

Combined Road-Rail Transportation of Hazardous Goods

MAIN CHANGES ADR/RID 2009

• The instructions in writing (ADR 5.4 et 8.1)

The transport haulier is responsible for the instructions in writing (standardised format ADR 2009) and the equipment for personal and general protection.

• Environmentally hazardous substances (ADR/RID 2.2.9.1.10)

For these substances, the ADR/RID takes over the specific rules of the 34. Amdt. of the IMDG code. According to 5.2.1.8.3 the new marking (see section 'labels and markings') must be affixed for environmentally hazardous goods concerned by the section 2.2.9.1.10 ADR/RID. The end of the transitional period is fixed to 31.12.2010 except for UN 3077 and 3082 for which the date is fixed to 01.07.2009.

• Limited quantities (ADR/RID 3.4)

Prior to a transport not including a maritime leg, the forwarders of hazardous goods packed in limited quantities must inform the transport haulier about the total gross weight of the goods for this category as from 01.01.2011. Moreover a marking 'LTD QTY' must be displayed on the four sides of the loading unit for transport over 8 tons in limited quantities.

• Excepted quantities (ADR/RID 3.5)

This notion already exists in the air legislation. It appears now in the edition 2009 of the ADR and RID. A column 7b (excepted quantities) has been inserted in the table 3.2.A.

Combined Transport is a safe and environmentally friendly mode of transport.

Given that transport risks may be considerably increased by the inherent dangers of hazardous goods (dangers of fire, explosion, and toxic emissions) the safety and security aspects are essential. Seen from these aspects, the competitive advantages of rail are considerable overall over long distances.

Goods transported by road can usually be transported by rail. Specific requirements such as marking, labelling, stowage and lashing must be fulfilled by the loader and the transport haulier before arrival at the railway terminal.

This document outlines the basic regulations, which are essential for proper transportation. Our expert stays at your disposal for any further information.

Legal provisions

The carriage of hazardous goods is regulated by: the RID in the case of rail transport, the ADR in the case of road transport, the IMDG in the case of maritime transport and the ADN in the case of inland waterway transport.

Goods prohibited for carriage

Hazardous goods suitable for road transportation can usually be carried by combined transport. Goods prohibited for carriage in combined transport are listed in Table A of the ADR/RID document with the word "prohibited". Furthermore, the following types of hazardous goods are not permitted in combined transport:

- Class 1 Explosive materials in compatibility group A (UN numbers 0074, 00113, 0114, 0129, 0130, 0135, 0224 and 0473)
- Class 4.1 Self-reacting materials requiring a temperature-controlled environment (UN numbers 3231 to 3240)
- Class 5.2 Organic peroxides requiring a temperature-controlled environment (UN numbers 3111 to 3120)
- Sulphur trioxide with a purity of 99.95% transported in tanks without inhibitor (Class 8, UN number 1829)

Overall technical condition of the ITU

All ITUs must comply with the technical requirements in order to avoid any risk of incident or accident during transportation (i.e. loss of contents and vapours, smells, opening of the manhole cover).

Particular attention must be given to the stowage and lashing of packages in the ITU so as to avoid any movement during rail transportation.

Refusal to transport and liability

If your ITU does not comply with the conditions of the shipping regulations, you will require to make the necessary changes to ensure the ITU is in conformity before loading. If not, the ITU will be refused for transportation.

ITUs will only be handed over for road transportation to duly identified road hauliers according to the procedures put in place in rail terminals.

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Information provided in this leaflet is for information purposes only and is not exhaustive.

Information required in UIRR documents

According to chapter 5.4 of the ADR the following data must be transmitted to the UIRR companies either at the booking of a transport or, at the latest, at the conclusion of the UIRR contract.

Rules for all classes

- The identification number of the hazard must precede the UN code when goods are transported in tank containers, tank swap bodies, MEGCs and bulk cargo containers (in accordance with RID regulations).
- The goods' UN number should be preceded by the letters 'UN'.
- The Proper Shipping Name should be specified and, if necessary, completed by its special provision(s) (SP) according to Column 6 of Table A (for example SP274, SP640 and SP61)
- For other Classes (except Class 7), the number of the hazard label template mentioned in Column 5 of table A (or if necessary according to the SP of the column 6). Where several numbers of labels are given, the numbers which follow the first one, must be indicated in brackets. If there is no corresponding label template for the substance, the Class must be inserted.
- If relevant, the packing group attributed to the substance may be preceded by the letters 'PG'.
- A declaration in accordance with the provisions of a particular agreement.
- For the transport of packages: the number and description of the packages, the total quantity of each substance should be characterised by its UN number, its Proper Shipping Name and Packing Group (expressed in volume, gross or net weight as the case may be). The total weight of the hazardous goods must be mentioned in kg.

Additional rules for class 1

- The Classification Code specified in column 3b of table A and, if necessary, followed in brackets by the number of the label template other than 1, 1.4, 1.5 and 1.6.
- The total net mass of the explosive goods should be specified in kg; in case of complete loads, addition of the number of packages and the mass in kg of each package as well as the total net mass in kg of the explosive goods in each package.

Additional rules for class 2

In the case of portable tanks and tank-containers containing deeply refrigerated liquefied gases, the consignor shall enter in the consignment note: "THE TANK IS GUARANTEED AS INSULATED IN ORDER THAT THE VALVES CANNOT OPEN BEFORE ...".

Additional rules for transport including a maritime trip

For transport of an ITU preceding or following a maritime trip, if necessary, the "specific provisions": "TRANSPORT ACCORDING TO 1.1.4.2.1".

Additional rules for waste transport

The word 'WASTE' should be put in front of the UN number and the proper shipping name, except if it is part of the proper shipping name (5.4.1.1.3).

Additional rules for uncleaned empty loading units and packages

The goods' declaration for uncleaned containment other than class 7 and for gas recipients with a capacity of more than 1000 l must include the means of containment/package and the words 'LAST LOAD'. The goods' declaration for uncleaned containment other than class 7 and including gas recipients with a capacity of not more than 1000 l must include the means of containment preceded by 'EMPTY'.

Labelling and marking of ITUs

The labelling and orange markings of the ITUs used in combined transport must correspond to the models of labels fixed in the column (5) and if relevant in the column (6) of table A of chapter 3.2 according to rules of Chapters 5.2 and 5.3:

- An orange label with the danger code and the UN number must be placed on each side of tank containers, portable tanks, MEGCs, and bulk containers. Tank/tipper semi-trailers have to be marked according to the ADR.
- The blank orange marking must remain in place on semi-trailers during rail transportation.
- Labels corresponding to the transported hazardous goods must be put on the four sides of swap bodies, containers, tank swap bodies, tank containers, MEGCs and bulk containers (chapter 5.3.1.2).
- For substances listed in 4.3.4.1.3, the official name of the transported goods must be written on tank containers according to 6.8.2.5.2.
- For substances listed in 3.4 (limited quantities), a marking 'LTD QTY' must be displayed on the four sides of the loading units for transport over 8 tons in limited quantities.
- For substances satisfying the rules of section 2.2.9.1.10 (Environmentally hazardous substances), a marking must be fixed according to the rules of section 5.2.1.8.3.

Any markings and orange labelling of the goods last transported must remain on the uncleaned empty loading units or on the ITUs transporting uncleaned empty packages.

Orange label marking



The number of the hazard code is comprised of two or three digits. Generally they stand for the following hazards (according to 5.3.2.3.1):

- 2 = Emission of gas due to pressure or to chemical reaction
- 3 = Flammability of liquids (vapours) and gas or self-heating liquid
- 4 = Flammability of solids or self-heating solids
- 5 = Oxidizing (fire-intensifying) effect
- 6 = Toxicity or risk of infection
- 7 = Radioactivity
- 8 = Corrosiveness.
- 9 = Risk of spontaneous violent reaction
- X = Substance reacts dangerously with water
- 0 = When the danger of a substance can be sufficiently indicated by one digit, this digit is followed by a zero (0)

Repetition of a digit indicates that the goods in question are of an intensified hazard (e.g. code 33 = highly flammable liquid).

Labels and markings (chapter 5.2)

Explosive substances				
Gas				
Flammable liquids				
Flammable solids				
Oxidizing substances and organic peroxides				
Toxic and infectious substances				
Radioactive materials				
Corrosive substances			Miscellaneous hazardous goods	

Labels and markings: basic principles

Tank Container



Swap body / Container



Semi-Trailer



In countries where a hazard label must be affixed on the lateral sides of a semi-trailer, it is not necessary to affix one on the rail wagon. In countries where it is not necessary to display a hazard label on the semi-trailer, the label(s) should be inserted in the label-case of the wagons.