

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods

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## CHAPTER 2.4

### ROAD TUNNEL CLASSIFICATION OF DANGEROUS GOODS

#### General provisions

2.4.1. For the purpose of passage of vehicles carrying dangerous goods through road tunnels, dangerous goods have been classified into groups which may be restricted in tunnels depending on the possible consequences of accidents to be taken into account on the basis of the tunnel characteristics.

2.4.2 The grouping system is based on the assumption that in tunnels, there are three major dangers which may cause numerous victims and possibly serious damage to the tunnel structure:

- (a) Explosions;
- (b) Release of toxic gas or volatile toxic liquid;
- (c) Fires.

The groupings are defined as follows:

Grouping A : Dangerous goods which are prohibited for carriage on open roads

Grouping B: Dangerous goods which may lead to a very large explosion;

Grouping C: Dangerous goods which may lead to a large explosion or a large toxic release but not to a very large explosion;

Grouping D: Dangerous goods which may lead to a large fire, but not to a very large or large explosion nor to a large toxic release.

Grouping E: Dangerous goods other than those of groupings A, B, C and D [except UN 3291?]

2.4.3 When dangerous goods of different groupings are carried in the same transport unit, the load shall be assigned to the most stringent grouping in the order A, B, C, D, or E, A being the most stringent grouping.

[2.4.4 Dangerous goods exempted in accordance with 1.1.3.2 to 1.1.3.5 shall not be taken into account in the grouping assignment]

2.4.5 When the quantity carried on board a transport unit is such that the provisions of 1.1.3.6.2 apply, no grouping assignment need be made and the load is not subject to the tunnel restrictions.

2.4.6 The grouping system is intended to be used in association with road signs and signals available for restricting traffic of dangerous goods, as follows

Dangerous goods restriction – Road sign	Access to tunnels restricted for
No sign	Grouping A
With additional panel indicating “B”	Groupings A and B only
With additional panel indicating “C”	Groupings A, B and C only
With additional panel indicating “D”	Groupings A, B, C and D only
Without additional panel	All groupings

2.4.7 Assignment of dangerous goods to these groupings is based on the intrinsic dangerous properties of the dangerous goods carried, the type of containment and the quantity carried per transport unit.

2.4.8 All dangerous goods prohibited from carriage in accordance with sections 2.2.X.2 of Part 2 are assigned with sections 2.2.X.2 of Part 2 are assigned to Grouping A.

2.4.9 Dangerous goods to be classified in groupings B, C or D have been assigned to tunnel codes B, B1000, B1, C, C 5000, C1, D or D1 in column (15) of Table A of Chapter 3.2 as follows:

### Grouping B

- B Class 1: Compatibility groups A, K and L  
 Class 3 : UN Nos. 1204, 2059, 3064, 3343, 3357, 3379 (classification code D)  
 Class 4.1: Classification codes D or DT  
 Self-reactive substances, type B (UN Nos 3221, 3222, 3231, 3232)  
 Class 5.2: Organic peroxides type B  
 (UN Nos. 3101, 3102, 3111, 3112)

B 1000 Dangerous goods of Divisions 1.1, 1.2 and 1.5 (except compatibility groups A, K and L), when the total net explosive mass per transport unit is greater than 1000 kg

B1 When carried in tanks, dangerous goods of:

- Class 2, classification codes F,TF and TFC;  
 Class 4.2, Packing Group I;  
 Classe 4.3, Packing Group I;  
 Classe 5.1, Packing Group I;

## **Grouping C**

C Dangerous goods of:

Class 1: Division 1.1, 1.2, 1.5 (except compatibility groups A, K, L);  
Class 1: Compatibility groups H and J;  
Class 7: UN Nos 2977 and 2978.

C 5000 Dangerous goods of Division 1.3 (except compatibility group L), when the net explosive mass per transport unit is greater than 5000 kg.

C1 When carried in tanks, dangerous goods of:

Class 2: Classification codes T, TC, TO, TOC  
Class 3: Packing Group I of classification code FC and FTC  
Class 6.1: Packing Group I of classification codes TF1 and TFC  
Class 8: Packing Group I of classification code CTI.

## **Grouping D**

D Dangerous goods of:

Class 2: Classification codes F, FC, T, TC, TF, TO, TFC, TOC  
Class 4.1: Self-reactive substances, types C, D, E, F, and UN Nos 2956, 3241, 3242, 3251  
Class 5.2: Organic peroxides, types C, D, E, F  
Class 6.1: Packing Group I of classification code TF1 and TFC  
Class 8: Packing Group I of classification code CTI  
Class 9: Classification code M10 (UN 3258)

D1 When carried in bulk or in tanks dangerous goods of :

Class 3: Packing Group I or II or classification code F2  
Class 4.2: Packing Group II  
Class 4.3: Packing Group II  
Class 6.1: Packing Group I of classification codes TF2 and TW1  
Packing Group II of classification codes TF1, TF2, TFC and TW1  
Class 8: Packing Group I of classification codes CF1, CFT and CW1.

2.4.10 All dangerous goods other than those of groupings A to D are assigned to Grouping E.  
[except UN No.3291 ?]

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