- 31.1.3 In the definition for "aerosols or aerosol dispensers", delete: "meeting the requirements of section 6.2.4 of the Model Regulations," at the beginning of the sentence and insert at the end: "(for transport purposes the receptacles need to meet the requirements of section 6.2.4 of the Model Regulations)"

Note 2: after "Model Regulations", insert "and section 2.7.1. of the GHS" and delete: "of Divisions 4.1".

Delete the second sentence. In the first sentence, delete: "offered for transport" and insert a full stop (.) after "Model Regulations". Insert a new second sentence, reading: "Aerosols for supply and use shall be subjected to the classification scheme as set out in section 2.3.2 of the GHS.". In the remainder of the original first sentence, replace "and for flammability" by "For flammability, aerosols". Delete the last sentence.

Note: add and "s" after "aerosol", delete "dispensers" and insert (Category 1) at the end of the note.

- 31.3.1 In the first sentence, between "as" and "flammable" insert "non-flammable,"
  - (a) Insert: "(Divisions 2.1 / Category 1)" between "flammable" and "if" and insert a colon (:) after "if" and convert the remainder of the text to a new

sub-indent (i) with the following amendments: replace "the product" by "it" and insert ", or" after "30 kJ/g". Insert a new sub-indent (ii) reading:

- "(ii) it meets the criteria for extreme flammability in 31.3.2 for spray aerosols or in 31.3.4 for foam aerosols; and"
- (b) Insert: "(Divisions 2.1 / Category 2)" between "flammable" and "if"
- (c) Insert: "(Divisions 2.2 / Category 3)" between "non-flammable" and "if"
- In the first sentence, delete: "be made taking into", insert "for" after "account", delete "on the basis of", insert "(see section 31.4 of this Manual)." after "distance test" and delete the rest of this sub-section.
- 31.3.4 Delete all text of indents (a) and (b).
- 31.3.5 Replace "criteria" by "procedure".
- In the first sentence, delete: "as flammable, extremely flammable or non flammable"; insert the following table after the "criteria:"

Criteria	UN Model Regulations Division	GHS Category
Ignition occurs at a distance of 75 cm or more, regardless of the heat of combustion	2.1	1
Ignition occurs at a distance of less than 75 cm, with a chemical heat of combustion equal to or more than 20 kJ/g	2.1	2
Ignition occurs at a distance equal or greater than 15 cm but less than 75 cm, with a chemical heat of combustion less than 20 kJ/g	2.1	2
No ignition occurs in the ignition distance test and the chemical heat of combustion is less than 20 kJ/g	Perform enclosed space ignition test described in section 31.5	

Delete indents (a) to (d).

In the beginning of the first sentence, amend "An aerosol" to read "Spray aerosols" and after "this Manual)" replace the rest of the first sentence and the second sentence by "shall be classified according to the following criteria:"

Criteria	UN Model Regulations Division	GHS category
Time equivalent is less than or equal to $300 \text{ s/m}^3$ or the deflagration density is less than or equal to $300 \text{ g/m}^3$	2.1	2
Time equivalent is more than 300 s/m <sup>3</sup> and the deflagration density is more than 300 g/m <sup>3</sup>	2.2	3

## 31.6.4.2 Amend to read: "Foam aerosols shall be classified according to the following criteria:"

Criteria	UN Model Regulations Division	GHS Catego ry
Flame height is 20 cm or more and the flame duration is 2 s or more	2.1	1

Flame height is 4 cm or more and the flame duration is 7 s or more	2.1	1
Flame height is 4 cm or more and the flame duration is 2 s or more	2.1	2
Flame height is 4 cm or less and the flame duration is 2 s or less (if any)	2.2	3

**Section 32** Delete "OF CLASS 3" from the title.

- In the first sentence, replace: "of Class 3 (see Chapter 2.3 of the Model Regulations)" by "(Class 3 / Categories 1 to 4)". In the second sentence, after "Model Regulations" insert: ", Chapter 2.6 of the GHS". Add a new last sentence reading: "Note 2 to paragraph 2.1.2.2 of the GHS should also be taken into consideration."
- 32.2.2 In the first sentence, replace "listed in this class" by "classified". Amend the second sentence to read: "... than 35 °C and not more than 60 °C may be regarded as non-flammable for some regulatory purposes (e.g. transport) if they do not sustain combustion (i.e. negative results have been obtained in the sustainability test L.2 in sub-section 32.5.2 of this Manual)."
- In the first sentence, insert after "listed": "by name in the dangerous goods list of", remove the brackets around "Chapter 3.2 of the Model Regulations" and delete "in this class by name".

In the third sentence, after "... open-cup test, may be", replace "offered for transport as commercial products" by "classified and "generic" or "not otherwise specified" flammable liquids".

In the fourth sentence, after "packing group III" insert: "/ Category 3" and after "packing group II" insert "/ Category 2".

- 32.2.4 In the second sentence, delete: "of substances".
- Delete "for the purposes of the Model Regulations" and replace "have passed" by "yield a negative when submitted to".
- Amend the end of the sentence to read: "... hazard grouping of a flammable liquid."
- 32.3.1.2 Delete "in the hazard grouping shown".
- 32.3.1.3 In the first sentence, replace "hazard group" by "packing group" (twice). In the third sentence, replace "hazard grouping" by "packing group" and "for the" by "for such a".

Table 32.1 Replace the current table by the following table and Note:

Criteria	<b>Model Regulations</b>	GHS
	Packing group	Category
Flash point < 23 °C and initial boiling point ≤ 35 °C	I	1
Flash point < 23 °C and initial boiling point > 35 °C	II	2
Flash point $\geq 23$ °C and $\leq 60$ °C and initial boiling point	III	3
> 35 °C		
Flash point > 60 °C and ≤ 93 °C	Not applicable	4

**Note**: the criterion of initial boiling point > 35 °C for packing group III / Category 3 is currently not used in GHS.

- 32.3.2.1 In the first sentence, replace "United Nations" by "Model Regulations", insert after "desensitised explosives" "as flammable liquids" and insert after "Model Regulations" "and note 2 to paragraph 2.1.1 of the GHS". In the second sentence, between "liquid mixture" and "to suppress", insert "in order".
- Delete current paragraph 32.3.2.2 and renumber subsequent two paragraphs to 32.3.2.2 and 32.3.2.3 respectively.
- New 32.3.2.2 In the first sentence, replace "is assigned to Class 1" by "meets the criteria for classification as explosive", amend "exempted from Class 1" to read "exempted from this class", amend "another class or division" to read "another hazard class", delete "or division" just before "at the highest concentration" and, at the end of the first sentence, amend "Class 1" to read "the class of explosives". In the second sentence, after "non-dangerous" insert "for some regulatory purposes (e.g. transport)" and amend the paragraph number to read "2.1.3.6.3".
- New 32.3.2.3 Delete "the Globally Harmonized System of Classification and Labelling of Chemicals", remove the brackets around "GHS" and replace "referred to" by "given in".
- 32.4.1 Amend the beginning of the title to read: "Tests for non-viscous ..."
- 32.4.2 Amend the beginning of the title to read: "Tests for viscous ..."
- In the first sentence, replace "substances of Class 3" by "liquids", and insert before "by reference to": "as per sub-section 2.3.2.2 of the Model Regulations"
- 32.4.2.2 Delete "the ISO method".
- 32.5.1.1 At the end of the paragraph, delete "with a flash point less than 23 °C"
- At the end of the paragraph, replace "32.3.1.6 and 32.3.1.7)" by "2.3.2.2 of the Model Regulations) or may not be subject to the Model Regulations (see 2.3.2.5 of the Model Regulations)"
- 32.5.2.2.1 At the beginning of the fifth sentence, delete: "A suitable apparatus is shown in Figure 32.5.2.1 and the", capitalise "Essential" and after "diagrams" insert "for a suitable apparatus".
- Section 33 In the title replace "CLASS 4" by "FLAMMABLE SOLIDS, SOLID DESENSITIZED EXPLOSIVES, SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION AND SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES"
- At the end of the paragraph, replace "substances (except self-reactive substances of Division 4.1, see Part II) and articles of Class 4" by "flammable solids, solid desensitized explosives, substances liable to spontaneous combustion and substances which, in contact with water, emit flammable gases".
- In the title replace "Division 4.1" by "Flammable solids and solid desensitized explosives"
- 33.2.1.1.1 In the first sentence delete "of Division 4.1" and insert "and Chapter 2.7 of the GHS" after "Model Regulations". In the second sentence insert "paragraph 2.7.2 of the GHS," after "Model Regulations," and delete "here" at the end of the sentence.
- 33.2.1.1.2 At the end of the paragraph replace "Divisions 4.1" by "the class of flammable solids".

- 33.2.1.1.3 Delete "and in the Model Regulations" and "for transport".
- 33.2.1.2.1 In the first sentence, delete "offered for transport", replace "subjected to the classification procedures as set out" by "classified according to the criteria" and insert "and paragraph 2.7.2," after "Model Regulations". In the second sentence delete "or articles". Delete the third sentence.
- 33.2.1.3 Replace "readily combustible" by "flammable"
- 33.2.1.3.2 At the end of the second sentence delete "of Division 4.1". In the third sentence replace "readily combustible" by "flammable", delete "of Division 4.1" and amend "packing group II or III" to "packing group II / Category 1 or III / 2".
- Fig. 33.2.1.3 In the title replace "ASSIGNING READILY COMBUSTIBLE" by "THE CLASSIFICATION OF FLAMMABLE" and delete ", TO DIVISION 4.1"
- 33.2.1.4 In the title replace "readily combustible" by "flammable".
- 32.2.1.4.4.1 In the first sentence replace "in Division 4.1" by "as flammable solids".
- 33.2.1.4.4.2 Insert after "packing group II" "/ Category 1" (twice)
- 33.2.1.4.4.3 Insert after "packing group III" "/ Category 2" (twice)
- 33.2.1.4.5 In the column "Result" change "4.1" to "a flammable solid" (three times)
- 33.2.3.1 In the first sentence replace "United Nations" by "Model Regulations", insert after "explosives" "as flammable solids" and at the end of the sentence, insert after Model Regulations "and note 2 to paragraph 2.1.1.1 of the GHS". In the second sentence, between "solid mixture" and "to suppress", insert "in order".
- Delete this paragraph and renumber the two subsequent paragraphs to 33.2.3.2 and 33.2.3.3 respectively.
- New 33.3.3.2 In the first sentence, replace "is assigned to Class 1" by "meets the criteria for classification as explosive", amend "exempted from Class 1" to read "exempted from this class", amend "another class or division" to read "another hazard class", delete "or division" just before "at the highest concentration" and, at the end of the first sentence, amend "Class 1" to read "the class of explosives". In the second sentence, after "non-dangerous" insert "for some regulatory purposes (e.g. transport)" and amend the paragraph number to read "2.1.3.6.3".
- New 33.3.3.3 Delete "the Globally Harmonized System of Classification and Labelling of Chemicals", remove the brackets around "GHS" and replace "referred to" by "given in".
- In the title, replace "Divisions 4.2" by "Pyrophoric and self-heating substances".
- 33.3.1.1.1 In the first sentence delete "United Nations", replace "of Division 4.2" by "i.e. pyrophoric liquids and solids and self-heating substances" and after "Model Regulations" insert "and Chapters 2.9, 2.10 and 2.11 of the GHS". In the second sentence, replace "sub-sections 2.4.3.2 and 2.4.3.3 of the Model Regulations" by "these references" and delete "here" towards the end of the sentence".
- 33.3.1.1.2 Indent (a): amend the beginning to read: "Liquid or solid substances which, even in...."
  - Indent (b) second sentence: replace "These substances" by "They"

- 33.3.1.1.3 Delete "for transport".
- 33.3.1.2.1 At the beginning of the first sentence, replace "Products" by "Substances", insert after "Model Regulations" "and Chapters 2.9, 2.10 and 2.11 of the GHS". Delete the second sentence.
- 33.3.1.3 In the title, delete "for substances liable to spontaneous combustion".
- In the second sentence, delete "here". In the third sentence delete "of Division 4.2". In the fourth sentence, after "Packing group 1" insert "/ Category 1".
- In the third sentence, delete "here". In the fourth sentence delete "of Division 4.2". In the fifth sentence, after "Packing group 1" insert "/ Category 1".
- 33.3.1.3.3.1 At the end of the fourth sentence, replace "assigned to Division 4.2" by "classified as a self-heating substance". In the fifth sentence, after "packing group II" replace "of Division 4.2" by "/ Category 1". In the last sentence, delete "here".
- 33.3.1.3.3.2 At the end of the paragraph, delete "of Division 4.2".
- 33.3.1.3.3.3 At the end of the paragraph, insert "/ Category 1".
- 33.3.1.3.3.4 In both indents (a) and (b), replace "transported" by "contained". In the last sentence, delete "of Divisions 4.2" (twice) and insert "/Category 2" after "packing group III".
- 33.3.1.3.3.5 Delete the whole paragraph.
  - Fig. 33.3.1.3.3.1 in the foot note: replace "in Division 4.2" by "as self-heating substances".
- 33.3.1.4.4 At the end of the sentence, after "should be classified" insert "as a pyrophoric solid of", delete "in", insert after "packing group I" "/ Category 1" and delete "of Division 4.2"
- 33.3.1.4.5 In the column "Results" replace "PGI of 4.2" by "a pyrophoric solid" (three times).
- 33.3.1.5.4 At the end of the sentence, after "should be classified" insert "as a pyrophoric liquid of", delete "in", insert after "packing group I" "/ Category 1" and delete "of Division 4.2"
- 33.3.1.5.5 In the column "Results" replace "Not 4.2" by "Not a pyrophoric liquid" (twice) and "4.2" by "Pyrophoric liquid" (four times).
- 33.3.1.6.3 In the tenth sentence, starting with "If a positive result..." insert "/ category 1" after "packing group II". In both indents (a) and (b), replace "transported" by "contained".
- 33.3.1.6.4.2 In the first sentence replace "in Division 4.2" by "as a self-heating substance". In both indents (b) and (c), replace "transported" by "contained".
- 33.3.1.6.4.3 After "Packing group II" insert "/ Category 1".
- 33.3.1.6.4.4 After "Packing group III" insert "/ Category 2". In both indents (a) and (b), replace "transported" by "contained".
- 33.1.3.6.5 In the column "Results" amend "Not 4.2" to "Not self-heating", "P.G. II of 4.2" to "Self-heating PG II/Cat 1" and "P.G. III of 4.2" to "Self-heating PG III/Cat 2". Keep the footnote attached to the three entries.

- 33.4.1.1.1 In the first sentence delete "United Nations", delete "of Division 4.3" and after "Model Regulations" insert "and Chapter 2.12 of the GHS". In the second sentence, replace "sub-sections 2.4.4.2 and 2.4.4.3 of the Model Regulations" by "these references" and delete "here" towards the end of the sentence".
- 33.4.1.1.3 Towards the end of the paragraph, delete "for transport".
- 33.4.1.2.1 At the beginning of the first sentence, replace "products offered for transport" by "substances" and insert after "Model Regulations" "and Chapter 2.12 of the GHS". Delete the second sentence.
- 33.4.1.3.1 At the end of the fourth sentence, replace "assigned to Division 4.3" by "classified as a substance which, in contact with water, emits flammable gases". Towards the end of the sixth sentence, delete "here". In the seventh (last) sentence, delete "of Division 4.3" and insert "/ Category 1, 2 or 3" after "packing group I, II or III".
- 33.4.1.4.3.5 In the penultimate sentence insert after "packing group" "/ category" and replace "Division 4.3" by "this hazard class".
- 33.4.1.4.4.1 Replace "Division 4.3" by "this hazard class".
- 33.4.1.4.4.2 After "Packing group I" insert "/ Category 1"
- 33.4.1.4.4.3 At the beginning of the paragraph, after "Packing group II" insert "/ Category 2" and at the end, after "packing group I" "/ Category 1".
- 33.4.1.4.4.4 At the beginning of the paragraph, after "Packing group III" insert "/ Category 3" and at the end, after "packing groups I or II" "/ Categories 1 or 2".
- 3.4.1.4.4.5 In the column "Results", replace "Not 4.3" by "Not classified in this hazard class".
- Section 34 In the title, replace "SUBSTANCES OF DIVISION 5.1" by "SOLIDS AND LIQUIDS"
- In the first sentence, delete "United Nations", replace "substances of Division 5.1" by "solids and liquids" and, after "Model Regulations" insert "and Chapters 2.13 and 2.14 of the GHS". In the second sentence replace "paragraphs 2.5.2.2 and 2.5.2.3 of the Model Regulations and" by "these references" and delete "here".
- In the first sentence replace "products offered for transport" by "substances" and replace "subjected to the classification procedures as set out in paragraphs 2.5.2.2.1 and 2.5.2.2.2 or 2.5.2.3.1 and 2.5.2.3.2 of the Model Regulations" by "classified according to the criteria". Delete the third sentence.
- In the first sentence, delete "outlined here", replace "substances" by "solids and liquids", delete "for transport" and replace "competent authority" by "classifier".
- In the first sentence delete the first occurrence of "substance". Delete the second sentence. In the (old) third line delete "of Division 5.1" and insert "Category 1, 2, or 3" before "should be assigned" and insert a full stop (.) after "test result". Start the thus created new sentence with: "For transport, in case of solids representing more than one hazard characteristics" and remove the brackets around the remainder of the new sentence. In the sentence starting with "As the particle…" replace "substance" by "solid".
- In the first sentence delete the first occurrence of "substance". In the second sentence delete "given here". Amend the start of the third sentence to read:

"Whether a liquid is an oxidizing substance and...." and insert after "..II or III" "/ Category 1, 2 or 3" and insert a full stop (.) after "test result". Start the thus created new sentence with: "For transport, in case of liquids representing more than one hazard characteristic" and remove the brackets around the remainder of the new sentence.

- In the title replace "substances" by "solids and liquids".
- 34.4.1.1 In the last sentence after "packing group I or II" insert "/ Category 1 or 2".
- 34.4.1.2.6 In the first sentence delete ", in the form in which it will be transported,".
- 34.4.1.3.1 In the first sentence replace "in which it will be transported (see" by "as determined in paragraph" and remove the closing bracket after 34.4.1.2.6.
- 34.4.1.3.3 In the last sentence insert "/ category" after "packing group" and replace "in Division 5.1": by "as an oxidizing solid".
- 34.4.1.4.2 After "Packing group I" insert "/ Category 1"

At the beginning of the second indent, after "Packing group II" insert "/ Category 2" and at the end, after "packing group I" "/ Category 1".

At the beginning of the third indent, after "Packing group III" insert "/ Category 3" and at the end, after "packing group I and II" "/ Categories 1 and 2".

At the beginning of the fourth indent replace "Division 5.1" by "an oxidizing solid".

In the last sentence between "For" and "substances" insert "the assignment of precedence of hazards for transport purposes in the case of'.

34.4.1.5 In the column 'Results" insert after "PG I" "/ cat. 1" (once), after "PG II" insert "/ cat.2" (eight times), after "PG III" insert "/ cat. 3" (two times) and replace "5.1" by "an oxidizing solid" (four times).

In the footnotes, in "a" after "PG II" insert "/cat. 2", in "b" after "PG III" insert "/ cat. 3" and in "c" at the end insert "as an oxidizing solid".

- In footnote "2" to this paragraph, at the end of the first sentence amend "the oxidizing" to "their oxidizing" and delete "of the substance".
- 34.4.2.4.2 After "Packing group I" insert "/ Category 1"

At the beginning of the second indent, after "Packing group II" insert "/ Category 2" and at the end, after "packing group I" "/ Category 1".

At the beginning of the third indent, after "Packing group III" insert "/ Category 3" and at the end, after "packing group I and II" "/ Categories 1 and 2".

At the beginning of the fourth indent replace "Division 5.1" by "an oxidizing liquid".

In the last sentence between "For" and "substances" insert "the assignment of precedence of hazards for transport purposes in the case of".

34.4.2.5 In the column 'Results" insert after "PG I" "/ cat. 1" (once), after "PG II" insert "/ cat.2" (four times), after "PG III" insert "/ cat. 3" (three times) and replace "Div. 5.1" by "an oxidizing liquid" (five times).

In the footnote "b" insert "transport" before "Class 8" and insert at the end of the note "(see section 2.0.3 of the Model Regulations)"

- In this whole sub-section amend "Packing Group(s)" to read "packing group(s)"
- In the last sentence insert after "packing group III" and "/ Category 3" and after "packing group I or II" "/ Categories 1 or 2".
- 34.4.3.2.2 In the last sentence insert after "packing group III" "/ Category 3"
- 34.4.3.2.3 In the last sentence insert after "packing group III" "/ Category 3"
- 34.4.3.4 In the table insert after "packing group I" "Category 1"; after "packing group II" "Category 2" and after "packing group III" "Category 3" (abbreviated, if needed).
- 34.4.3.5.4 In the first sentence delete "transport" and insert after "packing groups" "/ categories".

In the first indent after "Packing group I" insert "/ Category 1".

At the beginning of the second indent, after "Packing group II" insert "/ Category 2" and at the end, after "packing group I" "/ Category 1".

At the beginning of the third indent, after "Packing group III" insert "/ Category 3" and at the end, after "packing group I and II" "/ Categories 1 and 2".

At the beginning of the fourth indent replace "Division 5.1" by "an oxidizing solid".

In the sentence immediately after these indents, between "For" and "substances" insert "the assignment of precedence of hazards for transport purposes in the case of". Delete the rest of the current paragraph.

34.4.3.6 Amend the heading of column three to read "Results"; amend "I" to read "PG I / cat. 1" (three times); amend "II" to read "PG II / cat. 2" (four times); amend "III" to read "PG III / cat. 3" (twice) and amend "5.1" to read "an oxidizing solid" (three times).

In note "a" insert "/ cat. 2" at the end.

In note "b" insert "/ cat. 3" at the end.

- **Section 36** After "Reserved" delete the rest of the text.
- Section 37 In the title replace "OF CLASS 8" by "CORROSIVE TO METALS"
- 37.1.1 In the first sentence delete "United Nations", amend "classification of corrosive substances of Class 8" to read: "classification of substances corrosive to metal" and at the end of this paragraph, after "Model Regulations" insert "and Chapter 2.16 of the GHS. Convert the next of the text to a new paragraph 37.1.2, with the following amendments:

New 37.1.2: Insert "or 435" after "404" and insert after "Model Regulations" "and Chapter 3.2 of the GHS".

New 37.1.3 Create a new paragraph 37.1.3 reading: "In assigning the packing group to a substance or mixture in accordance with Chapter 2.8, paragraph 2.8.2.2 of the Model Regulations, account shall be taken of human experience in instances of accidental exposure. In the absence of human experience, the grouping shall be based on data obtained from experiments with OECD test guidelines 404 or

	435. A substance or mixture which is determined not to be corrosive in accordance with OECD test guideline 430 or 431 may be considered not to be corrosive to skin for the purposes of classification without further testing."
37.2.1	In the first sentence replace "products offered for transport" by "substances" and insert after "Model Regulations" "and paragraph 2.16.2 of the GHS". In the second sentence at the end delete "with existing entries". Delete the third sentence.
37.3	Delete "for transport" at the end of the paragraph.
37.4.1.1	Replace "during transport as dangerous goods of Class 8" by "as a substance corrosive to metal" and insert after "packing group III" "/ category 1".
Section 38	In the title insert "SUBSTANCES AND ARTICLES OF TRANSPORT" before "CLASS 9".
38.1	At the end of the paragraph insert "transport" before "Class 9".
38.2.1.1	Insert "transport" before "Class 9".
38.2.3.1	Insert "transport" before "Class 9".
38.2.3.2	Insert "transport" before "Class 9".
38.2.3.3	Delete whole paragraph and renumber subsequent paragraph to 38.2.3.3.