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**Economic Commission for Europe****Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)****Thirty-eighth session**

Geneva, 23–27 August 2021

Item 4 (b) of the provisional agenda

**Proposals for amendments to the regulations annexed to the ADN:  
other proposals****Carriage of fumigated bulk cargoes in cargo holds and fumigated cargo holds of dry-cargo vessels****Submitted by the Government of Germany\* \*\****Summary***Executive Summary:**

As explained by the German delegation at the thirty-seventh session of the ADN Safety Committee in an informal document, inland waterway vessels are often used to carry natural products like grain, oil seeds and animal feeds in a fumigated state. Either a fumigant such as methyl bromide or phosphine is added to the cargo, or bulk cargoes are loaded that have previously been fumigated in the silo on shore. These fumigants cause risks during the carriage by waterways for persons employed on board and persons involved in the loading and unloading of the vessels.

Germany is of the opinion that risks for persons employed on board inland waterway vessels must be excluded during carriage by incorporating into the ADN provisions on the carriage of perishable natural products in fumigated cargo holds or fumigated bulk cargoes.

**Action to be taken:**

Insert a new entry in Table A: Identification number 9007 BULK CARGOES IN FUMIGATED CARGO HOLDS or FUMIGATED BULK CARGOES with the classification code M11 and a special provision 804.

\* Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2021/22.

\*\* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (Sect.20) para 20.51).



Add a new special provision 804 to section 3.3.1 of ADN to largely exempt these bulk cargoes from ADN.

Add a new section 5.5.5 Special provisions applicable to bulk cargoes in fumigated cargo holds or fumigated bulk cargoes (identification number 9007), similar to the provisions for fumigated cargo transport units in section 5.5.3 of RID/ADR/ADN.

Consequential amendments to sub-section 2.2.9.3 of ADN and to Table B.

**Related documents:**

Informal document INF.7 of the thirty-seventh session of the ADN Safety Committee;  
ECE/TRANS/WP.15/AC.2/76, report of the thirty-seventh session, paragraphs 42 to 45.

## Introduction

1. In 2017 and 2018, it was found during the unloading of inland waterway vessels carrying e.g. corn and rapeseed for oil production or sunflower seeds that phosphine could still be detected in the cargo hold and that special measures had to be taken to protect the personnel of the vessel and the port. There was an indication that the cargo in the vessel had previously been fumigated or that the cargo hold had been fumigated in the country of origin. This substance is typically used for pest control.

2. At the end of 2019, cargo consisting of sunflower meal pellets was transhipped from a sea-going ship to several inland waterway vessels at a Dutch port. Some of these vessels carried their cargo to Germany. The cargo had been fumigated on the sea-going ship; on the inland waterway vessels the cargo was not fumigated. Toxic substances from the previous fumigation were released in the cargo holds of the inland waterway vessels during the voyage, and several persons required medical attention. As far as is known, the information that the cargo had been fumigated on the sea-going ship was not available on the inland waterway vessels.

3. Section 5.5.2 of ADN contains the requirements to be met when carrying fumigated cargo transport units. In accordance with Chapter 1.2 of ADN, cargo transport unit only means “a vehicle, a wagon, a container, a tank-container, a portable tank or an MEGC” but not inland waterway vessels or the cargo holds of inland waterway vessels.

4. The German delegation knows that recommendations for contractual clauses on the fumigation of cargoes have been developed by FEDIOL, the European vegetable oil and proteinmeal industry association. The German delegation is of the opinion that this offer of a voluntary commitment alone of the industry stakeholders concerned is not sufficient to ensure the safe carriage of fumigated animal feeds or seed cargoes by inland waterway vessels. Voluntary commitments should therefore be supplemented by mandatory safety-related provisions.

5. An extension of Chapter 5.5 of ADN to include provisions for the carriage of fumigated bulk cargoes would help solving the problem. As is the case of fumigated cargo transport units (UN No. 3359), the carriage in a fumigated state of bulk cargoes that are not to be classified as dangerous goods themselves would become subject to the applicable provisions of a new section 5.5.5 only. The insertion additionally requires a new entry in Table A and amendments to the classification provisions.

6. Germany had presented this proposal at the thirty-seventh session of the ADN Safety Committee (see informal document INF.7 and report of the thirty-seventh session, ECE/TRANS/WP.15/AC.2/76, paras. 42 to 45). During the discussion, it was noted that in some contracting parties there could be a general ban on carrying fumigated cargo in inland waterway vessels. The transport operations concerned were carried out by carriers who usually did not come into contact with dangerous goods regulations; these carriers were not to be overburdened. Therefore, there was a preference to include certain rules for the

carriage of fumigated bulk cargoes in the Rhine Police Regulations of the Central Commission for the Navigation on the Rhine.

7. Despite these concerns, Germany sticks to its proposal. A general ban on carriage could not be verified. Carriers can reasonably be expected to familiarize themselves with new rules that will be confined to a single sub-section of ADN. Incorporation into the Rhine Police Regulations is not suitable, as these Regulations are not applicable on all inland waterways within the scope of ADN and the issue does not concern the safety and efficiency of navigation within the meaning of the police regulations.

## **Proposal**

8. In 2.2.9.3 List of entries, add the following entry at the end of classification code M11:

“9007 BULK CARGOES IN FUMIGATED CARGO HOLDS or  
9007 FUMIGATED BULK CARGOES”.

9. In 3.2.1 Table A List of dangerous goods in numerical order, add the following new line:

UN No. or ID No.	Name and description	Class	Classification Code	Packing group	Labels	Special provisions	Limited and excepted quantities		Carriage permitted	Equipment required	Ventilation	Provisions concerning loading, unloading and carriage			Number of cones/ blue lights	Remarks
							3.4	3.5.1.2				7.1.6	7.1.6	7.1.6		
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)			(12)	(13)
9007	BULK CARGOES IN FUMIGATED CARGO HOLDS or FUMIGATED BULK CARGOES	9	M11			804				PP						

10. In 3.2.2 Table B List of dangerous goods in alphabetical order, insert the following new line:

Name and description	UN No. or ID No.
BULK CARGOES IN FUMIGATED CARGO HOLDS or	9007
FUMIGATED BULK CARGOES	9007

11. In section 3.3.1, add the following new special provision:

“804 Bulk cargoes in fumigated cargo holds or fumigated bulk cargoes that are not to be classified as dangerous goods themselves shall only be subject to the provisions of 5.5.5.

These provisions shall apply where the cargo holds of the vessel are fumigated after being filled with the bulk cargoes prior to or during carriage or where the bulk cargoes have been fumigated prior to or after filling them into the cargo holds, e.g. during an immediately preceding carriage operation in another sea-going ship or inland waterway vessel or at the point of loading.”

12. In Chapter 5.5, add a new section 5.5.5 as follows:

“5.5.5 Special provisions applicable to bulk cargoes in fumigated cargo holds or fumigated bulk cargoes (identification number 9007)

5.5.5.1 General

5.5.5.1.1 Bulk cargoes in fumigated cargo holds or fumigated bulk cargoes (identification number 9007) that do not have to be classified as dangerous goods themselves are not subject to any provisions of ADN other than those of this section.

5.5.5.1.2 If the fumigated cargo holds with bulk cargoes are loaded with other dangerous goods in addition to the fumigant or if other dangerous goods are loaded into a cargo hold in addition to the fumigated bulk cargoes, any provision of ADN relevant to these goods applies in addition to the provisions of this section.

5.5.5.1.3 Only cargo holds that can be closed in such a way that the escape of gas is reduced to a minimum shall be used for the carriage of bulk cargoes under fumigation or fumigated bulk cargoes.

5.5.5.1.4 Cargo holds shall not be entered.

5.5.5.2 Training

Persons engaged in the handling of fumigated cargo holds and cargo holds containing fumigated bulk cargoes shall be trained commensurate with their responsibilities.

5.5.5.3 Marking and warning marks

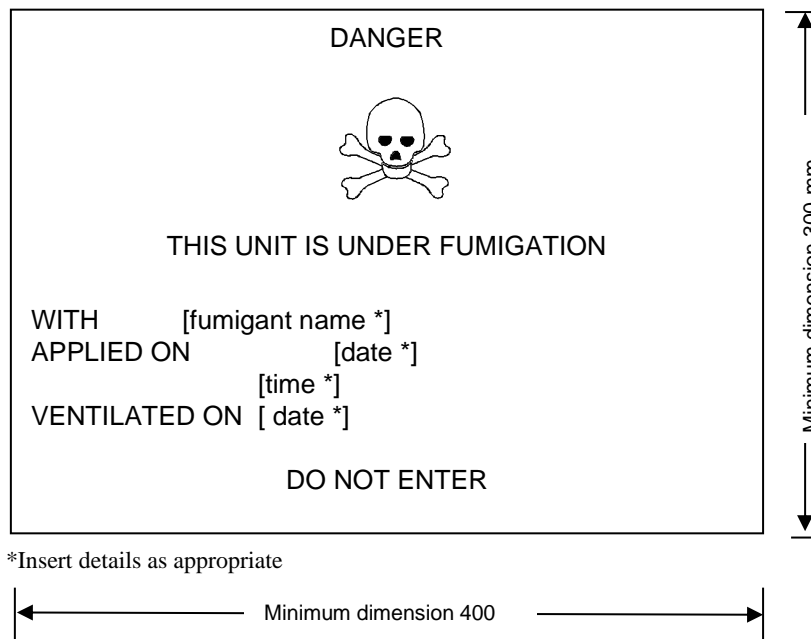
5.5.5.3.1 A cargo hold concerned shall be marked with a warning mark, as specified in 5.5.5.3.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo hold. Two warning marks each on the port side and on the starboard side shall be sufficient. The required warning marks shall remain affixed until the following provisions are met:

(a) the cargo hold has been ventilated to remove harmful concentrations of fumigant gas; and

(b) the bulk cargoes have been unloaded.

5.5.5.3.2 The fumigation warning mark shall be as shown in Figure 5.5.5.3.2.

Figure 5.5.3.2



Fumigation warning mark

The mark shall be a rectangle. The minimum dimensions shall be 400 mm wide × 300 mm high and the minimum width of the outer line shall be 2 mm. The mark shall be in black print on a white background with lettering not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

5.5.5.3.3 If the cargo hold has been completely ventilated either by opening the hatch covers or by mechanical ventilation after fumigation, the date of ventilation shall be marked on the fumigation warning mark.

5.5.5.3.4 When the cargo hold has been ventilated and unloaded, the fumigation warning marks shall be removed.

5.5.5.4 Documentation

5.5.5.4.1 Documents associated with the carriage of bulk cargoes in cargo holds that have been fumigated and have not been completely ventilated before carriage shall include the following information:

- “9007 BULK CARGOES IN FUMIGATED CARGO HOLDS, 9” or  
“9007 BULK CARGOES IN FUMIGATED CARGO HOLDS, Class 9” or  
“9007 FUMIGATED BULK CARGOES, 9” or  
“9007 FUMIGATED BULK CARGOES, Class 9”;
- The date and time of fumigation; and
- The type and amount of the fumigant used.

These particulars shall be drafted in an official language of the forwarding country and also, if the language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

If the fumigant is used during the voyage, the master shall draw up a document with the above particulars.

5.5.5.4.2 The documents may be in any form, provided they contain the information required in 5.5.5.4.1. This information shall be easy to identify, legible and durable.

5.5.5.4.3 Instructions for disposal of any residual fumigant including fumigation devices (if used) shall be provided.”

## Justification

13. In this context, fumigation means activities for the targeted control of harmful organisms/pests using biocidal products or pesticides or hydrogen cyanide (hydrocyanic acid, prussic acid) as well as substances and preparations that serve to generate or evaporate hydrogen cyanide or highly volatile hydrogen cyanide compounds, or phosphine or substances and preparations generating phosphine, or sulfuryl difluoride (sulfuryl fluoride) in order to protect the cargoes contained in the cargo holds of the vessels from these pests (such as insects or fungi). Harmful organism means an organism, including pathogens, that is harmful to humans, to human activities or to products used or manufactured by humans, or undesirable for or harmful to animals or the environment.

14. This issue needs to be regulated in ADN. The bulk cargoes are fumigated to protect them from pest infestation during a transport operation lasting several days. The persons that come close to, or into contact with, fumigated bulk cargoes during carriage must be protected from risks to their health or life posed by the fumigants released during carriage (including unloading).

15. This is not a matter to be dealt with by the shipping police, since it does not concern the safety and efficiency of navigation on the waterway. Regulating this matter only in the provisions of the Central Commission for the Navigation on the Rhine is not sufficient, as the transport operations in question often already begin on the Danube.

16. In the proposed section 5.5.5, no reference is made to paragraph 1.1.4.6.2 of ADN. Thus, ADN will not be given priority over other rules and regulations that generally apply to the carriage of goods on inland waterways. More stringent work safety regulations at national or European Union level on the fumigation of transport units, if any, that have not been introduced for reasons of safety of carriage will remain applicable.

17. In the case of cross-border transport operations, it would not be appropriate making reference to those national work safety regulations alone. Carriers and masters might have to comply with several different rules and regulations during a transport operation. For the enforcement agencies along the Rhine, this situation is not practicable either due to section 2.02 of the Rhine Police Regulations, as it is difficult to determine the applicable work safety regulations. In accordance with this provision, every Rhine riparian state or Belgium may decide that its work safety regulations are applicable on Rhine vessels licensed in its state. Thus, unlicensed vessels are subject to the regulations of the Rhine riparian state or Belgium in which the company or owner has its head office or legal domicile.

18. A general ban on carrying fumigated bulk cargoes or bulk cargoes in fumigated cargo holds would be disproportionate and is therefore out of question. The carriage of oil seeds and animal feeds from the Danube region or the Amsterdam-Rotterdam-Antwerp (ARA) ports to Germany is indispensable for the agricultural sector and cannot be replaced by road or rail transport operations in a sensible and economically viable way.

19. Regarding its structure and the warning marks, the new section 5.5.5 that is to be inserted is similar to section 5.5.2 Special provisions applicable to fumigated cargo transport units (UN 3359).

20. The risks posed to persons involved in the transport operation are comparable to the risks posed by the fumigation of CTUs.

21. Fumigated cargo transport units usually do not contain dangerous goods either and are only regulated in RID/ADR/ADN due to their fumigated state.

22. The provisions included in new section 5.5.5 serve to ensure that persons involved in the transport operation (including unloading) are appropriately informed. The information on the fumigated state of the cargo holds or the cargo draw the attention of all persons involved in the way necessary for taking the safety measures required for handling the cargo.

23. The closure of the cargo holds prevents an uncontrolled release of the fumigant during the voyage.

## **Safety**

24. The proposed provisions will largely prevent risks posed by fumigants released in an uncontrolled way to the personnel employed on board the vessels during carriage and to the personnel tasked with unloading the vessels.

## **Feasibility**

25. No problems are expected on the implementation. In several contracting parties that are members of the European Union, there are similar provisions in health and safety law, which continues to be applicable.

26. The implementation results in minor expenditures for the carriers for drawing up the accompanying documents and for the purchase and installation of warning marks.

27. It is assumed that even today only vessels equipped with cargo hold covers are used for the carriage of fumigated bulk cargoes. If this is not the case, the cargo holds can be additionally sealed with little effort to minimise the release of fumigants.

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