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## CARRIAGE OF DANGEROUS GOODS

### **Information on the amendments to the marine pollutants provisions, which will enter into force through amendment 34-08 to the IMDG Code on a voluntary basis from 1 January 2009 and mandatory from 1 January 2010**

1 The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its twelfth session (17 to 21 September 2007), noting that it would be appropriate to inform industry on how the International Maritime Dangerous Goods (IMDG) Code will be amended to address marine pollutant provisions from 1 January 2009, on a voluntary basis and from 1 January 2010, when it becomes mandatory, agreed to the information, as detailed in the annex, for circulation pending the entry into force of amendment 34-08 of the IMDG Code.

2 Member Governments and international organizations are invited to bring the above information to the attention of all concerned.

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## ANNEX

### **Information on the amendments to the marine pollutants provisions, which will enter into force through amendment 34-08 to the IMDG Code on a voluntary basis from 1 January 2009 and mandatory from 1 January 2010**

#### **1 Definition**

*Marine pollutants* mean substances which are subject to the provisions of Annex III of MARPOL 73/78, as amended. These are substances, solutions or mixtures that are harmful to the aquatic organisms and the aquatic ecosystem of which they are a part and can be either in the form of liquids or solids.

#### **2 General provisions**

2.1 Marine pollutants will have to be transported under the provisions of the revised Annex III of MARPOL 73/78, which will enter into force from 1 January 2010. These provisions will be included in amendment 34-08 to the IMDG Code.

2.1.2 Marine pollutants will have to be transported under the appropriate entry according to their properties if they fall within the criteria of any of the classes 1 to 8. If they do not fall within the criteria of any of these classes, they will have to be transported under the entry: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., UN 3077 or ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., UN 3082, as appropriate, unless there is a specific entry in class 9.

2.1.3 When a substance, material or article possesses properties that meet the criteria of a marine pollutant but will not be identified as such in amendment 34-08 to the IMDG Code, such substance, material or article will have to be transported as a marine pollutant in accordance with the Code.

#### **3 Classification**

3.1 A substance, material or article will be classified as a marine pollutant if the symbol **P** is indicated in the Index of amendment 34-08 to the IMDG Code, or in the absence of such an indication, if it meets the criteria of paragraph 2.9.3 of this amendment (see also the appendix to this annex). In this last case it will remain the responsibility of the consignor to self-classify each substance, material or article. Therefore the symbol “●” will no longer be assigned to generic and N.O.S. entries.

3.2 In amendment 34-08 there will no longer be any distinction between marine pollutant and severe marine pollutant (identified with the symbol **PP** in the Index of amendment 33-06). Therefore, substances, materials or articles previously identified as severe marine pollutants in amendment 33-06 to the IMDG Code will be identified as marine pollutants in amendment 34-08.

3.3 If a consignor has evidence that the substances, materials or articles no longer meet the criteria given in 2.9.3 of amendment 34-08 to the IMDG Code, but are indicated by the symbol **P** in the Index of this amendment, these substances, materials or articles need not be transported in accordance with the provisions of the IMDG Code applicable to marine pollutants, with the approval of the competent authority.

#### **4 Marking of packages including IBCs and limited quantities**

4.1 The marine pollutant mark required in amendment 33-06 to the IMDG Code will be replaced in amendment 34-08 with the mark as shown below. For packagings, the dimensions shall be at least 100 mm x 100 mm, except in the case of packages of such dimensions that they can only bear smaller marks.

##### **Marine pollutant mark**



Symbol (fish and tree): black on white or suitable contrasting background

4.2 As a consequence of the deletion of the term “severe marine pollutant”, the 500 g/500 ml inner packaging limitation, as currently provided in paragraph 5.2.1.6.1 of amendment 33-06 to the IMDG Code, will be removed. Therefore, packages containing all marine pollutants will be durably marked with the marine pollutant mark shown in 4.1 above, with the exception of single packagings and combination packagings containing inner packagings with:

- contents of 5 l or less for liquids; or
- contents of 5 kg or less for solids.

4.3 In addition, the limited quantity values applicable to substances, materials or articles formerly designated as severe marine pollutants have been harmonized with the provisions of the UN Recommendations on the transport of dangerous goods and SP944 has been deleted from amendment 34-08 to the IMDG Code.

#### **5 Marking of Cargo Transport Units**

5.1 The marine pollutant mark required in amendment 33-06 to the IMDG Code will be replaced in amendment 34-08 with the mark as shown in 4.1 above and will have sides of at least 250 mm x 250 mm.

5.2 The other marking provisions remain the same.

## APPENDIX

### 2.9.3 Environmentally hazardous substances (aquatic environment)

#### 2.9.3.1 General definitions

2.9.3.1.1 Environmentally hazardous substances include, *inter alia*, liquid or solid substances pollutant to the aquatic environment and solutions and mixtures of such substances (such as preparations and wastes).

For the purposes of this section,

“Substance” means chemical elements and their compounds in the natural state or obtained by any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

2.9.3.1.2 The aquatic environment may be considered in terms of the aquatic organisms that live in the water, and the aquatic ecosystem of which they are part<sup>1</sup>. The basis, therefore, of the identification of hazard is the aquatic toxicity of the substance or mixture, although this may be modified by further information on the degradation and bioaccumulation behaviour.

2.9.3.1.3 While the following classification procedure is intended to apply to all substances and mixtures, it is recognized that in some cases, e.g., metals or poorly soluble inorganic compounds, special guidance will be necessary<sup>2</sup>.

2.9.3.1.4 The following definitions apply for acronyms or terms used in this section:

BCF	Bioconcentration Factor;
BOD	Biochemical Oxygen Demand;
COD	Chemical Oxygen Demand;
GLP	Good Laboratory Practices;
EC <sub>50</sub>	the effective concentration of substance that causes 50% of the maximum response;
ErC <sub>50</sub>	EC <sub>50</sub> in terms of reduction of growth;
Kow	octanol/water partition coefficient;
LC <sub>50</sub>	(50% lethal concentration) the concentration of a substance in water which causes the death of 50% (one half) in a group of test animals;
L(E)C <sub>50</sub>	LC <sub>50</sub> or EC <sub>50</sub> ;
NOEC	No Observed Effect Concentration;
OECD	Test Guidelines Test guidelines published by the Organization for Economic Co-operation and Development (OECD).

<sup>1</sup> This does not address aquatic pollutants for which there may be a need to consider effects beyond the aquatic environment such as the impacts on human health, etc.

<sup>2</sup> This can be found in annex 10 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

## 2.9.3.2 Definitions and data requirements

2.9.3.2.1 The basic elements for classification of environmentally hazardous substances (aquatic environment) are:

- acute aquatic toxicity;
- potential for or actual bioaccumulation;
- degradation (biotic or abiotic) for organic chemicals; and
- chronic aquatic toxicity.

2.9.3.2.2 While data from internationally harmonized test methods are preferred, in practice, data from national methods may also be used where they are considered as equivalent. In general, freshwater and marine species toxicity data can be considered as equivalent data and are preferably to be derived using OECD Test Guidelines or equivalent according to the principles of Good Laboratory Practices (GLP). Where such data are not available, classification shall be based on the best available data.

2.9.3.2.3 *Acute aquatic toxicity* shall normally be determined using a fish 96 hour LC<sub>50</sub> (OECD Test Guideline 203 or equivalent), a crustacea species 48 hour EC<sub>50</sub> (OECD Test Guideline 202 or equivalent) and/or an algal species 72 or 96 hour EC<sub>50</sub> (OECD Test Guideline 201 or equivalent). These species are considered as surrogates for all aquatic organisms. Data on other species such as Lemna may also be considered if the test methodology is suitable.

2.9.3.2.4 *Bioaccumulation* means net result of uptake, transformation and elimination of a substance in an organism due to all routes of exposure (i.e., air, water, sediment/soil and food). The potential for bioaccumulation shall normally be determined by using the octanol/water partition coefficient, usually reported as a log K<sub>ow</sub> determined according to OECD Test Guideline 107 or 117. While this represents a potential to bioaccumulate, an experimentally determined Bioconcentration Factor (BCF) provides a better measure and shall be used in preference when available. A BCF shall be determined according to OECD Test Guideline 305.

2.9.3.2.5 *Environmental degradation* may be biotic or abiotic (e.g., hydrolysis) and the criteria used reflect this fact. Ready biodegradation is most easily defined using the OECD biodegradability tests (OECD Test Guideline 301 (A - F)). A pass level in these tests may be considered as indicative of rapid degradation in most aquatic environments. As these are freshwater tests, use of results from OECD Test Guideline 306, which is more suitable for the marine environment, is also included. Where such data are not available, a BOD (5 days)/COD ratio  $\geq 0.5$  is considered as indicative of rapid degradation. Abiotic degradation such as hydrolysis, primary degradation, both abiotic and biotic, degradation in non-aquatic media and proven rapid degradation in the environment may all be considered in defining rapid degradability<sup>3</sup>.

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<sup>3</sup> Special guidance on data interpretation is provided in chapter 4.1 and annex 9 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

**2.9.3.2.5.1** Substances are considered rapidly degradable in the environment if the following criteria are met:

- .1 In 28-day ready biodegradation studies, the following levels of degradation are achieved:
  - (i) tests based on dissolved organic carbon: 70%;
  - (ii) tests based on oxygen depletion or carbon dioxide generation: 60% of theoretical maxima;

These levels of biodegradation shall be achieved within 10 days of the start of degradation which point is taken as the time when 10% of the substance has been degraded; or

- .2 In those cases where only BOD and COD data are available, when the ratio of BOD<sub>5</sub>/COD is  $\geq 0.5$ ; or
- .3 If other convincing scientific evidence is available to demonstrate that the substance or mixture can be degraded (biotically and/or abiotically) in the aquatic environment to a level above 70% within a 28 day period.

**2.9.3.2.6** *Chronic toxicity* data are less available than acute data and the range of testing procedures less standardized. Data generated according to the OECD Test Guidelines 210 (Fish Early Life Stage) or 211 (Daphnia Reproduction) and 201 (Algal Growth Inhibition) may be accepted. Other validated and internationally accepted tests may also be used. The “No Observed Effect Concentrations” (NOECs) or other equivalent L(E)Cx shall be used.

### **2.9.3.3 Substance classification categories and criteria**

**2.9.3.3.1** Substances shall be classified as “environmentally hazardous substances (aquatic environment)”, if they satisfy the criteria for Acute 1, Chronic 1 or Chronic 2, according to the following tables:

**Acute toxicity**

**Category: Acute 1**

96 hr LC <sub>50</sub> (for fish)	≤ 1 mg/l and/or
48 hr EC <sub>50</sub> (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC <sub>50</sub> (for algae or other aquatic plants)	≤ 1 mg/l

**Chronic toxicity**

**Category: Chronic 1**

96 hr LC <sub>50</sub> (for fish)	≤ 1 mg/l and/or
48 hr EC <sub>50</sub> (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC <sub>50</sub> (for algae or other aquatic plants)	≤ 1 mg/l

and the substance is not rapidly degradable and/or the log K<sub>ow</sub> ≥ 4 (unless the experimentally determined BCF < 500)

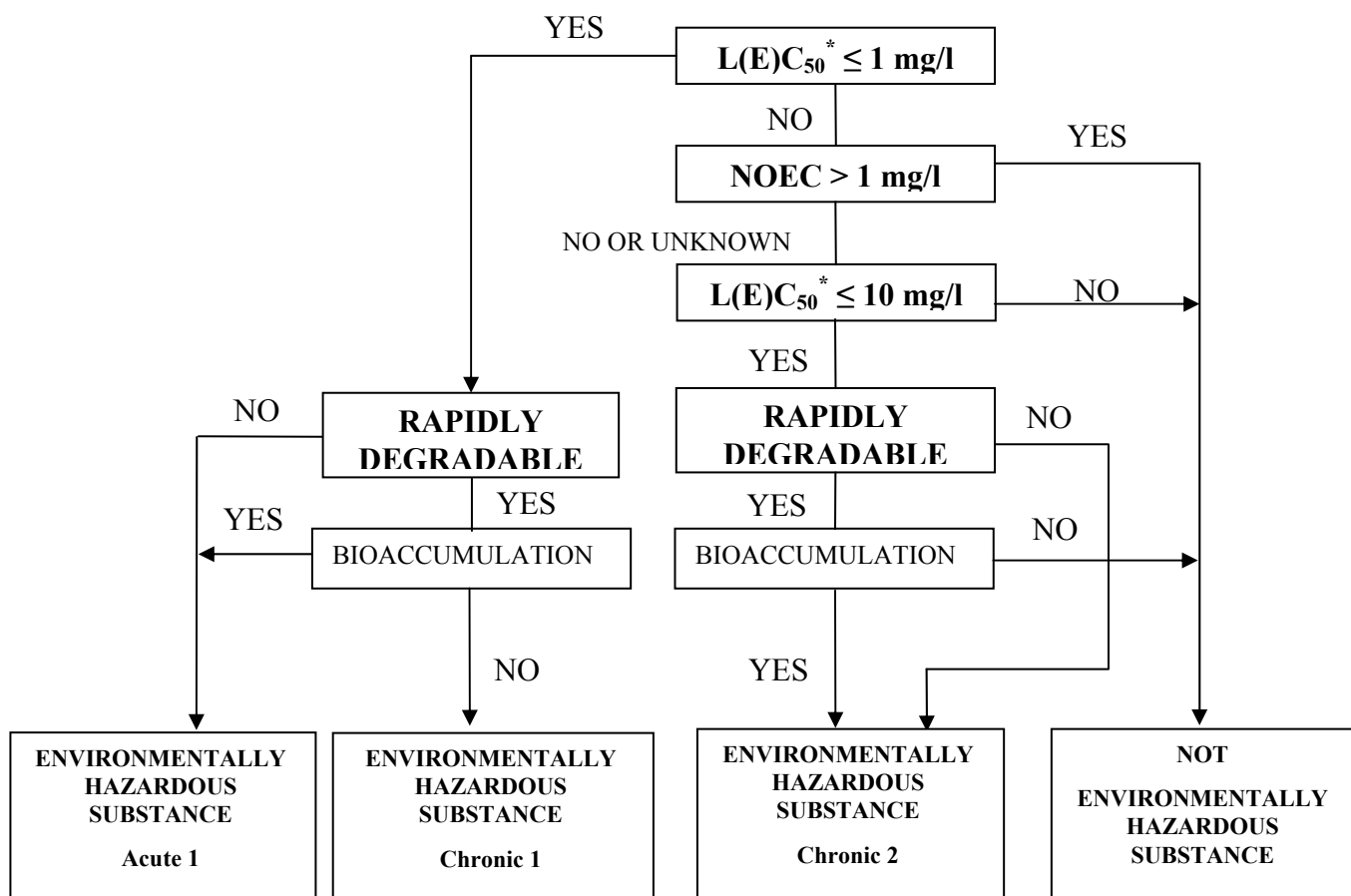
**Category: Chronic 2**

96 hr LC <sub>50</sub> (for fish)	> 1 to ≤ 10 mg/l and/or
48 hr EC <sub>50</sub> (for crustacea)	> 1 to ≤ 10 mg/l and/or
72 or 96 hr ErC <sub>50</sub> (for algae or other aquatic plants)	> 1 to ≤ 10 mg/l

and the substance is not rapidly degradable and/or the log K<sub>ow</sub> ≥ 4 (unless the experimentally determined BCF < 500), unless the chronic toxicity NOECs are > 1 mg/l



The classification flowchart below outlines the process to be followed.



\* Lowest value of 96-hour LC<sub>50</sub>, 48-hour EC<sub>50</sub> or 72-hour ErC<sub>50</sub>, as appropriate.

### 2.9.3.4 Mixtures classification categories and criteria

**2.9.3.4.1** The classification system for mixtures covers the classification categories which are used for substances meaning acute category 1 and chronic categories 1 and 2. In order to make use of all available data for purposes of classifying the aquatic environmental hazards of the mixture, the following assumption is made and is applied, where appropriate:

The “relevant ingredients” of a mixture are those which are present in a concentration of 1% by mass or greater, unless there is a presumption (e.g., in the case of highly toxic ingredients) that an ingredient present at less than 1% can still be relevant for classifying the mixture for aquatic environmental hazards.

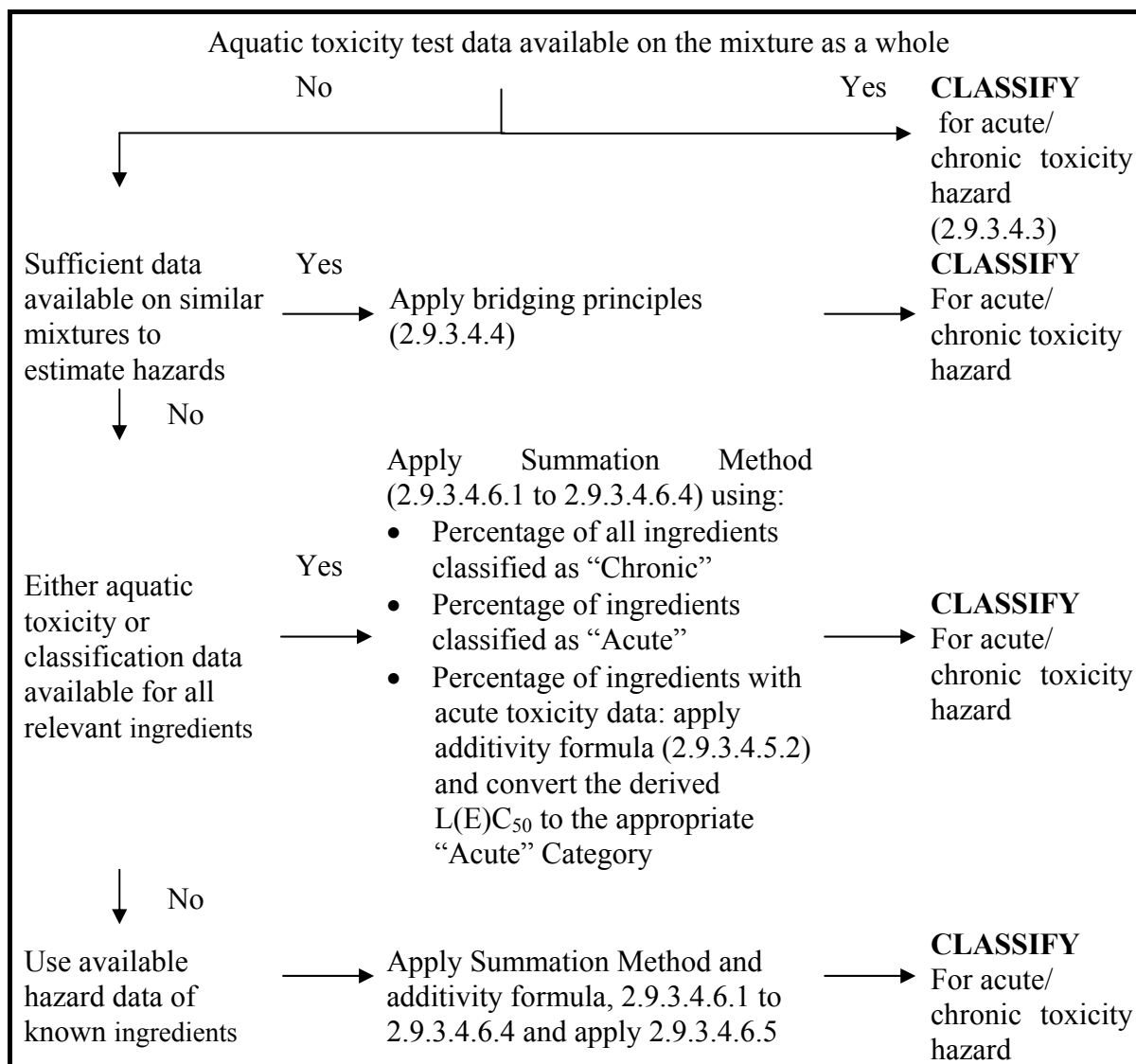
**2.9.3.4.2** The approach for classification of aquatic environmental hazards is tiered and dependent upon the type of information available for the mixture itself and its ingredients. Elements of the tiered approach include:

- .1 classification based on tested mixtures;
- .2 classification based on bridging principles;

- .3 the use of “summation of classified ingredients” and/or an “additivity formula”.

Figure 2.9.1 below outlines the process to be followed.

**Figure 2.9.1: Tiered approach to classification of mixtures for acute and chronic aquatic environmental hazards**



### 2.9.3.4.3 *Classification of mixtures when data are available for the complete mixture*

**2.9.3.4.3.1** When the mixture as a whole has been tested to determine its aquatic toxicity, it shall be classified according to the criteria that have been agreed for substances, but only for acute toxicity. The classification is based on the data for fish, crustacea and algae/plants. Classification of mixtures by using  $LC_{50}$  or  $EC_{50}$  data for the mixture as a whole is not possible for chronic categories since both toxicity data and environmental fate data are needed, and there are no degradability and bioaccumulation data for mixtures as a whole. It is not possible to apply the criteria for chronic classification because the data from degradability and bio-accumulation

tests of mixtures cannot be interpreted; they are meaningful only for single substances.

**2.9.3.4.3.2** When there is acute toxicity test data ( $LC_{50}$  or  $EC_{50}$ ) available for the mixture as a whole, this data as well as information with respect to the classification of ingredients for chronic toxicity shall be used to complete the classification for tested mixtures as follows. When chronic (long-term) toxicity data (NOEC) is also available, this shall be used in addition.

- .1  $L(E)C_{50}$  ( $LC_{50}$  or  $EC_{50}$ ) of the tested mixture  $\leq 1$  mg/l and NOEC of the tested mixture  $\leq 1.0$  mg/l or unknown:
  - classify mixture as category acute 1;
  - apply summation of classified ingredients approach (see 2.9.3.4.6.3 and 2.9.3.4.6.4) for chronic classification (chronic 1, 2, or no need of chronic classification).
- .2  $L(E)C_{50}$  of the tested mixture  $\leq 1$  mg/l and NOEC of the tested mixture  $> 1.0$  mg/l:
  - classify mixture as category acute 1;
  - apply summation of classified ingredients approach (see 2.9.3.4.6.3 and 2.9.3.4.6.4) for classification as Category Chronic 1. If the mixture is not classified as Category Chronic 1, then there is no need for chronic classification.
- .3  $L(E)C_{50}$  of the tested mixture  $> 1$  mg/l, or above the water solubility, and NOEC of the tested mixture  $\leq 1.0$  mg/l or unknown:
  - no need to classify for acute toxicity;
  - apply summation of classified ingredients approach (see 2.9.3.4.6.3 and 2.9.3.4.6.4) for chronic classification or no need for chronic classification.
- .4  $L(E)C_{50}$  of the tested mixture  $> 1$  mg/l, or above the water solubility, and NOEC of the tested mixture  $> 1.0$  mg/l:
  - No need to classify for acute or chronic toxicity.

#### **2.9.3.4.4** *Bridging principles*

**2.9.3.4.4.1** Where the mixture itself has not been tested to determine its aquatic environmental hazard, but there are sufficient data on the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, this data shall be used in accordance with the following agreed bridging rules. This ensures that the classification process uses the available data to the greatest extent possible in

characterizing the hazards of the mixture without the necessity for additional testing in animals.

#### **2.9.3.4.4.2 Dilution**

**2.9.3.4.4.2.1** If a mixture is formed by diluting another classified mixture or a substance with a diluent which has an equivalent or lower aquatic hazard classification than the least toxic original ingredient and which is not expected to affect the aquatic hazards of other ingredients, then the mixture shall be classified as equivalent to the original mixture or substance.

**2.9.3.4.4.2.2** If a mixture is formed by diluting another classified mixture or a substance with water or other totally non-toxic material, the toxicity of the mixture shall be calculated from the original mixture or substance.

#### **2.9.3.4.4.3 Batching**

**2.9.3.4.4.3.1** The aquatic hazard classification of one production batch of a complex mixture shall be assumed to be substantially equivalent to that of another production batch of the same commercial product and produced by or under the control of the same manufacturer, unless there is reason to believe there is significant variation such that the aquatic hazard classification of the batch has changed. If the latter occurs, new classification is necessary.

#### **2.9.3.4.4.4 Concentration of mixtures which are classified with the most severe classification categories (chronic 1 and acute 1)**

**2.9.3.4.4.4.1** If a mixture is classified as chronic 1 and/or acute 1, and ingredients of the mixture which are classified as chronic 1 and/or acute 1 are further concentrated, the more concentrated mixture shall be classified with the same classification category as the original mixture without additional testing.

#### **2.9.3.4.4.5 Interpolation within one toxicity category**

**2.9.3.4.4.5.1** If mixtures A and B are in the same classification category and mixture C is made in which the toxicologically active ingredients have concentrations intermediate to those in mixtures A and B, then mixture C shall be in the same category as A and B. Note that the identity of the ingredients is the same in all three mixtures.

#### **2.9.3.4.4.6 Substantially similar mixtures**

**2.9.3.4.4.6.1** Given the following:

.1 Two mixtures:

i) A + B

ii) C + B

.2 The concentration of ingredient B is the same in both mixtures;

- .3 The concentration of ingredient A in mixture (i) equals that of component C in mixture (ii);
- .4 Classification for A and C are available and are the same, i.e., they are in the same hazard category and are not expected to affect the aquatic toxicity of B,

then there shall be no need to test mixture (ii) if mixture (i) is already characterized by testing and both mixtures are classified in the same category.

**2.9.3.4.5** *Classification of mixtures when data are available for all components or only for some components of the mixture*

**2.9.3.4.5.1** The classification of a mixture shall be based on summation of the classification of its ingredients. The percentage of ingredients classified as “Acute” or “Chronic” will feed straight into the summation method. Details of the summation method are described in 2.9.3.4.6.1 to 2.9.3.4.6.4.1.

**2.9.3.4.5.2** Mixtures are often made of a combination of both ingredients that are classified (as Acute 1 and/or Chronic 1, 2) and those for which adequate test data is available. When adequate toxicity data is available for more than one ingredient in the mixture, the combined toxicity of those [components] shall be calculated using the following additivity formula, and the calculated toxicity shall be used to assign that portion of the mixture an acute toxicity hazard which is then subsequently used in applying the summation method.

$$\frac{\sum C_i}{L(E)C_{50m}} = \sum_n \frac{C_i}{L(E)C_{50i}}$$

where:

$C_i$  = concentration of ingredient i (mass percentage);

$L(E)C_{50i}$  = (mg/l)  $LC_{50}$  or  $EC_{50}$  for ingredient i;

$n$  = number of ingredients, and i is running from 1 to n;

$L(E)C_m$  =  $L(E)C_{50}$  of the part of the mixture with test data.

**2.9.3.4.5.3** When applying the additivity formula for part of the mixture, it is preferable to calculate the toxicity of this part of the mixture using for each substance toxicity values that relate to the same species (i.e., fish, daphnia or algae) and then to use the highest toxicity (lowest value) obtained (i.e., use the most sensitive of the three species). However, when toxicity data for each ingredient are not available in the same species, the toxicity value of each ingredient shall be selected in the same manner that toxicity values are selected for the classification of substances, i.e., the higher toxicity (from the most sensitive test organism) is used. The calculated acute toxicity shall then be used to classify this part of the mixture as Acute 1 using the same criteria described for substances.

**2.9.3.4.5.4** If a mixture is classified in more than one way, the method yielding the more conservative result shall be used.

**2.9.3.4.6** *Summation method*

**2.9.3.4.6.1** **Classification procedure**

**2.9.3.4.6.1.1** In general a more severe classification for mixtures overrides a less severe classification, e.g., a classification with chronic 1 overrides a classification with chronic 2. As a consequence the classification procedure is already completed if the results of the classification is chronic 1. A more severe classification than chronic 1 is not possible and it is not necessary therefore to undergo the further classification procedure.

**2.9.3.4.6.2** **Classification for the acute category 1**

**2.9.3.4.6.2.1** All ingredients classified as acute 1 shall be considered. If the sum of these ingredients is greater than or equal to 25% the whole mixture shall be classified as category acute 1. If the result of the calculation is a classification of the mixture as category acute 1, the classification process is completed.

**2.9.3.4.6.2.2** The classification of mixtures for acute hazards based on this summation of classified ingredients, is summarized in Table 2.9.1 below.

**Table 2.9.1: Classification of a mixture for acute hazards, based on summation of classified ingredients**

Sum of ingredients classified as:	Mixture is classified as:
$\text{Acute 1} \times M^1 \geq 25\%$	Acute 1

<sup>1</sup> For explanation of the M factor, see 2.9.3.4.6.4.

**2.9.3.4.6.3** **Classification for the chronic categories 1, 2**

**2.9.3.4.6.3.1** First, all ingredients classified as chronic 1 are considered. If the sum of these ingredients is greater than or equal to 25% the mixture shall be classified as category chronic 1. If the result of the calculation is a classification of the mixture as category chronic 1 the classification procedure is completed.

**2.9.3.4.6.3.2** In cases where the mixture is not classified as chronic 1, classification of the mixture as chronic 2 is considered. A mixture shall be classified as chronic 2 if 10 times the sum of all ingredients classified as chronic 1 plus the sum of all ingredients classified as chronic 2 is greater than or equal to 25%. If the result of the calculation is classification of the mixture as chronic 2, the classification process is completed.

**2.9.3.4.6.3.3** The classification of mixtures for chronic hazards, based on this summation of classified ingredients, is summarized in Table 2.9.2 below.

**Table 2.9.2: Classification of a mixture for chronic hazards, based on summation of classified ingredients**

Sum of ingredients classified as:	Mixture is classified as:
Chronic 1 × M <sup>1</sup> ≥ 25%	Chronic 1
(M × 10 × Chronic 1)+Chronic 2 ≥ 25%	Chronic 2

<sup>1</sup> For explanation of the M factor, see 2.9.3.4.6.4.

#### 2.9.3.4.6.4 Mixtures with highly toxic ingredients

**2.9.3.4.6.4.1** Acute category 1 ingredients with toxicities well below 1 mg/l may influence the toxicity of the mixture and are given increased weight in applying the summation of classification approach. When a mixture contains ingredients classified as acute or chronic category 1, the tiered approach described in 2.9.3.4.6.2 and 2.9.3.4.6.3 shall be applied using a weighted sum by multiplying the concentrations of acute category 1 ingredients by a factor, instead of merely adding up the percentages. This means that the concentration of “Acute 1” in the left column of Table 2.9.1 and the concentration of “Chronic 1” in the left column of Table 2.9.2 are multiplied by the appropriate multiplying factor. The multiplying factors to be applied to these ingredients are defined using the toxicity value, as summarized in Table 2.9.3 below. Therefore, in order to classify a mixture containing acute 1 and/or chronic 1 ingredients, the classifier needs to be informed of the value of the M factor in order to apply the summation method. Alternatively, the additivity formula (2.9.3.4.5.2) may be used when toxicity data are available for all highly toxic ingredients in the mixture and there is convincing evidence that all other ingredients, including those for which specific acute toxicity data are not available, are of low or no toxicity and do not significantly contribute to the environmental hazard of the mixture.

**Table 2.9.3: Multiplying factors for highly toxic ingredients of mixtures**

L(E)C <sub>50</sub> value	Multiplying factor (M)
0.1 < L(E)C <sub>50</sub> ≤ 1	1
0.01 < L(E)C <sub>50</sub> ≤ 0.1	10
0.001 < L(E)C <sub>50</sub> ≤ 0.01	100
0.0001 < L(E)C <sub>50</sub> ≤ 0.001	1000
0.00001 < L(E)C <sub>50</sub> ≤ 0.0001	10000
(continue in factor 10 intervals)	

**2.9.3.4.6.5 Classification of mixtures with ingredients without any useable information**

**2.9.3.4.6.5.1** In the event that no useable information on acute and/or chronic aquatic hazard is available for one or more relevant ingredients, it is concluded that the mixture cannot be attributed (a) definitive hazard category(ies). In this event, the mixture shall be classified based on the known ingredients only with the additional statement that: “x percent of the mixture consists of ingredient(s) of unknown hazards to the aquatic environment.”

**2.9.3.5 Substances or mixtures dangerous to the aquatic environment not otherwise classified under the provisions of this Code**

**2.9.3.5.1** Substances or mixtures dangerous to the aquatic environment not otherwise classified under this Code shall be designated:

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. or  
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
They shall be assigned to Packing Group III”.

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