



**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****Fiftieth Session**

Geneva, 28 November-6 December 2016

Item 4 of the provisional agenda

Guiding principles for the Model Regulations**Assignment of E-codes****Transmitted by the expert from the United States of America¹****Introduction**

1. The Guiding Principles for use with the nineteenth revised edition (see http://www.unece.org/trans/danger/publi/unrec/guidingprinciples/guidingprinciplesrev15_e.html) identify the appropriate E-Code assignments for dangerous goods listed in Chapter 3.2 but do not identify specific rationale for their assignment. This proposal would include the applicable quantity limits corresponding to the current E-codes on the basis of their Hazard Class and Packing Group and consistent with the risk-based approach in the 2005-2006 ICAO Technical Instructions² which formed the basis for the current E-Code system. This proposal would introduce no amendment to existing E-Code assignments, but rather identifies the quantities associated with each Hazard Class and Packing Group to provide a rationale for the assigned Code.

¹ In accordance with the programme of work of the Sub-Committee for 2015–2016 approved by the Committee at its seventh session (see ST/SG/AC.10/C.3/92, paragraph 95 and ST/SG/AC.10/42, para. 15).

² Prior to the adoption of the E-Code system by the Sub-Committee, the ICAO Technical Instructions contained a Chapter specific to excepted quantities that identified the materials authorized for transport as excepted quantities and the appropriate inner and outer packaging limits based on their hazard class and Packing Group. See Part 1;2.4 of the 2005-2006 ICAO TI (reproduced in informal document INF.6).

Discussion

2. The guiding principles in Chapter 3.5 explain the safety basis for excepted quantity provisions and assign E-codes based on the hazard Class or Division and Packing Group. Excepted quantity provisions are based on a rationale that selected dangerous goods packed in very small quantities, with limitations on the quantity per inner packaging and outer packaging and in very robust, tested packaging pose a lesser hazard in transport than do the same goods packed in larger volumes. Substances permitted in excepted quantities are based on those that may be transported by passenger aircraft by the 2005-2006 edition of the ICAO Technical Instructions. Articles are excluded from excepted quantities.

3. The Model Regulations in Chapter 3.5 establish packing requirements including inner packaging limits and outer packaging limits based on the code assigned to a specific substance in column 7b of the Dangerous Goods List.

4. While the current Guiding Principles appropriately assign E-Codes to dangerous goods based on their Hazard Class and Packing Group, the Table included chapter 3.5 in the Guiding Principles does not identify the quantities – only the correct E-Code. This proposal would ensure the Table also clearly communicates the authorized inner and outer packaging limits based on the Hazard Class and Packing Group, consistent with the 2005-2006 ICAO Technical Instructions. By including the relevant inner and outer packaging quantities in the Table as proposed, a more immediate visual identification of the risk-based approach adopted in the Model Regulations consistent with the 2005-2006 ICAO Technical Instructions is achieved.

Proposal

5. Replace the existing table in Chapter 3.5 of the Guiding Principles with the following:

Methodology for determining excepted quantities

Class/Division	Packing Group	Maximum net quantity per inner packaging (in grams for solids and ml for liquids and gases)	Maximum net quantity per outer packaging (in grams for solids and ml for liquids and gases, or sum of grams and ml in the case of mixed packing)	E-Code
1		Not permitted		E0
2.1		Not permitted		E0
2.2 without subsidiary hazard ^a		30 g / 30 ml	1000 g / 1000 ml	E1
2.2 with a subsidiary hazard		Not permitted		E0
2.3		Not permitted		E0
3 without a subsidiary hazard ^b	I	30 g / 30 ml	300 g / 300 ml	E3
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1

3 with a subsidiary hazard ^c	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
4.1 ^d	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
4.2	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
4.3	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
5.1	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
5.2 ^e		Not permitted		E0
6.1 Substances which are toxic by inhalation ^k	I	Not permitted		E0
6.1 ^{f,g}	I	1 g / 1 ml	300 g / 300 ml	E5
	II	1 g / 1 ml	500 g / 500 ml	E4
	III	30 g / 30 ml	1000 g / 1000 ml	E1
6.2		Not permitted		E0
7		Not permitted		E0
8 ^{h,i}	I	Not permitted		E0
	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1
9 ^j	II	30 g / 30 ml	500 g / 500 ml	E2
	III	30 g / 30 ml	1000 g / 1000 ml	E1

a. For gases, the volume indicated for inner packagings refers to the water capacity of the inner receptacle and the volume indicated for outer packagings refers to the combined water capacity of all inner packagings within a single outer package;

b. Desensitized explosives and UN 3256 shall not be transported as excepted quantities;

c. Chlorosilanes (UN Nos. 1162, 1196, 1250, 1298, 1305, 2985) shall not be transported as excepted quantities.

d. Self-reactive substances, polymerizing substances, desensitized explosives, UN Nos. 2304, 2448, 3176 (molten substances), 3360 and 3527 shall not be transported as excepted quantities;

e. Division 5.2 dangerous goods shall ONLY be transported as excepted quantities if in UN 3316, Chemical Kit or First Aid Kit;

f. UN Nos. 1600, 2312 and 3250 (molten substances) shall not be transported as excepted quantities;

g. Chlorosilanes (UN Nos. 3361, 3362) shall not be transported as excepted quantities;

h. UN Nos. 2215 (molten), 2576, 2803 and 2809 shall not be transported as excepted quantities;

i. Chlorosilanes (UN Nos. 1724, 1728, 1747, 1753, 1762, 1763, 1766, 1767, 1769, 1771, 1781, 1784, 1799, 1800, 1801, 1804, 1816, 1818, 2434, 2435, 2437, 2986, 2987) shall not be transported as excepted quantities.

j. Code E1 applies for UN Nos. 3334 and 3335. UN Nos. 1845, 2807, 3245, 3257 and 3258 shall not be transported as excepted quantities;

k. These are substances which are assigned Special Provision 354 in column (6) of the Dangerous Goods List and "TOXIC BY INHALATION" N.O.S entries.

The meaning of the Codes in the Table above is explained in 3.5.1 of the Model Regulations.
