

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 Globally Harmonized System of Classification and Labelling of Chemicals

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IMPLEMENTATION OF THE GHS

Reports from Governments or Organizations

Consideration of issues relevant to Safety Data Sheets (SDSs) by IMO

Transmitted by International Petroleum Industry Environmental Conservation Association (IPIECA)

Overview

1. IPIECA presents this informal document in response to the formal document submitted by the International Maritime Organization (IMO) (ST/SG/AC.10/C.4/2009/4). The Maritime Safety Committee (MSC) resolution “Recommendations for Material Safety Data Sheets (MSDS) for MARPOL Annex I Oil Cargo and Oil Fuel” approved by the IMO MSC at its 86th Session from 27 May to 5 June 2009 (MSC.286(86)) diverges from the hazard communication framework developed by the UN Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (UNSCGHS). In this informal document, IPIECA suggests an approach to harmonize the IMO and UNSCEGHS SDS formats.

Concerns with IMO SDS requirements

2. The current draft of the MSC resolution diverges from the hazard communication framework developed by the UNSCEGHS. It is a serious concern that two bodies of the UN (IMO and UNSCEGHS) are taking divergent approaches to hazard communication and counter to the fundamental GHS goal of harmonization.

3. The MSC resolution departs from the content of a standard GHS SDS by not requiring standard content (some of which, when available, is important for fully communicating product hazards and controls) or by substituting non-standard requirements.¹

¹ For example, the MSC resolution recommended format does not specify reporting of the following physical and chemical properties: odour threshold; pH; melting point/freezing point; initial boiling point; evaporation rate; flammability (solid, gas); solubility(ies); partition coefficient: n-octanol/water; and decomposition temperature. In the Annex, IPIECA highlights differences between the MSC resolution Annexes 1 and 2 and the most relevant text contained in the GHS.

Need for the UNSCEGHS to address hazard communication needs of MARPOL Annex I Cargoes and Marine Fuel Oils

4. The UNSCEGHS has previously addressed MARPOL Annex II cargoes in development of the GHS “Guidance on the Preparation of Safety Data Sheets.” IPIECA references the “Report of the Sub-Committee of Experts on its Twelfth Session” (ST/SG/AC.10/C.4/24), in which the UNSCEGHS added an additional sub-section under section 14 of Annex 4 of the GHS to take into account the information requirements regarding transport of substances in bulk according to MARPOL Annex II and the related IBC Code, as proposed in document ST/SG/AC.10/C.4/2006/21. To ensure alignment across the UN and to achieve the benefits of harmonization, the UNSCEGHS needs to incorporate hazard communication needs of MARPOL Annex I cargoes and marine fuel oils in the GHS framework.

Applicability of GHS framework to MARPOL Annex I Cargoes and Marine Fuel Oils

5. The GHS framework along with the IPIECA GHS guidance project (ST/SG/AC.10/C.4/2009/7) is sufficient to address hazards to the seafarer associated with MARPOL Annex I cargoes and marine fuel oils. While the GHS “Guidance on the Preparation of Safety Data Sheets” is considered suitable in all respects, additional guidance on benzene, sulphur, hydrogen sulphide, and oil pollution characteristics may help ensure that SDS information adequately addresses seafarer health and safety and the marine environment. IPIECA’s product stewardship experts and toxicologists believe the MSC resolution Annex 2 text provides the necessary guidance. IPIECA notes that section 1.4.3.6 of the GHS specifically mentions that workers on board ships need detailed hazard information, thereby confirming that seafarers are a GHS target audience requiring SDS information.

The need for collaboration with IMO MSC Bulk Liquids and Gases Sub-Committee (BLGSC) and the UNSCEGHS on SDS format

6. IPIECA supports UN involvement in the development of a consistent and practical approach to hazard communication for all workers, including seafarers. At the 13th Session of the BLGSC, the Sub-Committee agreed in principle that IMO should work more closely with UNSCEGHS to ensure that the special hazard communication needs of the maritime sector are addressed in the GHS.

7. IPIECA supports the use of the UNSCEGHS work to ensure a single, global, consistent, and coordinated approach to hazard communication. Any divergence of the IMO SDS format from the GHS framework will be overly burdensome, have significant financial implications for global industry, be unworkable in practice, and be counter to the goals of GHS.

Action requested of the UNSCEGHS

8. IPIECA suggests that the UNSCEGHS considers the formation of a subgroup tasked with accommodating the special needs of the maritime industry for MARPOL Annex I cargoes and marine fuel oils into the GHS. This could be achieved through the incorporation of additional text directly in the GHS or sector-specific guidance in the form of an Annex to the GHS.

Annex

IPIECA analysis of differences between GHS and MSC Resolution Annexes I and 2

Note: The table below illustrates the differences between the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)² and the MSC resolution Annex I parameters and the Annex 2 guidelines.³

		GHS	MSC Annex 1 and Annex 2
1	Identification of the substance or mixture and of the supplier	GHS Product identifier. [Guidance: The identity of the substance or mixture (GHS product identifier) should be exactly as found on the label. If one generic SDS is used to cover several minor variants of a substance or mixture, all names and variants should be listed on the SDS or the SDS should clearly delineate the range of substances included.]	The name of the substances
			Trade name of the substances
		Recommended use of the chemical and restrictions on use	
			Name of the category - see guidance for each MARPOL Annex I cargo and marine fuel shown in Annex 2. Liquid Categories are defined in Annex 2 as follows: (1) crude oils; (2) fuel and residual oils, including ships bunkers (ISO 8217, table 2); (3) unfinished distillates, hydraulic oils and lubricating oils; (4) gas oils, including ships bunkers (ISO 8217, table 1); (5) kerosenes; (6) naphthas and condensates; (7) gasoline blending stocks; (8) gasolines and spirits; and (9) asphalt solutions.
		Description of Bill of Lading (B/L), Bunker Delivery Note or other shipping document	

² Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Second revised edition, United Nations, ST/SG/AC.10/30/Rev.2, (2007).

³ Maritime Safety Committee (MSC) resolution "Recommendations for Material Safety Data Sheets (MSDS) for MARPOL Annex I Oil Cargo and Oil Fuel" approved by IMO MSC at its 86th Session from 27 May to 5 June 2009. The resolution number allocated by MSC 86 to the resolution is MSC.286(86).

		GHS	MSC Annex 1 and Annex 2
2	Hazards identification	GHS classification of the substance or mixture, GHS label elements, including precautionary statements, other hazards which do not result in classification. (Hazard symbols may be provided as a graphical reproduction of the symbols in black and white or the name of the symbol e.g. flame, skull and crossbones.)	
		Other hazards which do not result in classification (e.g. dust explosion hazard) or are not covered by the GHS	Other hazards which do not result in classification (e.g., hydrogen sulphide) or are not covered by the GHS
			See Guidelines in Annex 2. For the following provide appropriate hazards identification in section 2 of the MSDS: - Benzene – if present $\geq 0.1\%$ by weight (even if naturally occurring ingredient of the material) - Hydrogen sulphide – if present at any concentration, in liquid and vapour phases, or if possible to accumulate in a tank's vapour space - Total Sulphur – if present $\geq 0.5\%$ by weight, warn of potential for hydrogen sulphide evolution in section 2
3	Composition/ information on ingredients	Chemical identity	
		CAS number and other unique identifiers	
		The chemical identity and concentration or concentration ranges of all ingredients which are hazardous within the meaning of the GHS and are present above their cut-off levels. Cut-off levels vary based on the hazard classification of the ingredients.	The chemical identity and concentration or concentration ranges of all ingredients which are hazardous within the meaning of GHS and are present above their cut-off levels. Cut-off level for reproductive toxicity, carcinogenicity and category 1 mutagenicity is 0.1%. Cut-off level for all other hazard classes is 1%.
			See Guidelines in Annex 2. For the following provide appropriate composition/information on ingredients in section 3 of the MSDS: - Benzene – if present $\geq 0.1\%$ by weight (even if naturally occurring ingredient of the material) - Hydrogen sulphide – if present at any concentration, in liquid and vapour phases, or if possible to accumulate in a tank's vapour space - Total Sulphur – if present $\geq 0.5\%$ by weight, identify in section 3
4	First-aid measures	<i>No differences</i>	

		GHS	MSC Annex 1 and Annex 2
5	Fire-fighting measures	Suitable (and unsuitable) extinguishing media	Suitable extinguishing media
6	Accidental release Measures	<i>No differences</i>	
7	Handling and storage	<i>No differences</i>	
8	Exposure controls/personal protection	Control parameters e.g. occupational exposure limit values or biological limit values	Control parameters e.g. occupational exposure limit values
		Appropriate engineering controls	Appropriate technical precautions
9	Physical and chemical properties		See Guidelines in Annex 2.
		Odour threshold	
		pH	
		Melting point/freezing point	Pour point
		Initial boiling point and boiling range	Boiling range
		Evaporation rate	
		Flammability (solid, gas)	
		Vapour pressure	Vapour pressure (Reid vapour pressure (RVP) when appropriate)
		Relative density	Density
		Solubility(ies)	
		Partition coefficient: n-octanol/water	
Decomposition temperature			
10	Stability and reactivity	Viscosity	Kinematic viscosity
		Reactivity	
		Conditions to avoid (e.g. static discharge, shock or vibration)	Conditions to avoid (e.g., static discharge)
		Incompatible materials	
		Hazardous decomposition products	
11	Toxicological information	Provide appropriate toxicological information	See Guidelines in Annex 2. For the following provide appropriate toxicological information in section 11 of the MSDS: - Benzene – if present $\geq 0.1\%$ by weight (even if naturally occurring ingredient of the material) - Hydrogen sulphide – if present at any concentration, in liquid and vapour phases, or if possible to accumulate in a tank's vapour space Total Sulphur – if present $\geq 0.5\%$ by weight, warn of potential for hydrogen sulphide evolution in section 11

		GHS	MSC Annex 1 and Annex 2
12	Ecological information	Provide information on persistence and biodegradability	See Guidelines in Annex 2. For ecological information in section 12 of the MSDS: Persistent or non-persistent oil as per the International Oil Pollution Compensation (IOPC) Fund definition. International Oil Pollution Compensation (IOPC) Fund definition: "A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distils at a temperature of 340°C (645°F) and (b) at least 95% of which, by volume, distils at a temperature of 370°C (700°F) when tested by the ASTM Method D-86/78 or any subsequent revision thereof".
13	Disposal considerations	Information for proper disposal, recycling or reclamation of the substance or mixture and/or its container to assist in the determination of safe and environmentally preferred waste management options, consistent with the requirements of the national competent authority.	Description of waste residues and information on their safe handling and methods of disposal, in line with MARPOL requirements
14	Transport information	Packing group, if applicable	
		Environmental hazards (e.g.: Marine pollutant (Yes/No))	
		Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Note that this product is being carried under the scope of MARPOL Annex I
		Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises	Special precautions which a user needs to be aware of or needs to comply with in connection with transport (e.g. heating and carriage temperatures)
15	Regulatory information	<i>No differences</i>	
16	Other information including information on preparation and revision of the SDS	[Guidance: the date of preparation of the latest revision of the SDS, indication of where changes have been made to the previous version of the SDS, a key/legend to abbreviations and acronyms used in the SDS, and key literature references and sources for data used to compile the SDS]	Version No.
			Date of issue
			Issuing source
