

## Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

28 November 2023

### Sixty-third session

Geneva, 27 November-6 December 2023

Item 6 (d) of the provisional agenda

### Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods: Other miscellaneous proposals

## Supplementary information to informal document INF.38 of the sixty-second session of the Sub-Committee

### Submitted by the International Dangerous Goods and Containers Association (IDGCA)

## I. Foreword

1. At the sixty-second session of the Sub-Committee, IDGCA presented official document ST/SG/AC.10/C.3/2023/29 and informal document INF.38 (sixty-second session), which drew the attention of experts to the problem of the carriage of certain dangerous goods, including Class 8 dangerous goods in IBC type 31HZ1 with bottom discharge device and other service equipment. The majority of experts did not support IDGCA's proposal to amend Chapter 6.5 of the *Model Regulations* to clarify the requirements for combined IBCs.
2. In addition to document ST/SG/AC.10/C.3/2023/29, IDGCA provided information in informal document INF.38 (sixty-second session) on an accident involving the transport of hydrogen peroxide with UN number 2014 and the concentration of 59.99% in IBC type 31HZ1.
3. At the sixty-second session, IDGCA was requested that further input on the accident be provided to the next session. IDGCA therefore submits the following information.

## II. Introduction

4. The investigation and court proceedings have not been finalised to date, and it is therefore not possible to provide the following material for consideration by the experts of the Sub-Committee. It is also not possible to provide conclusions on the causes of the accident. IDGCA therefore submits the following additional information to informal document INF.38 (sixty-second session).
5. In February 2022, 42 high-capacity containers were loaded onto a ship at a port in India, with 20 IBC type 31HZ1 containers filled with hydrogen peroxide of 59.99% concentration of 1,000 litres each inside each container. Contrary to the requirements of IMDG Code (p. 7.1.3.2), some of the containers were loaded in the hold of the ship. According to the submitted documents, all IBCs had bottom discharge devices and top venting valves, the ambient temperature was approximately +28 °C. After a certain period of time (10-12 hours) when the vessel was moored at the berth, smoke appeared in hold No. 1 of the vessel and the captain of the vessel decided to seal the hold and switch on the carbon dioxide extinguishing system. However, after the CO<sub>2</sub> supply the fire was not stopped and after a certain period of time an explosion followed, as a result of which the hold lids were torn off together with the containers on the hold lid. Coastal rescue services arrived at the scene and extinguished the fire with water through the top cover of the hold, which resulted

in the fire stopping. Some of the hydrogen peroxide containers remained undamaged and were unloaded ashore. However, after a certain period of time some of them caught fire.

6. This fact gave reason to believe that the cause of the accident may be not only the placement of hydrogen peroxide inside the hold contrary to the requirements of the IMDG Code, but the cause of the accident may have been the leakage of liquid from the IBC through the bottom discharge or through the upper venting device, possibly the reaction of hydrogen peroxide with wood and other substances, intensification of the reaction, increase in pressure and temperature, which subsequently caused a fire.

7. The investigation of the entire hydrogen peroxide supply chain showed that the preliminary investigation failed to gather sufficient evidence that the cargo in the IBC was properly stowed in containers, that the containers were placed on the deck of the vessel without any leaks. At the same time, none of the shipper's transport documents contained any indication that hydrogen peroxide UN number 2014 was prohibited from being transported in the ship's holds, including on the IBC. At the same time, the captain was guided by the compliance document issued by the classification society under the SOLAS Convention, in which document this hazard class and subclass of dangerous goods were allowed for carriage in the hold.

8. Please also note that a cargo with the concentration of 59.99% falls under UN number 2014 and a cargo with a concentration of more than 60% falls under a different category of cargo, UN number 2015, and is only allowed to be carried in the first group of packages with all the associated requirements for the carriage of this cargo.

9. IDGCA plans to provide a full report on this unusual situation to the next session of the Sub-Committee to review the material and develop tools to prevent similar situations in the future.

### **III. Proposal**

10. We propose to hold a discussion on this issue in the case of experts' interest.

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