

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

14 November 2022

Sub-Committee of Experts on the Transport of Dangerous Goods

Sixty-first session

Geneva, 28 November - 6 December 2022

Item 3 of the provisional agenda

Listing, classification and packing

Present and future products in the Liquefied Petroleum Gas industry, amendment of UN Numbers, discussion points and proposals – Alternative proposal

Submitted by the World LPG Association and Liquid Gas Europe*

Summary

Executive summary: Document ST/SG/AC.10/C.3/2022/53 set out proposals to amend the definitions of UN 1075 and UN 1965.

This supplementary informal document provides an alternative proposal/approach, by adding a new Special Provision (SP) in 3.3.1 and referencing that SP against the two entries in the Dangerous Goods List in Chapter 3.2.

Action to be taken Informal exchange of views on this second option of adding a Special Provision to these two UN numbers to cover the addition of dimethyl ether (DME) and, in preparation of a formal detailed proposal at the next session.

Related document(s): ST/SG/AC.10/C.3/2022/53

Background

1. Document ST/SG/AC.10/C.3/2022/53 contains the background information on the way that the LPG industry is changing and adapting to meet its renewables goals.

Proposal

2. Document ST/SG/AC.10/C.3/2022/53 set out a proposal for amendment of the descriptions of UN 1075 PETROLEUM GASES, LIQUEFIED and UN 1965 HYDROCARBON GASE MIXTURES, LIQUEFIED, N.O.S. This information paper contains an alternative proposal, which is to add a new Special Provision to Chapter 3.3 (3.3.1) and to reference that new Special Provision against the entries for UN 1075 and UN 1965 in the Dangerous Good List in Chapter 3.2 (3.2.2).

3. Amend the Dangerous Goods List in 3.2.2 as follows:

UN No.	Name and description	Class or division	Subsidiary hazard	UN packing group	Special provision
(1)	(2)	(3)	(4)	(5)	(6)
1075	PETROLEUM GASES, LIQUEFIED	2.1			392, <u>XXX</u>
1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.	2.1			274, 392, <u>XXX</u>

4. Add a new Special Provision 'XXX' in 3.3.1:

“XXX This substance may contain hydrocarbon gases from non-petroleum sources and may also contain up to XX % by mass of UN 1033 DIMETHYL ETHER.”

Note - The quantity XX of DME, i.e. the drop-in level of DME in the LPG/DME blend, allowing full compatibility with existing LPG infrastructure equipment and appliances, without any impact to safety, is expected to be in the range of 10 % to 20 %. Ongoing research has already confirmed full compatibility at 10 % by mass, and this figure is expected to increase with the completion of the research work. This will be firmly defined and formally submitted for the June/July 2023 session for final approval.

Safety implications

5. No safety implications are foreseen from the proposal. The LPG industry has the opinion that safety in the transport of the proposed LPG/DME blend will not be affected or changed compared to conventional LPG. Also see Annex I of document ST/SG/AC.10/C.3/2022/53 for the pressure temperature curves for DME, butane, propane and butane/propane mixtures.