**Guidance Note for Using the Mixture Calculation Tool**

**for Trade named mixtures (List 3) as set out in the MEPC.2/Circular**

**Introduction**

When assessing new trade-named mixtures for the purposes of establishing tripartite agreements, the latest GESAMP Hazard Profile for the respective components is to be used to undertake the required mixture calculation and then to assign carriage requirements to the mixture in accordance with the provisions of the IBC Code.

To this end, an Excel-based Mixture Calculation Tool has been developed by the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals and Preparation of Consequential Amendments (ESPH) to automate this process for use by manufacturers and Member States.

To do so, the steps set out below should be followed, using the accompanying Excel Mixture Calculation too for trade-named mixtures for inclusion in List 3 of the MEPC.2/Circular.

**Steps to follow**

1. Identify each component (chemical) in the mixture by consulting Chapters 17, 18 or 19 of the IBC Code or the GESAMP/EHS Composite List (PPR.1/Circular) and insert the names of each component in the ‘Component/Family’ column and percentage content by volume under the ‘%’ column of the Mixture Calculation Tool.
2. Extract the GESAMP Hazard Profiles (GHP) for each component from the GESAMP Composite List and insert the rating information under the appropriate column in the Mixture Calculation Tool (A1,A2,B1,B2…). If there is no GHP for a given component (i.e. the component is unassessed), then a provisional name and GHP should be assigned by the manufacturer and the proposed hazard ratings entered in the Mixture Calculation Tool for that component.
3. Using the GHPs, determine the Pollution Category for each component, using the table set out in MARPOL Annex II, Appendix I.
4. Using the GHPs, identify the Safety and Pollution Hazards for each component, based on Chapter 21 of the IBC Code, paragraphs 21.3.1, 21.4.4.1 and 21.4.4.2.
5. Using the GHPs, calculate the Ship Type for each component, based on Chapter 21 of the IBC Code paragraphs 21.4.5.1 and 21.4.5.2
6. Complete steps 3 to 5 for each component in the mixture and enter all the calculated data for each component in the appropriate cells in the Mixture Calculation Tool.
7. Using Table 1 of the *Revised Guidelines for the Provisional Assessment of Liquid Substances Transported in Bulk* (MEPC.1/Circ.512) determine the row and component factor for each component in the mixture and enter these values in the appropriate columns (S and T) in the Tool.
8. Based on Chapter 21 requirements of the IBC Code and the GHPs, continue to complete carriage requirements, noting that the Ship Type may change based on criteria set out in 21.4.5.2. Product details as set out in Chapters 17 and 18 of the IBC Code may be superseded by a more recent GHP, so this should be checked.
9. Enter details for flash point, melting point, viscosity and vapour pressure based on the trade name mixture as a whole.
10. Based on the data entered, the Tool will calculate the Ship Type and Pollution Category for the mixture and these values will be highlighted below in the two tables.
11. If the product is ‘pollutant only’, this means that none of the components present safety hazards and the product can be shipped under an appropriate list 2 NOS entry (i.e. not otherwise specified).
12. List 3 products “(Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards” can be established for the product, based on the individual carriage requirements and using the data submitted by the manufacturer an overall carriage requirements. When considering the carriage requirements the components having the most severe pollution and safety hazards should be carefully considered, and included in the contains name.

**Reference documents**

1. MEPC.1/Circ.512 Revised Guidelines for the Provisional Assessment of Liquid Substances Transported in Bulk.
2. MEPC.2/Circ.20 Provisional Categorization of Liquid Substances
3. MARPOL Annex II Appendix I
Guidelines for the Categorization of Noxious Liquid Substances and Abbreviated legend to the revised GESAMP Hazard Evaluation Procedure.
4. IBC Code Chapter 17 “Summary of minimum requirements, Chapter 18 “List of Products to which the Code does not apply”, and Chapter 19 “Index of Products Carried in Bulk”. Amended by Resolution MEPC.225(64) and MSC.340(91).
5. PPR.1/Circ.x GESAMP/EHS Report, which includes the GESAMP Composite List

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