

## II

*(Preparatory Acts)*

## COMMISSION

**Amended proposal for a European Parliament and Council Directive concerning the placing of biocidal products on the market <sup>(1)</sup>**

*(95/C 261/03)**(Text with EEA relevance)**COM(95) 387 final — COD 465**(Submitted by the Commission pursuant to Article 189a (2) of the EC Treaty on 24 July 1995)*


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<sup>(1)</sup> OJ No C 239, 3. 9. 1993, p. 3.

## ORIGINAL PROPOSAL

## MODIFIED PROPOSAL

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THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100a thereof,

Having regard to the Treaty establishing the European Community, and in particular Article 100a thereof,

Having regard to the proposal from the Commission,

Having regard to the proposal from the Commission,

In cooperation with the European Parliament,

delete

Having regard to the opinion of the Economic and Social Committee,

Having regard to the opinion of the Economic and Social Committee,

Acting in accordance with the procedure laid down in Article 189b of the Treaty

(new recital 13a)

Whereas it is necessary to provide common rules for the evaluation and authorization of biocidal products to ensure a harmonized approach by Member States

## ORIGINAL PROPOSAL

## MODIFIED PROPOSAL

*Article 4 (1) (b)**Article 4 (1) (b)*

(b) It is established, in the light of current scientific and technical knowledge and it is shown from appraisal of the dossier provided for in Annex III and, where specified, the relevant parts of Annex IV according to the common principles for the evaluation of dossiers, that when used as authorized and having regard to:

- all normal conditions under which the biocidal product may be used,
- how the material treated with it may be used,
- the consequences from use and disposal,

the biocidal product:

- (i) is sufficiently effective;
- (ii) has no unacceptable effect on the target organism;
- (iii) has no harmful effects itself or as a result of its residues, on human or animal health, directly or indirectly (eg through drinking water, food or feed) or on groundwater;
- (iv) has no unacceptable effect on the environment having particular regard to the following considerations:
  - its fate and distribution in the environment; particularly contamination of water including drinking water and groundwater,
  - its impact on non-target organisms;
- (v) does not cause unnecessary suffering and pain to vertebrates to be controlled,

(b) It is established, in the light of current scientific and technical knowledge and it is shown from appraisal of the dossier provided for in Annex III and, where specified, the relevant parts of Annex IV according to the common principles for the evaluation of dossiers as laid down in Annex VI, that when used as authorized and having regard to:

- all normal conditions under which the biocidal product may be used,
- how the material treated with it may be used,
- the consequences from use and disposal,

the biocidal product:

- (i) is sufficiently effective;
- (ii) has no unacceptable effect on the target organism;
- (iii) has no harmful effects itself or as a result of its residues, on human or animal health, directly or indirectly (eg through drinking water, food or feed) or on groundwater;
- (iv) has no unacceptable effect on the environment having particular regard to the following considerations:
  - its fate and distribution in the environment; particularly contamination of water including drinking water and groundwater,
  - its impact on non-target organisms;
- (v) does not cause unnecessary suffering and pain to vertebrates to be controlled,

## ORIGINAL PROPOSAL

## MODIFIED PROPOSAL

*Article 26**Article 26***Common principles for the evaluation of dossiers**

delete

The common principles for evaluation of dossiers referred to in Article (4) (1) (b) above, shall be adopted in accordance with the procedure laid down in Article 25 (3). These principles shall be regularly reviewed and where appropriate revised, in accordance with the same procedure.

*Article 27**Article 27***Adaptation to technical progress****Adaptation to technical progress**

The amendments necessary for adapting Annexes II, III, IV and V to technical progress shall be adopted in accordance with the procedure laid down in Article 25 (3).

The amendments necessary for adapting Annexes II, III, IV, V and VI to technical progress shall be adopted in accordance with the procedure laid down in Article 25 (3).

## ANNEX VI

(new)

## COMMON PRINCIPLES FOR THE EVALUATION OF DOSSIERS

## Definitions

(a) *Hazard identification*

This is the identification of the adverse effects which a biocidal product has an inherent capacity to cause.

(b) *Dose (concentration) — response (effect) assessment*

This is the estimate of the relationship between the dose, or level of exposure, of an active substance or substance of concern in a biocidal product and the incidence and severity of an effect.

(c) *Exposure assessment*

This is the determination of the emissions, pathways and rates of movement of an active substance or a substance of concern in a biocidal product and its transformation or degradation in order to estimate the concentration/doses to which human populations, animals or environmental compartments are or may be exposed.

(d) *Risk characterization*

This is the estimation of the incidence and severity of the adverse effects likely to occur in a human population, animals or environmental compartments due to actual or predicted exposure to any active substance or substance of concern in a biocidal product. This may include 'risk estimation', i.e. the quantification of that likelihood.

(e) *Substance of concern*

Any substance, other than the active substance, which has an inherent capacity to cause an adverse effect on humans, animals or the environment and is present or is produced in a biocidal product in sufficient concentration to manifest such an effect. Such a substance, unless there are other grounds for concern, would normally be a substance classified as dangerous according to Directive 67/548/EEC and present in the biocidal product at a concentration leading the product to be regarded as dangerous within the meaning of Article 3 of Directive 88/379/EEC.

(f) *Animals*

Animals belonging to species normally fed and kept or consumed by humans.

**Introduction**

1. This Annex lays down principles to ensure that evaluations made and decisions taken by a Member State concerning the authorization of a biocidal product results in a harmonized high level of protection for humans, animals and the environment in accordance with Article 4 (1) (b) of the Directive.
2. In order to ensure a high and harmonized level of protection of human and animal health and of the environment, any risks arising from the use of a biocidal product shall be identified. To achieve this a risk assessment shall be carried out to determine the acceptability or otherwise of any risks identified during the proposed normal use of the biocidal product.
3. The Member State shall always carry out a risk assessment on the active substance or substances present in the biocidal product. This risk assessment shall entail hazard identification, and, as appropriate, dose (concentration) — response (effect) assessment, exposure assessment and risk characterization. Where a quantitative risk assessment cannot be made a qualitative assessment shall be produced.
4. Additional risk assessments shall be carried out, in the same manner as described above, on any other substance of concern present in the biocidal product where relevant for the use of the biocidal product.
5. In order to carry out a risk assessment data are required. These data are detailed in Annexes II, III and IV and, recognizing that there are a wide variety of product types, are flexible according to the product type and associated risks. The data required shall be the minimum necessary to carry out an appropriate risk assessment. Member States should take due consideration of the requirements of Articles 11 and 12 in order to avoid duplication of data submissions. The minimum set of data required for an active substance in any biocidal product type, however, shall be that detailed in Annex VII A of Directive 67/548/EEC. Data may also be required on a substance of concern present in a biocidal product.
6. The results of the risk assessments carried out on an active substance and on a substance of concern present in the biocidal product shall be integrated to produce an overall assessment for the biocidal product itself.
7. When making evaluations and taking decisions concerning the authorization of a biocidal product the Member State shall:
  - (a) take into consideration other relevant technical or scientific information which is reasonably available to them with regard to the properties of the biocidal product, its components, metabolites, or residues;
  - (b) evaluate, where relevant, justifications submitted by the applicant for not supplying certain data.
8. The Member State shall comply with the requirements of mutual recognition as stated in Articles 3 (3) and 3 (4) of the Directive.
9. It is known that many biocidal products present only minor differences in composition and this should be taken into account when evaluating dossiers.
10. The application of these common principles shall lead to the Member State deciding whether or not a biocidal product can be authorized, such authorization may include restrictions on use or other conditions. In certain cases the Member State may conclude that more data are required before an authorization decision can be made.
11. During the process of evaluation and decision-making, a Member State shall cooperate with the applicant in order to resolve any questions on the data requirements quickly or to identify at an early stage any additional studies required, or to amend any proposed conditions for the use of the biocidal product or to modify its nature or its composition in order to ensure full compliance with the requirements of this Annex or of this Directive. The administrative burden, especially for SMEs, shall be kept to the minimum necessary without prejudicing the level of protection afforded to humans and the environment.

12. The judgements made by the Member State during the evaluation and decision making process must be based on scientific principles, preferably recognized at international level, and be made with the benefit of expert advice.

### Evaluation

#### *General principles*

13. The data submitted in support of an application for authorization of a biocidal product shall be examined for completeness and overall scientific value by the receiving Member State. After acceptance of these data the Member State shall utilize them by carrying out a risk assessment based on the proposed use of the biocidal product.
14. A risk assessment on the active substance present in the biocidal product shall always be carried out. If there are, in addition, any substances of concern present in the biocidal product then a risk assessment shall be carried out for each of these. The risk assessment shall cover the proposed normal use of the biocidal product together with a reasonably foreseeable worst case scenario.
15. For each active substance and each substance of concern present in the biocidal product, the risk assessment shall entail a hazard identification and the establishment of appropriate no-effect levels where possible. It shall also include, as appropriate, a dose (concentration) — response (effect) assessment, together with an exposure assessment and a risk characterization.
16. The results arrived at from a comparison of the exposure to the no-effect level concentrations for each of the active substances and any substances of concern shall be integrated to produce an overall risk assessment for the biocidal product. Where quantitative results are not available the results of the qualitative assessments shall be integrated in a similar manner.
17. The risk assessment shall determine:
- (a) the risk to humans and animals;
  - (b) the risk to the environment;
  - (c) the measures necessary to protect humans, animals and the general environment during both the proposed normal use of the biocidal product and in a realistic worst case situation.
18. In certain cases it may be concluded that further data are required before a risk assessment can be finalized. Any such additional data requested shall be the minimum necessary to complete such a risk assessment.

#### *Effects on humans*

19. The risk assessment shall take account of the following potential effects arising from the use of the biocidal product and the populations liable to exposure.
20. The effects previously mentioned result from the properties of the active substance and any substance of concern present. They are:
- acute toxicity,
  - irritation,
  - corrosivity,
  - sensitization,
  - repeated dose toxicity,
  - mutagenicity,
  - carcinogenicity,
  - reproduction toxicity,
  - any special properties due to the active substance or substance of concern being a micro-organism, fungus or virus,
  - other effects due to physico-chemical properties.
21. The populations previously mentioned are:
- professionals,
  - non-professionals,
  - humans exposed indirectly via the environment.

22. The hazard identification shall address the properties and potential adverse effects of the active substance and any substances of concern present in the biocidal product. If this results in the biocidal product being classified according to the requirements of the Directive then dose (concentration) — response (effect) assessment, exposure assessment and risk characterization shall be required.
23. In those cases where the test appropriate to hazard identification in relation to a particular potential effect of an active substance or a substance of concern present in a biocidal product has been conducted but the results have not led to classification of the biocidal product then risk characterization in relation to that effect shall not be necessary unless there are other reasonable grounds for concern. The generation of unacceptable residues would be an example of reasonable grounds for concern.
24. The Member State shall apply points 25 to 28 when carrying out a dose (concentration) — response (effect) assessment on an active substance or a substance of concern present in a biocidal product.
25. For repeated dose toxicity and reproductive toxicity the dose response relationship shall be assessed for each active substance or substance of concern and, where possible, the no-observed-adverse-effect level (NOAEL) identified. If it is not possible to identify an NOAEL, the lowest-observed-adverse-effect level (LOAEL) shall be identified.
26. For acute toxicity, corrosivity and irritation, it is not usually possible to derive an NOAEL or LOAEL on the basis of tests conducted in accordance with the requirements of the Directive. For acute toxicity, the LD<sub>50</sub> or LC<sub>50</sub> value or, where the fixed dose procedure has been used, the discriminating dose shall be derived. For the other effects it shall be sufficient to determine whether the active substance or substance of concern has an inherent capacity to cause such effects during use of the product.
27. For mutagenicity and carcinogenicity it shall be sufficient to determine whether the active substance or substance of concern has an inherent capacity to cause such effects during use of the biocidal product. However, if it can be demonstrated that an active substance or a substance of concern identified as a carcinogen is non-genotoxic, it will be appropriate to identify a N(L)OAEL as described in paragraph 25.
28. With respect to skin sensitization and respiratory sensitization, in so far as there is no consensus on the possibility of identifying a dose/concentration below which adverse effects are unlikely to occur in a subject already sensitized to a given substance, it shall be sufficient to evaluate whether the active substance or substance of concern has an inherent capacity to cause such effects during use of the biocidal product.
29. Where toxicity data derived from observations of human exposure, e.g. information gained from manufacture, from poison centres or epidemiology surveys, are available special consideration shall be given to those data when carrying out the risk assessment.
30. An exposure assessment shall be carried out for each of the human populations (professionals, non-professionals and humans exposed indirectly via the environment) for which exposure to a biocidal product occurs or can reasonably be foreseen. The objective of the assessment shall be to make a quantitative or qualitative estimate of the dose/concentration of each active substance or substance of concern to which a population is or may be exposed during use of the biocidal product.
31. The exposure assessment shall be based on the information in the technical dossier provided in conformity with Article 7 of the Directive and on any other available and relevant information. Particular account shall be taken, as appropriate, of:
  - adequately measured exposure data,
  - the form in which the product is marketed,
  - the type of biocidal product,
  - the application method and application rate,
  - the physico-chemical properties of the product,
  - the likely routes of exposure and potential for absorption,
  - the frequency and duration of exposure,
  - the type and size of specific exposed populations where such information is available.

32. Where adequately measured, representative exposure data are available, special consideration shall be given to them when conducting the exposure assessment. Where calculation methods are used for the estimation of exposure levels, adequate models shall be applied. These models shall:

- make a best possible estimation of all relevant processes taking into account realistic parameters and assumptions,
- be submitted to an analysis taking into account possible elements of uncertainty,
- be reliably validated with measurements carried out under circumstances relevant for the use of the model,
- be relevant to the conditions in the area of use.

Relevant monitoring data from substances with analogous use and exposure patterns or analogous properties shall also be considered.

33. Where, for any of the effects set out in 20 a NOAEL or LOAEL had been identified, the risk characterization shall entail comparison of the NOAEL or LOAEL with the evaluation of the dose/concentration to which the population will be exposed. Where a NOAEL or LOAEL has not been established a qualitative comparison shall be made.

#### *Effects on animals*

34. Using the same relevant principles as described in the section 'Effects on Humans', the Member State shall consider the risks posed to animals from the biocidal product.

35. Data shall be submitted to and evaluated by the Member State to assess whether the biocidal product is humane in its effect on target vertebrates. This shall include an evaluation of the mechanism by which the effect is obtained and the observed effects on the behaviour and health of the target vertebrates; where the intended effect is to kill the target vertebrate the time necessary to obtain the death of the target vertebrate and the conditions under which death occurs shall be evaluated.

#### *Effects on the environment*

36. The risk assessment shall take account of any adverse effects arising in any of the 3 environmental compartments — air, soil and water (including sediment), following the use of the biocidal product.

37. The hazard identification shall address the properties and potential adverse effects of the active substance and any substances of concern present in the biocidal product. If this results in the biocidal product being classified according to the requirements of the Directive then (concentration) — response (effect) assessment, exposure assessment and risk characterization shall be required.

38. In those cases where the test appropriate to hazard identification in relation to a particular potential effect of an active substance or a substance of concern present in a biocidal product has been conducted but the results have not led to classification of the biocidal product then risk characterization in relation to that effect shall not be necessary unless there are other reasonable grounds for concern. Such grounds may derive from the properties and effects of any active substance or substance of concern in the biocidal product, in particular:

- any indications of bioaccumulation potential,
- the persistence characteristics,
- the shape of the toxicity/time curve in ecotoxicity testing,
- indications of other adverse effects on the basis of toxicity studies (e.g. classification as a mutagen),
- data on structurally analogous substances.

39. A dose (concentration) — response (effect) assessment shall be carried out in order to predict the concentration below which adverse effects in the environmental compartment of concern are not expected to occur. This shall be carried out for the active substance and for any substance of concern present in the biocidal product. This concentration is known as the predicted no-effect concentration (PNEC). However, in some cases, it may not be possible to establish a PNEC and qualitative estimation of the dose (concentration) — response (effect) then has to be made.

40. The PNEC shall be determined from the data on effects on organisms and ecotoxicity studies submitted in accordance with the requirements of Article 7 of the Directive. It shall be calculated by applying an assessment factor to the values resulting from tests on organisms, e.g. LD<sub>50</sub> (median lethal dose), LC<sub>50</sub> (median lethal concentration), EC<sub>50</sub> (median effective concentration), IC<sub>50</sub> (concentration causing 50 % inhibition of a given parameter, e.g. growth), NOEL(C) (no-observed-effect level (concentration)), or LOEL(C) (lowest-observed-effect level (concentration)).
41. An assessment factor is an expression of the degree of uncertainty in extrapolation from test data on a limited number of species to the real environment. Therefore, in general, the more extensive the data and the longer the duration of the tests, the smaller is the degree of uncertainty and the size of the assessment factor.
42. For each environmental compartment an exposure assessment shall be carried out in order to predict the concentration likely to be found of each active substance or substance of concern present in the biocidal product. This concentration is known as the predicted environmental concentration (PEC). However in some cases it may not be possible to establish a PEC and a qualitative estimate of exposure then has to be made.
43. A PEC, or where necessary a qualitative estimate of exposure, need only be determined for the environmental compartments to which emissions, discharges, disposal or distributions are known or are reasonably foreseeable.
44. The PEC, or qualitative estimation of exposure, shall be determined taking account of, in particular, and if appropriate:
- adequately measured exposure data,
  - the form in which the product is marketed,
  - the type of biocidal product,
  - the application method and application rate,
  - the physico-chemical properties,
  - breakdown/transformation products,
  - likely pathways to environmental compartments and potential for adsorption/desorption and degradation,
  - the frequency and duration of exposure.
45. Where adequately measured, representative exposure data are available, special consideration shall be given to them when conducting the exposure assessment. Where calculation methods are used for the estimation of exposure levels, adequate models shall be applied. The characteristics of these models shall be as listed in paragraph 32. Where appropriate, on a case by case basis, relevant monitoring data from substances with analogous use and exposure patterns or analogous properties shall also be considered.
46. For any given environmental compartment, the risk characterization shall, as far as possible, entail comparison of the PEC with the PNEC so that a PEC/PNEC ratio may be derived.
47. If it has not been possible to derive a PEC/PNEC ratio, the risk characterization shall entail a qualitative evaluation of the likelihood that an effect is occurring under the current conditions of exposure or will occur under the expected conditions of exposure.

#### *Unacceptable effects*

48. The Member State shall, where relevant, evaluate the possibility of the development of resistance to an active substance in the biocidal product by the target organism.
49. If there are indications that any other unacceptable effects may occur the Member State shall evaluate the possibility of such effects occurring. An example of such an unacceptable effect would be an adverse reaction to fastenings and fittings used in wood following the application of a wood preservative.

#### *Efficacy*

50. Data shall be submitted and evaluated to ascertain if the efficacy claims of the biocidal product can be substantiated. Data submitted by the applicant or held by the Member State must be able to demonstrate the efficacy of the biocidal product against the target organisms when used normally in accordance with the conditions of authorization.



51. Testing should be carried out according to European Union guidelines if these are available and applicable. In the absence of these other methods can be used as shown in the list below which is in order of descending preference:
- ISO, CEN or other international standard,
  - national standard,
  - industry standard (accepted by Member State),
  - individual producer standard (accepted by Member State),
  - data from the actual development of the biocidal product.

#### *Summary*

52. In each of the areas where risk assessments have been carried out, i.e. effects on man, animals, and the environment, the Member State shall combine the results for the active substance together with the results for any substance of concern to produce an overall assessment for the biocidal product itself. This should take account of any likely synergistic effects of the active substance(s) and substances of concern in the biocidal product.
53. For biocidal products containing more than one active substance any adverse effects shall also be combined to produce an overall effect for the biocidal product itself.

### **Decision making**

#### *General Principles*

54. The Member State shall come to a decision regarding the authorization for use of a biocidal product as a result of the integration of the risks arising from each active substance together with the risks from each substance of concern present in the biocidal product. The risk assessments shall cover normal use of the biocidal product together with a realistic worst case scenario.
55. In making a decision concerning authorization the Member State shall arrive at one of the following conclusions for each product type and for each area of use of the biocidal product for which application has been made:
1. the biocidal product cannot be authorized;
  2. the biocidal product can be authorized subject to specific conditions/restrictions;
  3. more data is required before a decision on authorization can be made.
56. If the conclusion arrived at by the Member State is that additional information or data are required before an authorization decision can be made then the need for any such information or data shall be justified. This additional information or data shall be the minimum necessary to carry out a further appropriate risk assessment.
57. The Member State shall comply with the principles of mutual recognition as detailed in Article 3 of the Directive.
58. The Member State shall recognize the concept of 'frame formulations' when making an authorization decision on a biocidal product.
59. The Member State shall only grant authorization to those biocidal products which, when used according to their conditions of authorization, do not present an unacceptable risk to humans, animals or the environment, are efficacious and which contain active substances permitted at Community level to be used in such biocidal products.
- In the case of active substances not on the market on the implementation date of the Directive only those substances listed in Annex I of the Directive can be used in biocidal products.
60. The Member State shall impose, where appropriate, conditions or restrictions when giving authorizations. The nature and severity of these shall be selected on the basis of, and be appropriate to, the nature and extent of the expected advantages and the risks likely to arise from the use of the biocidal product.

61. In the decision making process the Member State shall take into consideration the following:
  - the results of the risk assessment, in particular the relationship between exposure and effect,
  - the nature and severity of the effect,
  - the risk management which can be applied,
  - the field of use of the biocidal product,
  - the efficacy of the biocidal product,
  - the physical properties of the biocidal product,
  - the benefits of using the biocidal product.
62. The Member State shall, when taking a decision concerning the authorization of a biocidal product, take into account the uncertainty arising from the variability in the data used in the evaluation and decision making process.
63. The Member State shall prescribe that biocidal products shall be used properly. Proper use shall include application at an efficacious dose and minimization of use of biocidal products where possible.
64. Before issuing an authorization the Member State shall ensure that the label, together with the relevant safety data sheet, of the biocidal product:
  - fulfils the requirements of Articles 18 and 19 of the Directive,
  - contains the information on the protection of users required by Community legislation on worker protection,
  - specifies in particular the conditions or restrictions under which the biocidal product may or may not be used.
65. The Member State shall ensure that the proposed packaging and, where appropriate, the proposed procedures for destruction or decontamination of the biocidal product and its packaging are in accordance with the relevant regulatory provisions.

#### *Effects on humans*

66. The Member State shall not authorize a biocidal product if the risk assessment confirms that, in normal use, the product presents an unacceptable risk to humans.
67. The Member State shall consider possible effects on all human populations, namely professionals, non-professionals and humans exposed directly or indirectly through the environment when making a decision on the authorization of a biocidal product.
68. The Member State shall examine the relationship between the exposure and the effect and use this in the decision making process. A number of factors need to be considered when examining this relationship and one of the most important is the nature of the adverse effect of the substance. These effects include acute toxicity, irritancy, corrosivity, sensitization, repeated dose toxicity, mutagenicity, carcinogenicity and reproduction toxicity together with physico-chemical properties.
69. The Member State shall, where possible, compare the results obtained with those obtained from previous risk assessments for an identical or similar adverse effect and decide upon an appropriate margin of safety when making an authorization decision.
70. The Member State shall only as a last resort impose, as a condition of authorization, the wearing of personal protective equipment such as respirators, overalls, gloves and goggles in order to reduce exposure for professional operators. Such equipment must be readily available to them.
71. The Member State shall only as a last resort impose, as a condition of authorization, the wearing of personal protective equipment as an acceptable method for reducing exposure for non-professional users. Such personal protective equipment must be readily available to non-professional users and would normally be limited to items such as coveralls, gloves, boots, safety glasses and goggles.
72. If the relationship between the exposure and the effect cannot be reduced to an acceptable level then no authorization can be given by the Member State for the biocidal product.

73. No biocidal product classified according to Article 18 (1) of the Directive as very toxic or as a category 1 or 2 carcinogen or mutagen or classified as toxic for reproduction category 1 or 2, shall be authorized for use by the general public.

*Effects on animals*

74. The Member State shall not authorize a biocidal product if the risk assessment confirms that, in normal use, the biocidal product presents an unacceptable risk to animals.
75. Using the same relevant criteria as described in the section 'Effects on Humans', the Member State shall consider the risks posed to animals from the biocidal product when making an authorization decision.
76. An authorization for a biocidal product intended to eliminate vertebrates shall only be given when:
- death is synchronous with the extinction of consciousness, or
  - death occurs immediately, or
  - vital functions are reduced gradually without signs of obvious suffering.

For repellent products, the intended effect shall be obtained without unnecessary suffering and pain for the target vertebrate.

*Effects on the environment*

77. The Member State shall not authorize a biocidal product if the risk assessment confirms that the active substance or any substance of concern or any degradation or reaction product presents an unacceptable risk in any of the environmental compartments water (including sediment), soil and air. This shall include the assessment of risks to non-target organisms in these compartments.
78. The basic tool used in the decision making is the PEC/PNEC ratio or, if this is not available, a qualitative estimation. Due consideration shall be given to the accuracy of this ratio due to variability in the data used both in measurements of concentration and of estimation.
79. For any given environmental compartment if the PEC/PNEC ratio is equal to or less than one the risk characterization shall be that no further information and/or testing are necessary. If the ratio is greater than one the Member State shall judge, on the basis of the size of that ratio and on other relevant factors, if further information and/or testing are required to clarify the concern or if risk reduction measures are necessary or if the product cannot be given an authorization at all. Relevant factors to be considered are those previously mentioned in Section 38.

*Water*

80. The Member State shall not authorize a biocidal product if, under the proposed conditions of use, the foreseeable concentration of the active substance or of any other substance of concern or of relevant metabolites or breakdown or reaction products in groundwater exceeds the lower of the following concentrations:
- (a) the maximum permissible concentration laid down by Directive 80/778/EEC of 15 July 1980 relating to the quality of water intended for human consumption; or
  - (b) the maximum concentration laid down by the Commission when including the active substance in Annex I, on the basis of appropriate data, in particular toxicological data.
81. No authorization shall be granted if the concentration of the active ingredient or a substance of concern or of relevant metabolites, breakdown or reaction products to be expected after use of the biocidal product under the proposed conditions of use in surface water:
- exceeds, where the surface water in or from the area of envisaged use is intended for the abstraction of drinking water, the values fixed by Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States (OJ No L 194, 25. 7. 1975, p. 34), or
  - has an impact deemed unacceptable on non-target species.
82. The proposed instructions for use of the biocidal product, including procedures for cleaning application equipment, must be such that the likelihood of accidental contamination of water is minimized.

#### Soil

83. Where contamination of soil is likely to occur, the Member State shall not authorize a biocidal product if the active substance or substance of concern contained in it, after use of the biocidal product under the proposed conditions of use:
- during tests in the field, persist in soil for more than one year, or
  - during laboratory tests, form non-extractable residues in amounts exceeding 70 % of the initial dose after 100 days, with a mineralization rate of less than 5 % in 100 days,
- unless it is scientifically demonstrated that under field conditions there is no unacceptable accumulation in soil.

#### Air

84. The Member State shall not authorize a biocidal product where there is a foreseeable possibility of unacceptable effects on the air compartment, e.g. ozone depletion or contribution to the greenhouse warming potential.

#### Effects on non-target organisms

85. The Member State shall not authorize a biocidal product where there is a reasonably foreseeable possibility of non-target terrestrial vertebrates and/or invertebrates being exposed to the biocidal product if for any active substance or substance of concern:
- the PEC/PNEC is above 1 unless it is clearly established in the risk assessment that under field conditions no unacceptable effects occur after use of the biocidal product according to the proposed conditions of use;
  - the bioconcentration factor (BCF) related to fat tissues in non-target vertebrates is above 1 unless it is clearly established in the risk assessment that under field conditions no unacceptable effects occur, either directly or indirectly, after use of the product according to the proposed conditions of use.
86. The Member State shall not authorize a biocidal product where there is a reasonably foreseeable possibility of aquatic organisms being exposed to the biocidal product if for any active substance or substance of concern in it:
- the PEC/PNEC > 1 unless it is clearly established in the risk assessment that under field conditions the viability of aquatic organisms is not threatened by the biocidal product according to the proposed conditions of use,
  - the bioconcentration factor (BCF) is greater than 1 000 for substances which are readily biodegradable or greater than 100 for those which are not readily biodegradable unless it is clearly established in the risk assessment that under field conditions no unacceptable impact, either directly or indirectly, occurs on the viability of exposed organisms after use of the biocidal product according to the proposed conditions of use.

#### *Unacceptable effects*

87. If the development of resistance to the active substance in the biocidal product is likely the Member State shall take steps to minimize the consequences of this resistance. This may involve modification of the conditions of authorization or even refusal of any authorization.

#### *Efficacy*

88. The Member State shall not authorize a biocidal product which is not efficacious when used in accordance with the conditions of authorization.
89. The level, consistency and duration of control or protection or other intended effects must be similar to those resulting from the use of suitable reference products. If no suitable reference product exists, the biocidal product must be shown to give a defined benefit in terms of the level, consistency and duration of control or protection or other intended effects during normal use.

*Summary*

90. In each of the areas where risk assessments have been carried out, i.e. effects on humans, animals, and the environment, the Member State shall combine the conclusions arrived at for the active substance and the substances of concern to produce an overall conclusion for the biocidal product itself.

**Overall integration of conclusions**

91. The Member State shall combine the individual conclusions arrived at with regard to effects of the biocidal product on the three sectors namely, humans, animals and the environment to arrive at a overall conclusion for the global effect of the biocidal product.
92. The Member State shall then take due consideration of any relevant unacceptable effects, the efficacy of the biocidal product and the benefits of using the biocidal product before taking an authorization decision on the biocidal product.
93. The Member State shall ultimately decide whether or not the biocidal product can be authorized and whether this authorization shall be subject to any restrictions or conditions in conformity with this Annex and the Directive.
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