

COMMISSION OF THE EUROPEAN COMMUNITIES

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Brussels, 1 December 1988

Proposal for a
COUNCIL DIRECTIVE

ON BATTERIES AND ACCUMULATORS CONTAINING DANGEROUS SUBSTANCES

(presented by the Commission)

Com 672

EXPLANATORY MEMORANDUM

I. General

1. This proposal for a Directive on batteries and accumulators containing dangerous substances forms part of the Community waste management programme designed to protect the environment and help complete the internal market. The three primary objectives of the proposal are the smooth running of the internal market, the disposal of spent batteries and accumulators without causing pollution and the encouragement of the re-use of the raw materials they contain. A fourth objective is to encourage the production of batteries and accumulators whose dangerous substance content is low, by taking off the market products not in line with technical progress in this respect. Accordingly, the measures taken must reduce the quantities of dangerous substances in waste, ensure more efficient use of resources and promote controlled disposal of batteries and accumulators classified as dangerous wastes. This proposal was announced in the Fourth Community Action Programme on the Environment¹ and follows up a Danish proposal brought to the Commission's notice following the procedure laid down in Directive 83/189/EEC.²

2. Parliament's Committee on the Environment has already discussed this question and has recognized the necessity to take measures at Community level. Steps are being taken in a number of Member States, often in the form of voluntary collection agreements, as in Belgium and the Netherlands. Article 14 of the German law on waste lays down general provisions, to be followed by specific implementing measures. Outside the Community, Switzerland and Sweden have adopted wider ranging measures than those proposed by the Commission in Annex I of its proposal covering batteries and accumulators with a mercury content of over 0.025%. However, the Commission feels that it is preferable to limit the scope in order to make recycling more economically attractive. In return, to avoid incineration of batteries not covered by the proposal releasing dangerous emissions into the air, the Commission has also proposed a Directive setting limits for mercury emissions for municipal waste incineration plants (2bis).

(1) OJ N° C 70, 18.3.1987 (paragraph 5.3.6.)
(2) OJ N° L 109, 26.4.1983
(2bis) OJ N° C 75, 23.3.1988

In addition, the Commission considers that scientific and technical progress following the adaptation phases provided for in the proposal should result in prohibiting the marketing of certain types of batteries.

3. This proposal lays down specific additional rules, as provided for in Article 2(2) of Council Directive 75/442/EEC on waste (3) ("the basic Directive") once it has been amended by the proposal for a Council Directive(4). Consequently, the rules laid down in the basic Directive will continue to apply to all batteries and accumulators other than those specifically excluded by this proposal.

II. Legal basis of the proposal

4. As mentioned above, a number of Member States are preparing measures to control the elimination of batteries and accumulators. The objectives of these measures correspond to those set out in Article 3. The realisation of these objectives would lead Member States to take certain measures that - if taken unilaterally - might produce unfavourable effects for the free circulation of batteries and accumulators and thus for the internal market.

To avoid such a situation, it is deemed necessary to harmonize these measures, at the same time assuring the optimal protection of the environment. To this end it has been decided that Article 100A of the Treaty should be used. This harmonization is necessary in order to ensure a high level of protection for the environment. It is achieved mainly through Article 4 which standardizes the marking and measures concerning appliances containing batteries and accumulators as well as the type of batteries and accumulators covered by such measures. Article 7 also aims at achieving standardization as it calls for the marketing of certain batteries to be prohibited in the light of scientific and technical progress.

³OJ No L 194, 25.7.1975.
⁴OJ No C

III. Environmental impact of uncontrolled disposal of batteries and accumulators

5. It is generally acknowledged that unless special precautions are taken disposal of batteries and accumulators containing mercury, cadmium and lead is a potential hazard to human health and the environment. For this reason mercury, cadmium and their compounds are on the "black list" ("List I of families and groups of substances") in the Annex to Council Directives 76/464/EEC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community⁵ and 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances.⁶ The first specific Directives

⁵OJ No L 129, 18.5.1976.

⁶OJ No L 20, 26.1.1980.

adopted to follow up Directive 76/464 set limit values and quality objectives for mercury⁷ and cadmium.⁸

In turn, Article 4 of Directive 80/68 virtually categorically bans all direct or indirect discharges on black-listed substances into groundwater.

Lead is on the "grey list" ("List II of families and groups of substances") in the Annex to Directives 76/464/EEC and 80/68/EEC. The Member States are therefore required to adopt programmes including, in particular, quality objectives to reduce lead pollution in surface water (Article 7 of Directive 76/464) and conduct a prior investigation on all plans to discharge lead directly or indirectly into groundwater (Article 5 of Directive 80/68).

Mercury and cadmium are also on the black lists, and lead on the grey lists, in a series of worldwide agreements (e.g. the London Convention of 29 December 1972) and regional conventions (e.g. the Oslo Convention of 15 February 1972, the Paris Convention of 4 June 1974 and the Agreement of 3 December 1976 for the protection of the Rhine against chemical pollution), all designed to protect the sea and other surface water against pollution. The dangers posed by these substances are acknowledged all over the world.

6. On 21 April 1987 the Commission sent the Council an action programme on environmental pollution by cadmium⁹ containing an overview of the environmental impact and sources of this form of pollution followed by a strategy for controlling cadmium in products on the market or in waste. One measure proposed in the programme was for the Community to provide incentives for recycling products containing cadmium, in particular batteries. On 3 December 1987 the Council showed its approval for this

⁷ Directives 82/176/EEC, OJ No L 81, 27.3.1982 and 84/156/EEC, OJ No L 74, 17.3.1984.

⁸ Directive 83/513/EEC, OJ No L 291, 24.10.1983.

⁹ OJ No C

programme by adopting a resolution¹⁰ calling, inter alia, for the collection and recycling of products containing cadmium, for example batteries, as one of the main components of the cadmium control strategy.

7. Batteries and accumulators power appliances in a wide range of applications, each requiring units built to very different specifications. To satisfy these demands, the industry markets batteries and accumulators of all sizes and capacities. This variety is provided primarily by non-rechargeable mercury batteries or rechargeable cadmium accumulators. However, only certain categories of non-rechargeable batteries can be replaced by rechargeable ones. And since even rechargeable batteries have a service life of only a few years at most, the mercury would simply be replaced by cadmium, an equally potent pollutant.

8. Only a small proportion of the mercury and cadmium in the environment is attributable to uncontrolled dumping of batteries and accumulators. Although around 50% of the mercury in household refuse stems from batteries and accumulators, human activity generates no more than 8 000 or 9 000 tonnes of mercury a year, while natural phenomena such as volcanic eruptions and gaseous emissions through the earth's crust pour between 25 000 and 150 000 tonnes of mercury into the air each year. In 1983/84 the ten-member Community produced around 250 tonnes of mercury a year for battery and accumulator production.

As for cadmium, an estimated 20% of the cadmium in household refuse stems from accumulators. It is practically impossible to say exactly how much cadmium can be traced back to accumulators, however, since the units discarded are produced both inside and outside the EEC and many of them built into appliances.

¹⁰ OJ No C

An estimated 1 000 to 1 200 tonnes of the 6 000 or so tonnes of cadmium consumed in 1984 was used to make Ni/Cd accumulators. Against this, an estimated 500 000 tonnes or more of lead was sold in batteries in the Community in 1985, almost 80% of them car batteries. A study ordered by the Commission clearly demonstrated that the recycling rate for lead batteries varies considerably, depending on lead prices.

In view of this imponderable, the Commission feels that, despite the high average recycling rate (almost 80%), measures must be taken to improve and, above all, maintain this rate, particularly since almost 100 000 tonnes a year remains to be recycled.

Although overall batteries and accumulators bear the blame for only a small share of heavy metal pollution, in some places they can be a major contributor.

In any case, individual measures to deal with each source is the only way to bring about a reduction both locally and overall. For this reason, the Commission feels that it is time to take action to reduce the incidence of batteries and accumulators in household refuse, to promote the recycling of batteries and accumulators and to ensure that non-recycled batteries are disposed of in an acceptable manner.

IV. Measures proposed

9. The proposal calls on the Member States to set objectives to protect the environment against the hazards posed by batteries and accumulators, to draw up programmes and to inform the Commission of the programmes adopted, the measures taken and the means employed.

10. In principle, it is left to the Member States to choose the means employed. Consequently, this proposal lays down the general framework within which the Member States must act, rather than specific detailed rules.

The Commission, assisted by the Waste Management Committee, will assess the progress made and the need for any further Community measures, based on the information and statistics submitted by the Member States.

11. Nevertheless the proposal still calls on the Member States to take a number of specific measures, including:

- (i) marking the batteries and accumulators in question;
- (ii) organizing their disposal;
- (iii) banning makers from building batteries and accumulators into appliances so that they cannot be readily removed;
- (iv) drawing up disposal and recycling programmes which must:
 - (a) promote treatment processes allowing greater recycling;
 - (b) provide for selective collection of spent batteries and accumulators;
 - (c) make arrangements for separate disposal of spent batteries and accumulators;
 - (d) prohibit the marketing of certain types of battery after the adaptation phases.

12. Harmonized markings for batteries and accumulators are needed not only to keep consumers and the authorities informed but also for the internal market. Member States will not be allowed to hinder the free movement of batteries or accumulators bearing the markings laid down in the Directive.

13. Selective collection of certain types of batteries and accumulators will provide a steady enough supply to make recycling profitable, allowing for fluctuations in the market price of the raw materials and for technical progress.

Selective collection requires cooperation from consumers. Consequently, it is essential to create the right conditions for them to participate. An optional deposit system would encourage selective collection.

14. In addition, the proposal places an obligation on the Member States to promote methods of treating spent batteries and accumulators, to dispose of them separately so that the heavy metals can be cycled and to keep track of them until the end.

15. Article 6 specifies that the "polluter pays" principle is to apply only to the producer of the batteries or accumulators or, where appropriate, to the importer into the Community. This rule is designed to avoid shifting the burden onto the seller or consumer.

15a. The marketing of batteries containing more than 0.30% of mercury should be banned by the Member States, as required by Article 7, in the light of scientific and technical progress.

16. Since any measures taken by the Member States could affect the functioning of the internal market, the "Agreement of the representatives of the governments of the Member States meeting in Council of 5 March 1973 on information for the Commission and Member States with a view to possible harmonization throughout the Communities of urgent measures concerning the protection of the environment"¹¹ must be applied in every case so that Community measures can be taken wherever appropriate.

17. Under no circumstances may the measures taken by the Member States conflict with the rules laid down in the Treaty, particularly on the free movement of goods. Consequently, the proposal generally bans the Member States from impeding, prohibiting or restricting the marketing of batteries and accumulators satisfying the requirements of the Directive on the grounds of their markings of their content of the substances mentioned in Annex I, with the exception of products covered by Article 7.

18. The measures provided for in the proposal fit in perfectly with the objectives of the action taken by the Community on the environment:

- (i) to preserve, protect and improve the quality of the environment;
- (ii) to contribute towards protecting human health;
- (iii) to ensure a prudent and rational utilization of natural resources.

¹¹ OJ No C 9, 15.3.1973, p.1.

V. Consultations

19. Technical meetings were held with the national experts on this subject and the Waste Management Committee when drafting this proposal. Parallel consultations were held with the industry.

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on batteries and accumulators containing dangerous substances

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

In cooperation with the European Parliament,

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

Whereas the general rules on waste disposal laid down by Council Directive
75/442/EEC¹ apply to spent batteries and accumulators;

Whereas one Member State has notified the Commission that it intends to adopt
binding measures on the marking and disposal of batteries and accumulators
containing dangerous substances and others are considering the subject;
whereas any disparity between the laws or administrative measures adopted by
the Member States could create barriers to trade and distort competition in
the Community and can thereby have a direct impact on the establishment and
functioning of the internal market; whereas it therefore appears necessary
to proceed with approximation of the laws in this field;

¹OJ No L 194, 25.7.1975, p.47

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Whereas the objectives and principles of the Community's environment policy, as set out in the European Community Action Programmes on the Environment,² aim, in particular, at preventing, reducing and as far as possible eliminating pollution and ensuring sound management of raw material resources;

Whereas in order to achieve these objectives Member States must take measures on, inter alia, the marking of batteries and accumulators in line with the rules laid down in this Directive; whereas when drafting these rules the Commission has taken as a base a high level of protection for the environment;

Whereas a high level of protection for the environment should be achieved, in the light of scientific and technical progress, by prohibiting the marketing of batteries containing more than 0,30% of mercury by weight;

Whereas a large proportion of spent batteries and accumulators containing mercury, cadmium or lead are thrown away without any particular precautions and end up either on public landfills or in an incinerator; whereas these heavy metals are key components in batteries and accumulators but are toxic and, consequently, dangerous;

Whereas collection and recycling of spent batteries and accumulators can help save raw materials;

² OJ No C 112, 20.12.1973, p.1
OJ No C 139, 13.6.1977, p.1
OJ NO C 46, 17.2.1983, p.1
OJ No C 70, 18.3.1987, p.3

Whereas the Commission must be notified of the drafts of these measures so that it can examine them and, if necessary, request the Member States to defer their introduction;

Whereas in view of the various aspects of the problem posed by batteries and accumulators adequate measures should be taken to reduce the pollution hazard,

HAS ADOPTED THIS DIRECTIVE:

Article 1

The objective of this Directive is to approximate the laws of the Member States on the controlled disposal of batteries and accumulators containing the dangerous substances listed in the Annex.

Article 2

For the purposes of this Directive:

- (a) "Battery or accumulator" means a source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary (non-rechargeable) or secondary (rechargeable) cells, as listed in the Annex;
- (b) "Spent battery and accumulator" means a battery or accumulator which is not reusable or intended for disposal;
- (c) "Disposal" means the collection, sorting and carriage of spent batteries and accumulators and their storage above or under ground and any conversion operations necessary for recycling;

- (d) "Recycling" means processing to recover the secondary raw materials contained in spent batteries and accumulators;
- (e) "Deposit system" means a system under which the buyer pays the seller a sum of money which is refunded when the spent battery or accumulator is returned.

Article 3

Member States shall prohibit the marketing of alkaline manganese batteries containing more than 0,30 % of mercury by weight as from 1 January 1993.

Article 4

The Member States shall take appropriate measures to ensure that batteries and accumulators are marked to indicate whether the battery or accumulator must be disposed of separately, can be recycled or may be disposed of with household refuse.

This marking must appear on the battery or accumulator and, where appropriate, on any appliance into which it is built.

The marking shall correspond to symbol ISO 7000-1135, consisting of a light-coloured square containing three black-outlined arrows. Each battery and accumulator must contain two symbols, on opposite sides thus ensuring immediate visibility.

The size of each symbol should be 3 % of the total area, with a maximum dimension of 5 cm by 5 cm; if a battery is so small that 3 % of the total area is smaller than 0,5 cm by 0,5 cm, one symbol of 1 cm by 1 cm shall be displayed on the package instead of the two symbols on the battery.

Article 5

Member States shall take measures to ensure that batteries and accumulators may be built into appliances only if they can be readily removed by the consumer without the aid of special tools.

Article 6

In order to protect the environment against the hazards posed by batteries and accumulators, action taken by the Member States in the field covered by this Directive shall pursue the following objectives:

- reduction of the heavy-metal content in batteries and accumulators;
- promotion of marketing of batteries and accumulators with a smaller dangerous-substance content;
- reduction of the incidence of spent batteries and accumulators in wastes disposed of at household waste-disposal plants;
- promotion of research aimed at reducing the dangerous-substance content in batteries and accumulators and at the recycling thereof;
- separate disposal of spent batteries and accumulators.

Article 7

Member States shall ensure the efficient organization of disposal, including the setting-up of a deposit system, where appropriate.

Article 8

Member States shall ensure that consumers are informed about:

- (a) the danger of uncontrolled disposal of spent batteries and accumulators;
- (b) the marking of batteries, accumulators and appliances with built-in batteries and accumulators;
- (c) the choice of types of battery and accumulator available;
- (d) the method of removing batteries and accumulators which are built into appliances;
- (e) where appropriate, the reasons for charging a deposit and the amount charged.

Article 9

Member States shall draw up disposal and recycling programmes in order to achieve the objectives laid down in Article 6.

The first programmes shall cover a four-year period starting on 1 January 1990. They shall be submitted to the Commission by 1 July 1989 at the latest.

The programmes shall be reviewed and updated regularly, at least every four years, in the light, in particular, of technical progress and of the economic situation. The revised programmes shall also be submitted to the Commission in good time.

The programmes shall contain at least measures for:

- promotion of treatment processes allowing greater recycling;
- separate collection of spent batteries and accumulators;
- separate disposal of spent batteries and accumulators.

Article 10

By way of derogation from Article 11 of Directive 75/442/EEC, Member States shall take measures to ensure that the cost of disposing of batteries and accumulators, less any proceeds from recycling, shall be borne by the importer into the Community of the batteries and accumulators or by the manufacturer.

Article 11

Member States shall not impede, prohibit or restrict the marketing of batteries and accumulators covered by this Directive and conforming to the provisions laid down therein, with the exception of batteries covered by Article 3.

Article 12

The Commission shall adapt Article 4 and the Annex to this Directive to technical progress in accordance with the procedure set out in Article 12c of Directive 75/442/EEC.

Article 13

1. Member States shall take the measures necessary to comply with this Directive by 1 July 1989. They shall inform the Commission thereof forthwith.

2. Member States shall communicate to the Commission the texts of the national laws and regulations which they adopt in the field covered by this Directive. The Commission shall inform the other Member States thereof.

Article 14

This Directive is addressed to the Member States.

Done at

For the Council

ANNEX

Batteries and accumulators

This Directive applies to:

1. all batteries and accumulators put on the market after this Directive enters into force and containing more than 25 mg of mercury per cell, except manganese batteries;
2. alkaline manganese batteries containing:
 - from 1 July 1989, more than 0.30% mercury by weight,
 - from 1 January 1991, more than 0.15% mercury by weight,
 - from 1 January 1993, more than 0.10% mercury by weight.
3. from 1 July 1989, batteries and accumulators containing more than 0.025% cadmium by weight;
4. batteries and accumulators containing more than 0.4% of lead.