

SUB-COMMITTEE ON CARRIAGE OF
CARGOES AND CONTAINERS
9th session
Agenda item 6

CCC 9/6/14
1 August 2023
Original: ENGLISH
Pre-session public release:

AMENDMENTS TO THE IMDG CODE AND SUPPLEMENTS

Regulation of stabilized substances

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International Group of P&I Associations and WSC

SUMMARY

Executive summary: This document contains an update on discussions on stabilized substances which took place between CCC 8 through E&T 38 and up to the point of submission, and proposes a way forward.

Strategic direction, if applicable: 7

Output: 7.10

Action to be taken: Paragraph 12

Related documents: CCC 8/18 and CCC 9/6

Introduction

1 This document comments on document CCC 9/6 (report of E&T 38) and is submitted in accordance with the provisions of paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.5).

Background

2 It is recalled that CCC 8 had for its consideration document CCC 8/6/11 (Morocco et al.), setting forth proposals to amend the IMDG Code to address identified deficiencies regarding special transport conditions and operational controls in order to ensure safe transport. Document CCC 8/6/11 proposed for stabilized substances to which SP386 applies to include an additional 5.4.1.4.3.8 in the IMDG Code so as require the shipper to provide the SADT/SAPT, the anticipated duration of the effectiveness of inhibitors and any special transport conditions or operational controls required for the safe transport on the dangerous goods transport document. The document also proposed to amend SP386, in order to ensure greater visibility into cargo transported at a temperature higher than ambient.

3 Following CCC 8, in recognition of the importance of addressing this matter for shippers, carriers, port authorities, transport workers, as well as the environment, in document E&T 38/3/11 (BIMCO et al.), E&T 38 was informed of the interim outcomes of discussions amongst industry associations on the matter of stabilized substances. Specifically, document E&T 38/3/11, noting that, at the time, discussions were under way, highlighted the following points:

- .1 the provision of the self-accelerating decomposition temperature (SADT) to the carrier and the relevance of the SADT in determining safe transport conditions;
- .2 the provision of the self-accelerating polymerization temperature (SAPT) to the carrier, and the relevance and reliability of the SAPT as a basis for determining safe transport conditions, including but not limited to test methods for determining the SAPT;
- .3 the widespread use of chemical inhibitors as a means of enhancing safety in the transport of polymerizing substances, as well as regulatory standards in this regard; and
- .4 the provision of critical information to the carrier (e.g. critical temperature, chemical inhibitors' efficacy period and parameters), for the carrier and port authorities to be able to use in the prevention of destabilization and/or to mitigate cases where chemical stabilization becomes ineffective.

4 After consideration, E&T 38 noted the multimodal aspects of this issue and that there may be a need to submit proposals to the UN Sub-Committee of Experts on the Transport of Dangerous Goods (TDG) for potential discussion by the Explosives Working Group (EWG). E&T 38 also noted that this issue had maritime-specific aspects. In this context, E&T 38 agreed to invite interested Member States and international organizations to submit further proposals to CCC 9, and encouraged interested parties to reach out to DGAC and WSC, in order to be included in these ongoing discussions.

Update on regulatory review at the intermodal level

5 Following the above invitation by E&T 38, the co-sponsors of this document provide an update on the regulatory review initiatives regarding this matter.

6 In discussions with producers of stabilized substances, the co-sponsors were informed that the determination of an exact SAPT via the test methods as described in the UN *Manual of Tests and Criteria*, test series H, was not straightforward or not even possible as described in this test manual. This was in contrast with SADT determinations where there was a straightforward decomposition reaction without the influence of inhibition/inhibition effectiveness.

7 The co-sponsors were also informed that due to the relatively short period of introducing polymerizing substances in the UN Model Regulations and all modal regulations, not all the details of determining an SAPT by the traditional test series H methods were fully studied. It appeared that several technical aspects need to be discussed regarding the UN test series H related to the SAPT determination or even alternative methods to guarantee safe transport in all modes of transport of stabilized and polymerizing substances.

8 Finally, the co-sponsors were informed that CEFIC and DGAC made a proposal to the sixty-second session of the UN TDG Sub-Committee (which met from 3 to 7 July 2023 in Geneva) regarding polymerizing substances and SAPT, which included the below non-comprehensive list of issues:

- .1 feasibility of determining an absolute SAPT for stabilized polymerizing substances;
- .2 inhibitor depletion and temperature dependence related to transport times;
- .3 applicability of individual test of series H (H1-H4);
- .4 test conditions (atmosphere, degree of filling etc.);
- .5 inhibitor depletion related to test times in test series H, (e.g. seven days versus transport times); and
- .6 SAPT determination versus determination of safe transport times (SP386).

9 Following consideration, EWG agreed that specific SAPTs do not ensure the safe transport of these polymerizing substances. The co-sponsors were informed that, as a result of these deliberations, the UN TDG Sub-Committee had instructed an informal correspondence group (ICG) to work on evaluating industry best practices for ensuring that stabilizer was present and effective to ensure safety in transport.

Proposed way forward

10 The co-sponsors understand that the regulation of polymerizing substances is currently under review at the intermodal level in the UN TDG Sub-Committee as mentioned above, and that this could potentially lead to amendments to the UN Model Regulations, which would in due course need to be incorporated in the IMDG Code, and/or to amendments to other instruments which may impact the discussion at IMO.

11 Given the fact that the intermodal discussion is germane and closely connected to the issues that were raised in the original document (CCC 8/6/11), consideration of amendments to the IMDG Code by IMO, including on the point of critical information to be provided to the carrier by the shipper regarding these substances, would be best undertaken once the final outcome of the review process in the UN TDG Sub-Committee is available, so as to ensure consistency.

Action requested of the Sub-Committee

12 The Sub-Committee is invited to note the information in paragraphs 5 to 9, consider the proposed way forward in paragraphs 10 to 11 and take action, as appropriate.
