

**OTIF**



**ORGANISATION INTERGOUVERNEMENTALE POUR  
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN  
INTERNATIONALEN EISENBAHNVERKEHR**

**INTERGOVERNMENTAL ORGANISATION FOR INTER-  
NATIONAL CARRIAGE BY RAIL**

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(English and French only)

**RID:** 51<sup>th</sup> Session of the Committee of Experts on the Transport of Dangerous Goods  
(Berne, 30 and 31 May 2012)

**Subject:** Security provisions relating to certain explosive articles

**Proposal transmitted by Ireland**

***Summary***

- Explanatory summary:** To provide a textual clarification, for 2013 RID, for the applicability of security provisions relating to certain explosive articles in the High Consequence Dangerous Goods List.
- Decision to be taken:**
- To propose and present clarification of text for RID 2013;
  - Amend the exemptions related to quantities carried per wagon or large container in respect of security requirements for certain explosives articles.
- Related documents:**
- ST/SG/AC.10/C.3/56 December 2005 (Report of the Sub-Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonised System of Classification and Labelling of Chemicals);
  - ST/SC/AC.10/C.3/2005/39 (Miscellaneous proposals of amendments to the Model Regulations on the Transport of Dangerous Goods);
  - ECE/TRANS/WP.15/AC.1/2007/30/Add.1 (Report of the Ad Hoc Working Group on Harmonisation of RID/ADR/ADN with the UN recommendations on the Transport of Dangerous Goods);
  - ECE/TRANS/WP.15/2012/2 (Security Provisions relating to certain explosive articles transmitted by the Government of Ireland);
  - informal document INF.10 of the RID/ADR/ADN Joint Meeting in March 2012 (Security Provisions for explosives submitted by the Secretariat and associated report of this meeting)

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## Introduction

1. This same proposal, adapted for ADR purposes, was submitted to the 92<sup>nd</sup> session of WP.15 in May 2012. The proposal was debated and accepted by the meeting and will be included in ADR 2013. It was further recommended that in order to ensure that the texts for both ADR and RID remain harmonized that a similar proposal be adapted for RID and submitted as an informal paper for the RID meeting (51<sup>st</sup> session) at the end of May 2012.
2. Chapter 1.10 of RID makes the security provisions applicable to all of the articles belonging to UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500 regardless of the quantity carried.
3. However these same articles can be classified under different UN Nos., depending on how they are packaged, and by virtue of the application of 1.10.4 the security provisions of Chapter 1.10 do not apply to these articles when they do not exceed the quantities referred to in 1.1.3.6.3.

The articles of concern are

<u>UN No.</u>	<u>Proper Shipping Name</u>	<u>Alternative UN Nos.</u>
0029	Detonators Non Electric	0267, 0455
0030	Detonators Electric	0255, 0456
0059	Charges Shaped without Detonator	0439, 0440, 0441
0065	Cord Detonating Flexible	0289
0073	Detonators For Ammunition	0364, 0365, 0366
0288	Charges Shaped Flexible Linear	0237
0290	Cord Detonating Mild Effect	0104
0360	Detonators Assemblies Non Electric	0361, 0500
0364	Detonators For Ammunition	0073, 0365, 0366
0439	Charges Shaped without Detonator	0059, 0440, 0441

4. This anomaly needs to be addressed in order to rectify the situation where large quantities of security sensitive items which are highly attractive to terrorists and criminals alike can be transported without application of any security provisions.

## Background

5. In December 2005 the UN Sub Committee of Experts accepted the principle that assignment to a hazard division was dependent on a safety standpoint and was independent of security considerations. It thus adopted the proposal of the United Kingdom (ST/SG/AC.10/C.3/2005/39) that due to security concerns certain explosive articles of Division 1.4 (UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500) should be included as high consequence dangerous goods and Table 1.4.1 of the Model Regulations was amended accordingly.
6. Subsequently the RID Committee of Experts adopted the proposal to make the security provisions of Chapter 1.10 applicable to articles belonging to those same UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500 and section 1.10.4 of RID was amended accordingly. This addressed the security concerns relating to those particular UN Nos. but as can be seen here the same articles may be classified as different UN Nos. depending on how they are packaged.

7. High consequence dangerous goods have been defined in Chapter 1.10 as those "which have the potential for misuse in a terrorist incident and which may, as a result, produce serious consequences such as mass casualties or mass destruction". As a consequence of the above decisions the list now includes all explosives classified as Division 1.1, 1.2, 1.5, those classified as Division 1.3 in compatibility Group C and also UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500 of Division 1.4.
8. Designation of explosives as high consequence dangerous goods means that the security provisions in Chapter 1.10 apply whereby carriers, consignors and others engaged in the transport of these dangerous goods are required to adopt, implement and comply with a security plan that addresses at least the elements specified in 1.10.3.2.
9. Certain explosives articles may be classified as Division 1.1 or 1.2 and the same article in different packaging arrangements may be classified as Division 1.4. This is common practice for safety reasons as the explosive articles when packaged as Division 1.4 "present only a slight risk of explosion in the event of ignition or initiation during carriage" while if packaged as Division 1.1 they "have a mass explosion hazard which affects almost the entire load instantaneously" or Division 1.2 they "have a projection hazard but not a mass explosion hazard".

For example an Electric Detonator can be packaged such that it is classified as either

- UN No 0030 Hazard Division 1.1B, or
- UN No 0255 Hazard Division 1.4B or
- UN No 0456 Hazard Division 1.4S

10. The explosive articles of principal concern are detonators, detonator assemblies of all types and certain other articles. These articles are security sensitive items which are highly attractive to criminals and terrorists alike as they are an essential component of improvised explosive devices (IEDs) and are extremely difficult to manufacture or acquire illicitly.

### **Current situation and problem defined**

11. An anomaly exists in the RID as the applicability of 1.10.4 (except for UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500) is dependent on the quantities being carried in the wagon or large container exceeding the limits specified in 1.1.3.6.3. If the quantity being carried is below this limit for the particular transport category then by application of 1.10.4 the transport can proceed without application of the security provisions of Chapter 1.10. All of the articles of concern (UN Nos. 0029, 0030, 0059, 0065, 0073, 0288, 0290, 0360, 0364, 0439) are transport category 1 and so there can be up to 20 kg net mass of explosive substance in the wagon or large container without any security provisions applying.
12. As these items typically contain only small amounts of very sensitive explosive material, normally for detonators < 1 g of explosive, then up to 20,000 individual articles may be transported without any security provisions applying. The consequences of a wagon or large container loaded with these articles falling into the hands of terrorists or criminals would be catastrophic as each of the 20,000 articles could be used as the means of initiation in 20,000 separate improvised explosive devices (IEDs).
13. Below is a list of the explosive articles concerned with the various UN Nos. that can be assigned to that particular explosive article and at what limits Chapter 1.10 applies.

Proper Shipping Name (UN No. of concern)	UN No.	Hazard Classification	Transport Category	Chapter 1.10 Apply
Detonators, Non-Electric for blasting (UN No. 0029)	0029	1.1B	1	Only when > 20 kg NEC* on wagon or large container (approx 20,000 units)
	0267	1.4B	2	Yes – Always
	0455	1.4S	4	Yes – Always
Detonators, Electric for blasting (UN No. 0030)	0030	1.1B	1	Only when > 20 kg NEC* on wagon or large container (approx 20,000 units)
	0255	1.4B	2	Yes – Always
	0456	1.4S	4	Yes – Always
Charges, Shaped without detonator (UN Nos. 0059 and 0439)	0059	1.1D	1	Only when > 20 kg NEC* on wagon or large container
	0439	1.2D	1	Only when > 20 kg NEC* on wagon or large container
	0440	1.4D	2	Yes – Always
	0441	1.4S	4	Yes – Always
Cord Detonating Flexible (UN No. 0065)	0065	1.1D	1	Only when > 20 kg NEC* on wagon or large container
	0289	1.4D	2	Yes – Always
Detonators, For Ammunition (UN Nos. 0073 and 0364)	0073	1.1B	1	Only when > 20 kg NEC* on wagon or large container (approx 20,000 units)
	0364	1.2B	1	Only when > 20 kg NEC* on wagon or large container (approx 20,000 units)
	0365	1.4B	2	Yes – Always
	0366	1.4S	4	Yes – Always
Charges, Shaped, Flexible, Linear (UN No. 0288)	0288	1.1D	1	Only when > 20 kg NEC* on wagon or large container
	0237	1.4D	2	Yes – Always
Cord (Fuse), Detonating, Mild Effect, metal clad (UN No. 0290)	0290	1.1D	1	Only when > 20 kg NEC* on wagon or large container
	0104	1.4D	2	Yes – Always
Detonators Assemblies, Non-Electric for blasting (UN No. 0360)	0360	1.1B	1	Only when > 20 kg NEC* on wagon or large container (approx 20,000 units)
	0361	1.4B	2	Yes – Always
	0500	1.4S	4	Yes – Always

\* NEC is the net explosive content

14. This list clearly demonstrates that for exactly the same explosive article the applicability of the security provisions of Chapter 1.10 is dependent on how the article is packaged and classified. Using the example of the Electric Detonator again, we have the situation where if these are packaged as UN No. 0255 Hazard Division 1.4B or UN No. 0456 Hazard Division 1.4S then the security provisions must be applied regardless of the quantity, while if it is packaged as UN No. 0030 Hazard Division 1.1B then the security provisions only apply if there is more than 20 kg (approx 20,000 separate articles) on the one wagon or large container.

15. This situation needs to be addressed urgently, in parallel with the revision of the 2013 ADR, so that the security provisions apply unilaterally to these security sensitive explosive articles regardless of their UN No. and hazard classification (which only relates to safety).

### Proposal

16. Amend 1.10.4 so that there is no exemption from the security provisions of Chapter 1.10 for UN Nos. 0029, 0030, 0059, 0065, 0073, 0288, 0290, 0360, 0364, 0439 even if the quantity carried is less than the quantity specified in 1.1.3.6.3.

Amend 1.10.4 to read as follows:

**"1.10.4** The provisions of 1.10.1, 1.10.2 and 1.10.3 do not apply when the quantities carried in packages in a wagon or large container do not exceed those referred to in 1.1.3.6.3 except for ~~Class 1 explosives of Division 1.4~~ with UN numbers **0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456** and 0500 and except for UN Nos. 2910 and 2911 if the activity level exceeds the  $A_2$  value. In addition the provisions of 1.10.1, 1.10.2 and 1.10.3 do not apply when the quantities carried in tanks or in bulk in a wagon or container do not exceed those referred to in 1.1.3.6.3.

In addition the provisions of this Chapter do not apply to the carriage of UN No. 2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) and UN No. 2913 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I)."

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