II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION

of 29 November 2002

establishing revised ecological criteria for the award of the Community eco-label to detergents for dishwashers and amending Decision 1999/427/EC

(notified under document number C(2002) 4632)

(Text with EEA relevance)

(2003/31/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme [1], and in particular the second subparagraph of Article 6(1) thereof,

Whereas:

(1) Under Regulation (EC) No 1980/2000 the Community eco-label may be awarded to a product possessing characteristics which enable it to contribute significantly to improvements in relation to key environmental aspects.

(2) Regulation (EC) No 1980/2000 provides that specific eco-label criteria are to be established according to product groups.

(3) It also provides that the review of the eco-label criteria, as well as of the assessment and verification requirements related to the criteria, is to take place in due time before the end of the period of validity of the criteria specified for each product group.

(4) It is appropriate to revise the ecological criteria that were established by Commission Decision 1999/427/EC of 28 May 1999 establishing the ecological criteria for the award of the Community eco-label to detergents for dishwashers [2], in order to reflect the developments in the market. At the same time, the period of validity of that Decision as extended by Decision 2002/173/EC [3] and the definition of the product group should be modified.

(5) A new Decision should be adopted establishing the specific ecological criteria for this product group, which will be valid for a period of five years.

(6) It is appropriate that, for a limited period of not more than 18 months, both the new criteria and the criteria established by Decision 1999/427/EC should be valid concurrently, in order to allow sufficient time for companies that have been awarded or that have applied for the award of the eco-label for their products prior to the date of application of this Decision, to adapt those products to comply with the new criteria.

(7) The measures provided for in this Decision are based on the draft criteria developed by the European Union Eco-Labelling Board established under Article 13 of Regulation (EC) No 1980/2000.

(8) The measures provided for in this Decision are in accordance with the opinion of the Committee instituted by Article 17 of Regulation (EC) No 1980/2000,

HAS ADOPTED THIS DECISION:

Article 1

In order to be awarded the Community eco-label under Regulation (EC) No 1980/2000, a detergent for dishwashers must fall within the product group 'detergents for dishwashers' as defined in Article 2, and must comply with the ecological criteria set out in the Annex to this Decision.

[1] OJ L 237, 21.9.2000, p. 1.
[2] OJ L 167, 2.7.1999, p. 38.
[3] OJ L 56, 27.2.2002, p. 33.

Article 2

The product group 'detergents for dishwashers' shall comprise all detergents intended for use exclusively in automatic domestic dishwashers and all detergents intended for use in automatic dishwashers operated by professional users but similar to automatic domestic dishwashers in terms of machine size and usage.

Article 3

For administrative purposes the code number assigned to the product group 'detergents for dishwashers' shall be '015'.

Article 4

Article 3 of Decision 1999/427/EC is replaced by the following:

'*Article 3*

The product group definition and the specific ecological criteria for the product group shall be valid until 31 May 2004.'

Article 5

This Decision shall apply from 1 January 2003 until 31 December 2007.

Producers of products falling within the product group 'detergents for dishwashers' which have already been awarded the eco-label before 1 January 2003 may continue to use that label until 31 May 2004.

Producers of products falling within the product group 'detergents for dishwashers' which have already applied for the award of the eco-label before 1 January 2003 may be awarded the eco-label under the terms of Decision 1999/427/EC. In these cases the label may be used until 31 May 2004.

Article 6

This Decision is addressed to the Member States.

Done at Brussels, 29 November 2002.

For the Commission

Margot WALLSTRÖM

Member of the Commission

ANNEX

FRAMEWORK

The aims of the criteria

These criteria aim in particular at promoting:

— reduction of water pollution both by reducing the quantity of detergent used and by limiting the quantity of harmful ingredients,

— reduction of energy use by promoting low temperature detergents,

— the minimisation of waste by reducing the amount of primary packaging.

Additionally, the criteria enhance the consumers' environmental awareness. The criteria are set at levels that promote the labelling of detergents for dishwashers that have a low environmental impact.

Assessment and verification requirements

The specific assessment and verification requirements are indicated within each criterion.

Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, it is understood that these may originate from the applicant and/or his supplier(s) and/or their supplier(s), et cetera, as appropriate.

Where possible, the testing should be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Where appropriate, test methods other than those indicated for each criterion may be used if the competent body assessing the application accepts their equivalence.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

Where appropriate, the applicant may use subsequent revisions of the Detergent Ingredient Database as they become available.

The competent bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO14001, when assessing applications and monitoring compliance with the criteria (*note*: it is not required to implement such management schemes.).

Functional unit and reference dosage

The functional unit, to which inputs and outputs should be related, shall be the quantity of product required to wash 12 place settings with a standard soil (as defined by DIN or ISO standards). The dosage recommended by the manufacturer to consumers for normally soiled dishes and 12 place settings is taken as a reference dosage under standard conditions, as laid down in the IKW washing performance test referred to in criterion 6.

CRITERIA

1. Environmental scoring matrix

The following five parameters are included in an environmental matrix and are aggregated and assessed as a whole, as presented below:

— total chemicals,

— critical dilution volume, toxicity (CDV_{tox}),

— phosphates (expressed as sodium tripolyphosphate — STPP),

— aerobic non-biodegradable organics (aNBDO),

— anaerobic non-biodegradable organics (anNBDO).

The following table summarises these parameters and their related scoring, their exclusion hurdles and their weighting factors. The formulae for calculating the score for each parameter and the exclusion hurdles are detailed below in points (a) to (f). The parameters are calculated for each ingredient by considering the dosage per wash, water content and mass percentage in the formulation and they are added up for each product formulation.

Environmental scoring matrix

Parameter	Score				Excluding hurdle	Weight factor
	4	3	4	1		
Total chemicals	16,5	18	19,5	21	22,5	3
Critical dilution volume, $_{toxicity}$	60	120	180		200	8
Phosphates (as STPP)	0	2,5	5	7,5	10	2
Aerobically non-biodegradable organics	0	0,25	0,5	0,75	1	1
Anaerobically non-biodegradable organics	0	0,05	0,10	0,15	0,2	1,5
Minimum score required	30					

Note: All values are expressed in g/wash, except CDV_{tox} which is expressed in l/wash.

Assessment and verification: The exact formulation of the product shall be provided, including the exact chemical description of ingredients (e.g. identification according to IUPAC, CAS No, sum and structural formulae, purity, type and percentage of impurities, additives; for mixtures, e.g. surfactants: DID number, composition and spectrum of distribution homologues, isomers, and trade names); analytical evidence of the composition of surfactants, and the exact tonnage of product that is put on the market (reporting on 1 March, related to the year before).

(a) *Toxicity to aquatic organisms*

The critical dilution volume toxicity (CDV_{tox}) is calculated for each ingredient (i) using the following equation:

$$CDV_{tox}\ (\text{ingredient i}) = \frac{\text{weight (i)} \times \text{LF (i)}}{\text{LTE (i)}} \cdot 1\,000$$

where weight (i) is the weight of the ingredient per recommended dose, LF is the loading factor and LTE is the long-term toxicity effect concentration of the ingredient. The CDV_{tox} is summed for each ingredient (i), making the CDV_{tox} for the product:

$$CDV_{tox} = \sum CDV_{tox}\ (\text{ingredient i})$$

CDV_{tox} shall be ≤ 200 l/wash.

Score $(CDV_{tox}) = (5 - (CDV_{tox}/60)) \times 8$

Assessment and verification: The exact formulation of the product shall be provided to the Competent Body, together with the details of the CDV_{tox} calculations and the related score. For all ingredients included in the Detergent Ingredient Database (DID-list, see Annex IA), the relevant values given in the DID-list shall be used, and the corresponding ingredient number shall be given. In the case of new chemicals or additional ingredients that are not listed in the DID list the approach described in Appendix I.B shall be followed.

(b) *Total chemicals*

Total chemicals, in g/wash, are the recommended dosage minus water content.

Total chemicals shall be ≤ 22,5 g/wash.

Score (Total chemicals) = (15 – (Total chemicals/1,5)) × 3

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with the details of the total chemical calculations and the related score.

(c) *Phosphates (as STPP — sodium tripolyphosphate)*

Phosphates are the quantity of phosphates in the formulation calculated as STPP.

Phosphates shall be ≤ 10 g/wash.

Score (Phosphates) = (4 – (Phosphates/2,5)) × 2

Assessment and verification: The exact formulation of the product shall be provided to the Competent Body, together with the details of phosphate calculations and the related score.

(d) *Aerobically non-biodegradable organics (aNBDO)*

Aerobically non-biodegradable organics is the weight per wash, in g/wash, of all organic ingredients which are aerobically non-biodegradable (see DID-list).

aNBDO shall be ≤ 1 g/wash

$Score_{(aNBDO)} = 4 - (aNBDO/0{,}25)$

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with the details of the aNBDO calculations and the related score. For all ingredients included in the DID-list (Annex IA), the relevant data given in the DID-list shall be used. For ingredients which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are aerobically biodegradable shall be provided. The tests for ready biodegradability shall be as referred to in Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances ([1]), and its subsequent amendments, in particular the methods detailed in Annex V.C4, or their equivalent OECD 301 A-F test methods, or their equivalent ISO tests. The 10 days window principle shall not apply. The pass levels shall be 70 % for the tests referred to in Annex V.C4-A and C4-B of Directive 67/548/EEC (and their equivalent OECD 301 A and E tests and ISO equivalents), and shall be 60 % for tests C4-C, D, E and F (and their equivalent OECD 301 B, C, D and F tests and ISO equivalents).

(e) *Anaerobically non-biodegradable organics (anNBDO)*

Anaerobically non-biodegradable organics is the weight per wash, in g/wash, of all organic ingredients that are anaerobically non-biodegradable using respective correction factors (see DID-list).

anNBDO shall be ≤ 0,2 g/wash.

$Score_{(anNBDO)} = (4 - (anNBDO/0{,}05)) \times 1{,}5$

Assessment and verification: The exact formulation of the product shall be provided to the Competent Body, together with the details of the anNBDO calculations and the related score. For all ingredients included in the DID-list (Annex IA), the relevant data given in the DID-list shall be used. For ingredients which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are anaerobically biodegradable shall be provided. The reference test for anaerobic degradability shall be ISO 11734, ECETOC No 28 (June 1988) or an equivalent test method, with the requirement of 60 % ultimate degradability under anaerobic conditions. Test methods simulating the conditions in a relevant anaerobic environment may also be used to document that 60 % ultimate degradability has been attained under anaerobic conditions (see Appendix IC).

(f) *Total score*

The sum of Score (CDV_{tox}) + Score (Total chemicals) + Score (Phosphates) + Score (aNBDO) + Score (anNBDO) shall be ≥ 30.

Assessment and verification: The exact formulation of the product shall be provided to the Competent Body, together with the details of the total score calculations.

2. **Biodegradability of surfactants**

(a) *Ready aerobic biodegradability*

Each surfactant used in the product shall be readily biodegradable.

Assessment and verification: The exact formulation of the product shall be provided to the competent body. The DID list (see Appendix IA) indicates whether a specific surfactant is aerobically biodegradable or not (i.e. those that have an entry of 'Y' in the column on aerobic biodegradability shall not be used). For surfactants which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are aerobically biodegradable shall be provided. The tests for ready biodegradability shall be as referred to in Directive 67/548/EEC, and its subsequent amendments, in particular the methods detailed in Annex V.C4, or their equivalent OECD 301 A-F test methods, or their equivalent ISO tests. The 10 days window principle shall not apply. The pass levels shall be 70 % for the tests referred to in Annex V.C4-A and C4-B of Directive 67/548/EEC (and their equivalent OECD 301 A and E tests and ISO equivalents), and shall be 60 % for tests C4-C, D, E and F (and their equivalent OECD 301 B, C, D and F tests and ISO equivalents).

([1]) OJ 196, 16.8.1967, p. 1.

(b) *Anaerobic biodegradability*

Each surfactant used in the product shall be anaerobically biodegradable.

Assessment and verification: The exact formulation of the product shall be provided. The DID list (see Appendix IA) indicates whether a specific surfactant is anaerobically biodegradable or not (i.e. those that have an entry of 'Y' in the column on anaerobic biodegradability shall not be used). For surfactants which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are anaerobically biodegradable shall be provided. The reference test for anaerobic degradability shall be ISO 11734, Ecetoc No 28 (June 1988) or an equivalent test method, with the requirement of 60 % ultimate degradability under anaerobic conditions. Test methods simulating the conditions in a relevant anaerobic environment may also be used to document that 60 % ultimate degradability has been attained under anaerobic conditions (see Appendix IC).

3. **Dangerous, hazardous or toxic substances or preparations**

(a) No ingredient shall be included in the product that, at the time of application, is or may be assigned any of the following risk phrases (or combinations thereof):

R40 (limited evidence of a carcinogenic effect)

R45 (may cause cancer)

R46 (may cause heritable genetic damage)

R49 (may cause cancer by inhalation)

R50-53 (very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment)

R51-53 (toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment)

R60 (may impair fertility)

R61 (may cause harm to the unborn child)

R62 (possible risk of impaired fertility)

R63 (possible risk of harm to the unborn child)

R64 (may cause harm to breastfed babies)

R68 (possible risks of irreversible effects)

as laid down in Directive 67/548/EEC and its subsequent amendments, or in Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations [1], and its subsequent amendments.

Each ingredient of any preparation used in the formulation that exceeds 0,01 % by weight of the final product shall also meet this requirement.

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with copies of the material safety data sheets of each ingredient and a declaration of compliance with this criterion. Test results or references to published data shall be given.

(b) No preservatives shall be used that are or may be classified as R50-53, as laid down in Council Directive 67/548/EEC and its subsequent amendments or Directive 1999/45/EC and its subsequent amendments, whatever their amount.

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with copies of the material safety data for such ingredients (whether substances or preparations) and a declaration of compliance with this criterion. Test results or references to published data shall be given.

[1] OJ L 200, 30.7.1999, p. 1.

(c) *APEOs, APDs, EDTA, NTA*

The following ingredients shall not be included in the product, either as part of the formulation or as part of any preparation included in the formulation:

— alkylphenolethoxylates (APEOs) or other alkyl phenol derivatives (APDs).

— EDTA (ethylene-diamine-tetra-acetate)

— NTA (nitrilotriacetate)

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with a declaration of the absence of these chemical compounds.

(d) *Phosphonates*

The quantity of phosphonates that are not readily biodegradable (aerobically) shall not exceed 0,2 g/wash.

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with a declaration of compliance with this criterion.

4. **Fragrances**

(a) *Nitromusks and polycyclic musks.*

Nitromusks and polycyclic musks shall not be included in the product, either as part of the formulation or as part of any preparation included in the formulation. This concerns, amongst others, the following:

musk xylene:	5-tert-butyl-2,4,6-trinitro-m-xylene
musk ambrette:	4-tert-butyl-3-methoxy-2,6-dinitrotoluene
moskene:	1,1,3,3,5-pentamethyl-4,6-dinitroindan
musk tibetine:	1-tert-butyl-3,4,5-trimethyl-2,6-dinitrobenzene
musk ketone:	4′-tert-butyl-2′,6′-dimethyl-3′,5′-dinitroacetaphenone
HHCB:	1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta(g)-2-benzopyran
AHTN:	6-Acetyl-1,1,2,4,4,7-hexamethyltetralin

(b) *Code of practice*

Any ingredients added to the product as a fragrance shall have been manufactured and/or handled following the code of practice of the International Fragrance Association.

Assessment and verification: The exact formulation of the product shall be provided to the competent body, together with a declaration of compliance for each part (a) and (b) of this criterion.

5. **Packaging**

(a) Primary packaging shall not exceed 2,5 grams per functional unit.

(b) Cardboard primary packaging shall consist of ≥ 80 % recycled material.

(c) Plastic primary packaging shall be labelled according to ISO 1043.

Assessment and verification: The applicant shall supply the competent body assessing the application with a sample of the packaging. A calculation of the quantity of primary packaging and a declaration regarding the percentage of recycled material in cardboard packaging shall be submitted to the competent body.

6. **Washing performance**

The product shall have a satisfactory washing performance at the recommended dosage according to the standard test developed by IKW or the EN 50242 (modified as below).

The tests shall be carried out at 55 °C or at a lower temperature.

Assessment and verification: The test report shall be submitted to the competent body. A test other than the IKW test or the modified version of EN 50242 may be used if the competent body assessing the application accepts its equivalence.

If EN 50242: 1998 is used, the following modifications shall apply: the tests shall be carried out at 55 °C ± 2 °C with cold pre-wash without detergent; the machine used in the test shall be connected to cold water and must hold 12 place settings with a washing index of between 3,35 and 3,75; the machine's drying programme shall be used, but only the cleanliness of the dishes shall be assessed; a weak acidic rinsing agent in accordance with the standard (formula III) shall be used; the rinsing agent setting shall be between 2 and 3; the dosage of dishwashing detergent shall be as recommended by the manufacturer; three attempts shall be carried out at a water hardness in accordance with the standard; an attempt consists of five washes where the result is read after the fifth wash without the dishes being cleaned between the washes; the result shall be better than or identical to the reference detergent after the fifth wash; recipe for the reference detergent (Detergent B IEC 436) and rinsing agent (formula III), see Appendix B in the standard EN 50242: 1998 (the tensides are to be stored in a cool place in watertight containers not exceeding 1 kg and are to be used within three months).

7. **Purity of enzymes**

The enzyme production micro-organism shall be absent from the final enzyme preparation.

Assessment and verification: A test report or certificate from the enzyme producer shall be provided to the competent body.

8. **Consumer information**

(a) *Information on the packaging*

The following text (or equivalent) shall appear on or in the product:

'This eco-labelled detergent works well at low temperatures (***). Select low temperature washing cycles on the dishwasher, wash full loads and do not exceed the recommended dosage. This will minimise both energy and water consumption and reduce water pollution.

For more information about the Flower:

http://europa.eu.int/ecolabel.

(***) The applicant shall insert here the recommended temperature or range of temperatures that shall not exceed 55 °C.'

(b) *Dosage instructions*

Dosage instructions shall appear on the product packages. The recommended dosages shall be specified for 'normally' and 'heavily' soiled dishes, and for the ranges of water hardness appropriate to where the product is marketed. The instructions shall specify how to make best use of the product according to the soil.

The applicant shall take suitable steps to help the consumer respect the recommended dosage, for example by making available a dosage device (for powdered or liquid products), and/or by indicating the recommended dosage at least in ml (for powdered or liquid products). A recommendation shall appear on the packaging for the consumers to contact their water supplier or local authority in order to find out the degree of hardness of their tap water.

(c) *Information and labelling of ingredients*

Commission Recommendation 89/542/EEC of 13 September 1989 concerning the labelling of detergents and cleaning agents [1] shall be applied and the following groups of ingredients shall be labelled:

Enzymes:	indication of the type of enzymes
Preservation agents:	characterisation and labelling according to IUPAC (International Union of Pure and Applied Chemistry) nomenclature.

If the product contains perfume, it shall be indicated on the packaging.

Assessment and verification: The applicant shall provide a sample of the product packaging together with a declaration of compliance with each part (a), (b) and (c) of this criterion.

9. **Information appearing on the eco-label**

Box 2 of the eco-label shall contain the following text

'— helps reduce water pollution,

— helps reduce packaging.'

Assessment and verification: The applicant shall provide the competent body assessing the application with a sample of the product packaging showing the label, together with a declaration of compliance with this criterion.

[1] OJ L 291, 10.10.1989, p. 55.

Appendix I.A

DID-LIST

DETERGENTS INGREDIENTS DATABASE AND APPROACH TO BE FOLLOWED FOR INGREDIENTS NOT LISTED IN THE DATABASE

A. **The data given below on the most commonly used detergent ingredients shall be used for the calculation of the ecological criteria**

Note: the parameters a NBO, SI, II, THOD as well as the CF-factors for an NBO are not used within this product group)

Detergent ingredients database (DID-list; version 29. September 1998

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic Non-Biodegradable (an NBO)	Aerobic Non-Biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
	Anionic surfactants								
1	C 10-13 LAS (Na ø 11,5-11,8, C14<1 %)	0,3	0,3	0,05	Y, CF = 0,75	O	O	O	2,3
2	other LAS (C14 > 1 %)	0,12	0,12	0,05	Y, CF = 1,5	O	O	O	2,3
3	C 14/17 Alk. sulfonate	0,27	0,27	0,03	Y, CF = 0,75	O	O	O	2,5
4	C 8/10 Alkylsulfate	EC50 = 2,9	0,15	0,02	O	O	O	O	1,9
5	C 12-15 AS	0,1	0,1	0,02	O	O	O	O	2,2
6	C 12-18 AS	LC50 = 3	0,15	0,02	O	O	O	O	2,3
7	C 16-18 FAS	0,55	0,55	0,02	O	O	O	O	2,5
8	C 12-15 A 1-3 EO sulphate	0,15	0,15	0,03	O	O	O	O	2,1
9	C 16/18 A 3-4 EO sulphate	no valid data	0,1	0,03	O	O	O	O	2,2
10	C 8-Dialkylsulfosuccinate	LC50 = 7,5	0,4	0,5	Y, CF = 1,5	O	O	O	2
11	C 12/14 sulpho-fat.-acid methylester	EC50 = 5	0,25	0,05	Y, CF = 0,75	O	O	O	2,1
12	C 16/18 sulpho-fat.-acid methylester	0,15	0,15	0,05	Y, CF = 0,75	O	O	O	2,3
13	C 14/16 alpha olefine sulphonate	LC50 = 2,5	0,13	0,05	Y, CF = 0,75	O	O	O	2,3
14	C 14/18 alpha olefine sulphonate	LC50 = 1,4	0,07	0,05	Y, CF = 2,0	O	O	O	2,4
15	SOAPS C12-22	EC0 = 1,6	1,6	0,05	O	O	O	O	2,9
	Nonionic surfactants								
16	C 9/11 A > 3-6 EO lin. or mono br.	EC50 = 3,3	0,7	0,03	O	O	O	O	2,4
17	C 9/11 A > 6-9 EO lin. or mono br.	EC50 = 5,4	1,1	0,03	O	O	O	O	2,2
18	C 12/15 A 2-6 EO lin. or mono br.	0,18	0,18	0,03	O	O	O	O	2,5

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic Non-Biodegradable (an NBO)	Aerobic Non-Biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
19	C 12-15 (Avg. C < 14) A > 6-9 EO lin. or mono br.	0,24	0,24	0,03	O	O	O	O	2,3
20	C 12-15 (Avg. C > 14) A > 6-9 EO	0,17	0,17	0,03	O	O	O	O	2,3
21	C 12-15 A > 9-12 EO	LC50 = 0,8	0,3	0,03	O	O	O	O	2,2
22	C 12-15 A > 20-30 EO	EC50 = 13	0,65	0,05	O	O	O	O	2
23	C 12-15 A > 30 EO	LC50 = 130	6,5	0,75	O	Y	O	O	0 (*)
24	C 12/18 A 0-3 EO	no data	0,01	0,03	O	O	O	O	2,9
25	C 12-18 A 9 EO	0,2	0,2	0,03	O	O	O	O	2,4
26	C 16/18 A 2-6 EO	0,03	0,03	0,03	O	O	O	O	2,6
27	C 16/18 A > 9-12 EO	LC50 = 0,5	0,05	0,03	O	O	O	O	2,3
28	C 16/18 A 20-30 EO	EC50 = 18	0,36	0,05	O	O	O	O	2,1
29	C 16/18 A > 30 EO	LC50 = 50	2,5	0,75	O	Y	O	O	0 (*)
30	C 12/14 Glucose amide	4,3	4,3	0,03	O	O	O	O	2,2
31	C 16/18 Glucose amide	0,116	0,116	0,03	O	O	O	O	2,5
32	C 12/14 Alkylpolyglucoside	1	1	0,03	O	O	O	O	2,3
	Amphoteric surfactants								
33	C 12-15 Alkyl dimethylbetaine	0,03	0,03	0,05	Y, CF = 2,5	O	O	O	2,9
34	C 12-18 Alkyl amidopropylbetaine	0,03	0,03	0,05	Y, CF = 2,5	O	O	O	2,8
	Sud controllers								
35	Silicone	EC50 = 241	4,82	0,4	Y, CF = 0,75	Y	O	O	0,0
36	Paraffin	no data	100	0,4	O	Y	O	O	0 (*)
	Fabric softening								
37	Glycerol	LC50 > 5-10 gl	1 000	0,13	O	O	O	O	1,2
	Builders								
38	Phosphate as sodium-tri-polyphosphate (STPP)		1 000	0,6	O	O	Y	O	0,0
39	Zeolite A	120	120	0,05	O	O	O	Y	0,0
40	Citrate	EC50 = 85	85	0,07	O	O	O	O	0,6
41	Polycarboxylates and related derivates	124	124	0,4	Y, CF = 0,1	Y	O	O	0 (*)
42	Clay		1 000	0,05	O	O	O	Y	0,0
43	Carbonate /bicarbonate	LC50 = 250	250	0,8	O	O	Y	O	0,0

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic Non-Biodegradable (an NBO)	Aerobic Non-Biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
44	Fatty acid (C ≥ 14)	EC0 = 1,6	1,6	0,05	O	O	O	O	2,9
45	Silicate / disilicate	EC50 > 1 000	1 000	0,8	O	O	Y	O	0,0
46	NTA	19	19	0,13	O	O	O	O	0,6
47	Polyaspartic acid. Na salt	125	12,5	0,13	Y, CF = 0,1	O	O	O	1,2
	Bleaching								
48	Perborate mono (as borate)	1 - 10	6	1	O	O	Y	O	0,0
49	Perborate tetra (as borate)	1 - 10	6	1	O	O	Y	O	0,0
50	Percarbonate (see carbonate)	LC50 = 250	250	0,8	O	O	Y	O	0,0
51	TAED	EC0 = 500	EC0 = 500	0,13	O	O	O	O	2,0
	Solvents								
52	C 1 - C 4 alcohols	LC50 = 8 000	100	0,13	O	O	O	O	2,3
53	Monoethanolamine	0,78	0,78	0,13	O	O	O	O	2,4
54	Diethanolamine	0,78	0,78	0,13	O	O	O	O	2,3
55	Triethanolamine	0,78	0,78	0,13	O	O	O	O	2
	Miscellaneous								
56	Polyvinylpyrrolidon (PVP / PVNO / PVPVI)	EC50 > 100	100	0,75	Y, CF = 0,1	Y	O	O	0 (*)
57	Phosphonates	7,4	7	0,4	Y, CF = 0,5	Y	O	O	0 (*)
58	EDTA	LOEC = 11	11	1	Y, CF = 0,1	Y	O	O	0 (*)
59	CMC	LC50 > 250	250	0,75	Y, CF = 0,1	Y	O	O	0 (*)
60	Na Sulphate	EC50 = 2 460	1 000	1	O	O	Y	O	0,0
61	Mg Sulphate	EC50 = 788	800	1	O	O	Y	O	0,0
62	Na Chloride	EC50 = 650	650	1	O	O	Y	O	0,0
63	Urea	LC50 > 10 000	100	0,13	O	O	O	O	2,1
64	Maleic acid	LC50 = 106	2,1	0,13	O	O	O	O	0,8
65	Malic acid	LC50 = 106	2,1	0,13	O	O	O	O	0,6
66	Ca formiate		100	0,13	O	O	O	O	2,0
67	Silica		100	0,05	O	O	O	Y	0,0
68	High MW polymers PEG > 4000		100	0,4	O	Y	O	O	0 (*)
69	Low MW polymers PEG > 4000		100	0,13	O	O	O	O	1,1

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic Non-Biodegradable (an NBO)	Aerobic Non-Biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
70	Cumene sulfonate	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,7
71	Xylene sulfonate	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,6
72	Toluene sulfonates	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,4
73	Na-/Mg-/KOH		100	1	O	O	Y	O	0,0
74	Enzymes	LC50 = 25	25	0,13	O	O	O	O	2,0
75	Perfume formulation as used	LC50 = 2-10	0,02	0,1	Y, CF = 3,0	Y	O	O	0 (*)
76	Dyes	LC50 = 10	0,1	0,4	Y, CF = 3,0	Y	O	O	0 (*)
77	Starch	no data	250	0,1	O	O	O	O	0,97
78	Zn phthalocyanine sulfonate	0,16	0,016	0,07 (**)	Y, CF = 2,5	Y	O	O	0 (*)
79	Anionic polyester (Soil release polymer)	EC50 = 310	310	0,4	Y, CF = 0,1	Y	O	O	0 (*)
80	Iminodisuccinate	23	2,3	0,13	Y, CF = 2,5	O	O	O	1,1
	Optical brighteners = FWA								
81	FWA 1 (1)	LC0 = 10	1,0	0,4	Y, CF = 1,5	Y	O	O	0 (*)
82	FWA 5 (2)	3,13	3,13	0,4	Y, CF = 0,5	Y	O	O	0 (*)
	Additional ingredients								
83	Alkyl aminoxides (C12-18)	0,08	0,08	0,05	Y, CF = 2,5	O	O	O	3,2
84	Glycereth (6-17EO) cocoate	EC50 = 32	1,6	0,05	O	O	O	O	2,1
85	Phosphate esters (C12-18)	EC50 = 38	1,9	0,05	Y, CF = 2,5	O	O	O	2,3

(1) FWA 1 = Disodium 4.4-bis (4-anilino-5-morpholino-1,3,5-triazin-2-yl)amino stilbene-2.2-disulfonate
(2) FWA 5 = Disodium 4.4-bis(2-sulfostryryl)biphenyl
(*) THOD for aerobically non degradable organic substances is set to zero
(**) rapid photodegradation

Notes:

Y = yes, criterion applies
O = no, criterion does not apply
LTE = long term effect concentration
NOEC = non observed effect concentration
CF = correction factor for anaerobic non degradable organic substances
THOD = theoretical oxygen demand

Appendix I.B

The following approach applies, as appropriate in the case of ingredients that are not listed on the DID-list

Aquatic toxicity

The lowest validated long-term effect (LTE) data on fish, *daphnia magna* or algae should be considered for the calculation of the critical dilution volume criterion (toxicity).

In cases where data on homologues and/or QSARs (quantitative structure activity relationships) are used, a correction could be considered for the finally selected LTE data.

In the absence of LTE data the following procedure has to be applied in order to estimate the LTE data by using the specified uncertainty factor (UF) on the data of the most sensitive species:

Non surfactants

DATA AVAILABLE	UF TO BE USED
At least 2 acute LC_{50} on fish or *daphnia* or algae	100
1 NOEC on fish or *daphnia* or algae	10
2 NOEC on fish or *daphnia* or algae	5
3 NOEC on fish, *daphnia* or algae	1
	Take lowest validated NOEC

Deviation from this rule may be admitted if evidence can be provided that lower factors or data can be scientifically justified. NOEC is the No Observed Effect Concentration (in a chronic test).

Surfactants

DATA AVAILABLE	UF TO BE USED
At least 2 NOECs on fish or *daphnia* or algae	1 (lowest NOEC)
1 NOEC on fish or *daphnia* or algae	1 (NOEC-if species is most sensitive in acute toxicity)
	10 (NOEC-if species is not the most sensitive in acute toxicity)
3 LC_{50} on fish or *daphnia* or algae	20 (lowest LC_{50})
At least 1 LC_{50} on fish, *daphnia* or algae	50 (lowest LC_{50})
	or 20 in specific cases (see below)

In the last case referred to above, an uncertainty factor of 20 may be used instead of 50 only if 1-2 $L(E)C_{50}$ (LC_{50} in case of fish toxicity, EC_{50} in case of *daphnia* or algal toxicity) data are available and if it can be concluded from the information for other compounds that the most sensitive species have been tested. Such a rule can be applied only within a group of homologues. It should be emphasised that the LTEs (long-term effects) used must be consistent within a group of homologues with respect to the influence of e.g. length of alkyl chain for LAS (linear alkylbenzene sulphonate) or number of EOs (ethoxy groups) for alcohol-ethoxylate if such QSARs can be established.

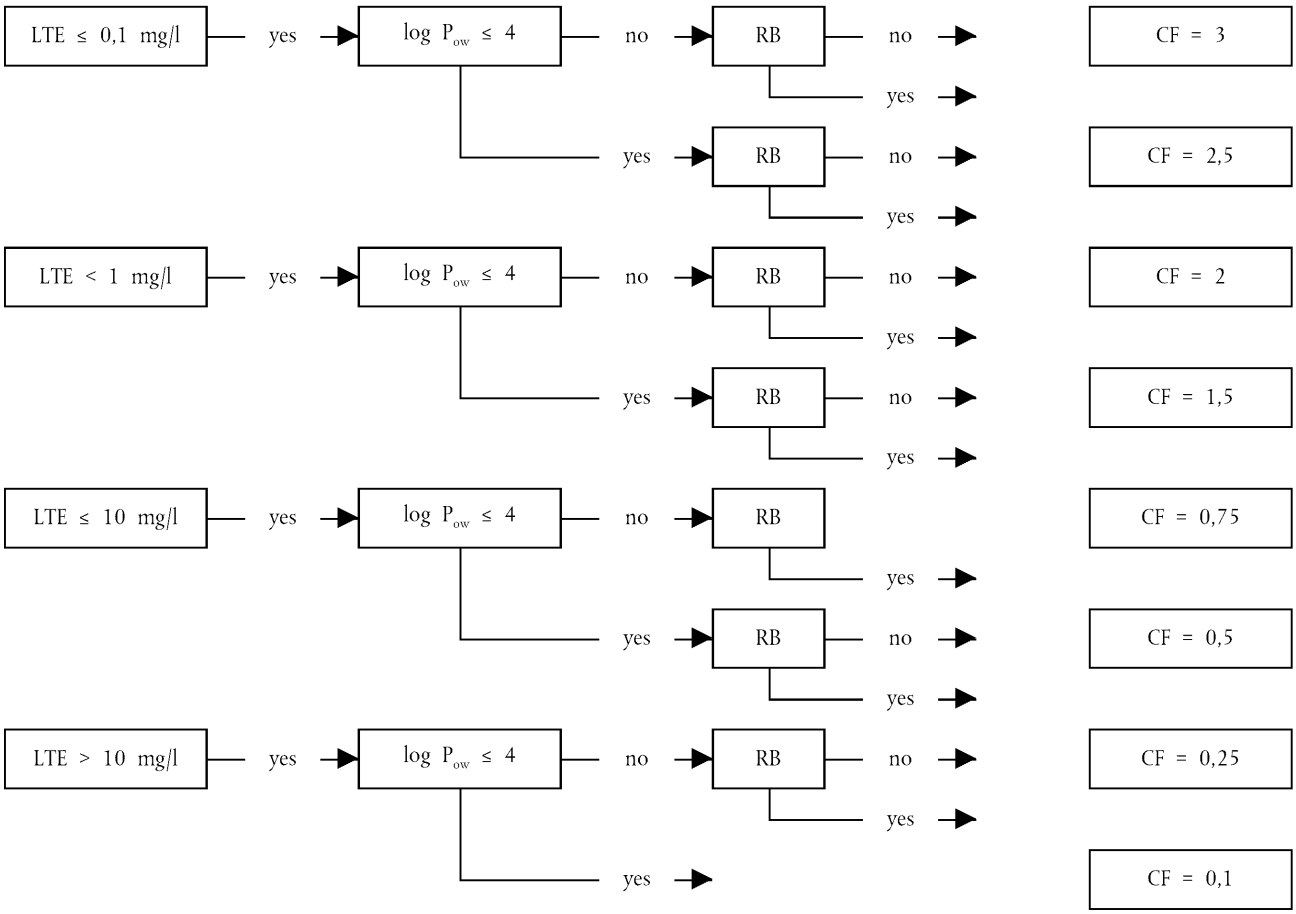
Any deviation from the above-described scheme has to be well reasoned for the specific chemical.

Loading factors

Loading factors shall be established according to Commission Directive 93/67/EEC of 20 July 1993 laying down the principles for assessment of risk to man and the environment of substances [1] notified in accordance with Council Directive 67/548/EEC and to Council Regulation (EEC) No 793/93 [2].

[1] OJ L 227, 8.9.1993, p. 9.
[2] OJ L 84, 5.4.1993, p. 1.

Non-biodegradable organics (anaerobic): flow diagram to define correction factors (CF) (1)



RB: ready aerobic biodegradability
LTE: long-term effect
CF: correction factor

(1) The correction factors are to be established on the basis of the ingredient properties and applied to the dosage expressed in g/wash.

Appendix I.C

Documentation of anaerobic biodegradability

The following approach may be used to provide the necessary documentation of anaerobic degradability in the case of ingredients that are not listed in the DID-list:

1. **Apply reasonable extrapolation**

   Use test results obtained with one raw material to extrapolate the ultimate anaerobic degradability of structurally related surfactants. If anaerobic biodegradability has been confirmed for a surfactant (or a group of homologues) according to the DID-list, it can be assumed that a similar type of surfactant is also anaerobically biodegradable (e.g., C12-15 A 1-3 EO sulphate (DID No 8) is anaerobically biodegradable, and a similar anaerobic biodegradability may also be assumed for C12-15 A 6 EO sulphate). If anaerobic biodegradability has been confirmed for a surfactant by use of an appropriate test method, it can be assumed that a similar type of surfactant is also anaerobically biodegradable (e.g., literature data confirming the anaerobic biodegradability of surfactants belonging to the group alkyl ester ammonium salts may be used as documentation for a similar anaerobic biodegradability of other quaternary ammonium salts containing ester-linkages in the alkyl chain(s)).

2. **Perform screening test for anaerobic degradability**

   If new testing is necessary, perform a screening test by use of ISO 11734, ECETOC No 28 (June 1988) or an equivalent method.

3. **Perform low-dosage degradability test**

   If new testing is necessary, and in the case of experimental problems in the screening test (e.g. inhibition due to toxicity of test substance), repeat testing by using a low dosage of surfactant and monitor degradation by 14C measurements or chemical analyses. Testing at low dosages may be performed by use of OECD 308 (August 2000) or an equivalent method.