

**COMMITTEE OF EXPERTS ON THE  
TRANSPORT OF DANGEROUS GOODS  
(Twenty-first session, 4-12 December 2000  
agenda item 2 (b))**

**WORK OF THE SUB-COMMITTEE OF EXPERTS  
ON THE TRANSPORT OF DANGEROUS GOODS**

**Draft Amendments to the Recommendations on the Transport of Dangerous Goods**

**Model Regulations on the Transport of Dangerous Goods  
Transport of solid substances in bulk in freight containers**

**Comments on ST/SG/AC.10/ C.3 /2000/29**

**Transmitted by the Expert from the United Kingdom**

## **Introduction**

The expert from the United Kingdom welcomes the work that has been undertaken to produce Model Regulations on the transport of solid substances in bulk and thanks the expert from Germany for co-ordinating the work on this subject. The United Kingdom broadly supports the conclusions of the Working Group which met in Bonn from 5<sup>th</sup>-7<sup>th</sup> April 2000, see ST/SG/AC.10/2000/1. The expert from the United Kingdom while generally in agreement with the definitions and proposals transmitted by the expert from Germany at the 18<sup>th</sup> session of the Sub-Committee of Experts on the Transport of Dangerous Goods, see ST/SG/AC.10/C.3/2000/29, has a number of comments and suggested amendments which are detailed below. The expert from the United Kingdom believes that paper C.3/2000/29, with the proposed amendments suggested by the UK, together with his own proposal in paper, ST/SG/AC.10/2000/16, forms a comprehensive basis on which to address this important subject in the current biennium.

### Comments on 2000/29

#### **1.2.1 Definitions**

Recognition may need to be made of the two different uses of the term “bulk” in sea transport.

- 1) In the present context of transport of solids in bulk packagings (freight containers, road or rail vehicles), and
- 2) transport of solid bulk cargoes (BC Code)

#### **4.3.1.1**

Amend to read “ ... Divisions 4.1, 4.2, 4.3, 5.1 and 6.1 and Classes 7, 8 and 9 in bulk.”

Delete all the text in parenthesis after “Classes 4.1 ...”. This aspect for Division 4.1 and indeed all other Divisions and Classes, is covered in 4.3.1.2.

#### **4.3.1.10**

Amend to read "... is free from any residue of a previous load if a different substance and any deficiencies ...". "save" should read "safe".

#### **4.3.1.11**

Delete "loading or discharge" as loading or discharging under pressure is allowed under some systems.

#### **4.3.1.12**

"dangerous substances" should read "dangerous residues".

#### **4.3.1.13**

"closing" should read "closure".

#### **4.3.1.14**

Amend to read "... shall be closed in the same manner as bulk containers ...".

#### **4.3.1.15**

Substances that contain flammable liquid, at temperatures above the flash point of the liquid, present similar hazards to substances that are liable to dust cloud explosions. Such substances should be included in this section. The safety measures required include the exclusion of all potential sources of ignition and not just electrostatic discharges. Therefore the text should be amended to read as follows;

"If bulk containers are used for the carriage of bulk goods liable to cause a dust explosion, or evolve flammable vapours, measures shall be taken to exclude sources of ignition and prevent dangerous electrostatic discharge during filling or discharge of the substance."

#### **4.3.1.16**

"the UN Recommendations" should read "these Regulations".

#### **4.3.2 and 6.8.2.3.9**

This should refer to sheeted bulk containers (code [BK]1) (see also 6.8.2.1).

#### **4.3.3.1**

In order to prevent spontaneous ignition of Division 4.2 substances, some restrictions will be needed on the mass of material that can be transported in bulk containers. The criteria defining a Division 4.2 PG III substance is based on the risk of 27 cu. metres spontaneously igniting at 50-55 °C. The larger amounts involved in bulk transport will ignite at lower temperatures. Bulk transport is certainly not appropriate to Division 4.2 substances of PG II, since they can self-heat at 50°C in quantities of 450 litres and below.

The required restriction could be expressed in either of two ways : -

“The total mass carried in a bulk container shall be such that its spontaneous ignition temperature is greater than 55 °C.” or

“Transport in bulk is allowed only when the bulk quantity transported is less than the critical mass at which dangerous self-heating can occur at temperatures lower than [the maximum transport temperature] [55°C].”

#### **6.8.2.1**

Delete the definition of " open top bulk container " and add a new definition of sheeted bulk container as follows;

- *sheeted bulk container* means an open [top] bulk container with rigid side and end walls and a non-rigid covering.

“Open top” bulk containers without a sheet or covering are not, and should not, be permitted in this proposal.

#### **6.8.2.2**

Amend the second line of the table to read “Sheeted bulk container”

#### **6.8.2.3.2**

“6.8.2.3.4 to 6.8.2.3.5” should read “6.8.2.3.3 to 6.8.2.3.5”.

#### **6.8.2.3.3**

Delete “an” in the first line.

#### **6.8.2.3.8**

“removable” should read “movable”.

#### **6.8.2.4.4**

“[BK]3” should read “[BK]2” and the beginning of the second sentence should read “The ventilation shall ...”.

#### **6.8.2.5.4**

“6.8.2.5.1.4” should read “6.8.2.5.6”.

### **Consequential amendments**

#### **Data sheet – Figure 1**

(Note the numbering will change if sections dealing with large packagings and environmental hazards are also added.)

Add new text as follows: -

“6.2.X Bulk containers (6.8\*/) ?                      yes/no

If yes, give details in Sections ... .. and/or X.

**Section Y. BULK CONTAINERS (only complete if yes in 6.2.X)**

Y.1 Proposed type(s) ... ..”

**1.1.1.2**

Delete (a) and consequently (b) and (c) become (a) and (b).

**3.2.1**

Add the following text to the column which will contain the [BK] codes.

“Bulk container code – a code including the letters “[BK]” refers to types of bulk containers used for the transport of bulk goods described in Chapter 6.8.”

**Dangerous Goods List**

Add the relevant [BK] codes against the substances included at the end of 2000/29 (i.e. those substances that are permitted under all the modal provisions RID/ADR, IMDG Code and 49 CFR).

**5.3.1.1.4**

Amend the first sentence as follows: - “... in unpurged tanks or empty uncleaned bulk containers shall ...”.

**5.3.2.1.1**

Add a new (b) as follows: -

“(b) Solids in bulk containers;”

As a consequence (b) to (d) become (c) to (e).

**5.4.1.1.10**

Amend the title to read: -

“... packagings, bulk containers and tanks”

and amend the text in parenthesis as follows; -

“(including ... .. IBCs, bulk containers, portable tanks, ... ..)”

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