

Manual of European Environmental Policy

The following pages are a section from the Manual of European Environmental Policy written by the Institute for European Environmental Policy.

The Manual was published by Earthscan/Routledge from 2010 to 2012. It was designed as an on-line interactive reference work and annual printed versions were also produced.

This section is the text of the Manual as published in 2012. It is therefore important to note the following:

- The contents have not been updated since 2012 and no guarantee is given of the accuracy of the contents given potential subsequent developments.
- The sections include links to external websites (e.g. to legal texts). These links continue to work as long as those links are not broken by those websites.
- The sections also include the original links that enabled interactivity within the published on-line version of the Manual. These links no longer work.

© Copyright IEEP 2014

The Manual should be cited as follows:

Farmer, A.M. (2012) (Editor). Manual of European Environmental Policy. 1043pp. Routledge, London.

Detergents

Between 1973 and 2004 detergents in the EU were regulated through a series of Directives. In 2004 these were replaced by a Regulation (subsequently amended).	
Formal references	
73/404/EEC (OJ L347 17.12.73)	Directive on detergents
16.6.71 – COM(71)655	
73/405/EEC (OJ L347 17.12.73)	Directive relating to methods of testing the biodegradability of anionic surfactants
Proposed 16.6.71 – COM(71)655	
82/242/EEC (OJ) L109 22.04.82)	Directive relating to methods of testing the biodegradability of non-ionic surfactants and amending Directive 73/404/EEC
Proposed 8.2.80 – COM(80)40	
82/243/EEC (OJ L109 22.04.82)	Directive amending Directive 73/405/EEC relating to the methods of testing the biodegradability of anionic surfactants
Proposed 24.3.81 – COM(81)128	
86/94/EEC (OJ L80 25.03.86)	Directive amending for the second time Directive 73/404/EEC on detergents
Proposed 22.5.85 – COM(85)217	
Legal base	Article 115 TFEU (originally article 100 EEC Treaty)
Regulation (EC) No 648/2004 (OJ L104 08.04.04)	Regulation on detergents
Proposed 4.9.02 – COM(2002)485	
Amended by COM(2003)306	
Regulation (EC) No 907/2006 (OJ L168 21.6.2006)	Regulation amending Annexes III and VII of Regulation (EC) No 648/2004
Regulation (EC) No 551/2009 (OJ L164 26.6.2009)	Regulation amending Annexes V and VI of Regulation (EC) No 648/2004
Regulation (EU) No 259/2012 (OJ 94, 30.3.2012)	Regulation amending Regulation (EC) No 551/2009 as regards the use of phosphates and other phosphorus compounds in consumer laundry detergents and consumer automatic dishwasher detergents
Binding dates	
Entry into force	8 October 2005
Review of the application of the Regulation	By 8 April 2009

Directives 73/404/EEC, 73/405/EEC, 82/242/EEC, 82/243/EEC and 86/94/EEC

Purpose of the Directives

In the 1950s widespread foaming of rivers resulted from the growing domestic use of ‘hard’ detergents, which are difficult to break down by sewage treatment. This foam is unpleasant to look at, impairs photosynthesis and oxygenation of water and interferes with the sewage treatment process. ‘Soft’ or more biodegradable detergents were subsequently developed, and one purpose of the Directives was to prevent the sale of ‘hard’ detergents. The other purpose was to ensure free trade in detergents within the Community.

Summary of the Directives

Directive 73/404/EEC could effectively have been called a Framework Directive covering many types of detergents: anionic, cationic, non-ionic and ampholytic. It prohibited the marketing of any of these detergents where the average level of biodegradability of the surfactants was less than 90 per cent (‘surfactants’ or ‘surface active agents’ are the essential constituents of detergents to which other constituents may be added). The Directive was not concerned with other constituents such as phosphates. Moreover, the use of those surfactants with an average level of biodegradability of not less than 90 per cent could not be harmful to human or animal health. However, the Directive by itself was largely unenforceable since it specified no methods by which testing was to be carried out. Testing methods for anionic and non-ionic surfactants were outlined in subsequent daughter Directive 73/405/EEC, amended by Directive 82/243/EEC and Directive 82/242/EEC. Daughter Directives in relation to cationic and ampholytic surfactants were never agreed.

Under the Directive if a Member State decided that an imported detergent did not comply with the requirements of the Directive, it could prohibit the marketing and use of the detergent and had to inform the country of origin and the Commission accordingly. If the exporting country objected and agreement could not be reached, the Commission had to obtain an opinion from an authorized laboratory in another Member State using the reference methods laid down in the daughter Directives.

Directive 73/405/EEC, the first of the daughter Directives, was concerned only with anionic detergents – the kind most commonly used. It originally laid down three methods of testing: a French method, a German method and an OECD method but an amendment made by Directive 82/243/EEC added a British method called the ‘porous pot test’. The biodegradability was found to be no less than 80 per cent, the assumption apparently being that if this level were obtained on every test, then the average level of 90 per cent required by Directive 73/404/EEC would also be obtained. This point was not made clear but compatibility between the two Directives had to be assumed. The UK government pointed out to the Commission the apparent inconsistency between the 90 per cent of Directive 73/404/EEC and the 80 per cent of Directive 73/405/EEC without apparently ever receiving a satisfactory reply.

Directive 82/242/EEC was concerned with non-ionic detergents and laid down four methods of testing: an OECD method, a German method, a French method and a British method. The biodegradability had to be no less than 80 per cent. The Directive also amended Directive 73/404/EEC by establishing a committee for adapting the detergent Directives to technical progress.

Directive 82/243/EEC amended Directive 73/405/EEC by updating the approved testing methods and – as described above – by including the British ‘porous pot test’ as one of the methods. It also amended Directive 73/405/EEC by laying down in an Annex a reference testing method which is to be used during the procedure set out in Directive 73/404/EEC in the event of a dispute between Member States.

Directive 86/94/EEC only deferred the period of exemption for certain detergents.

Regulation (EC) No 648/2004

Purpose of the Regulation

Regulation (EC) No 648/2004 was developed to update provisions in the Directives and to tackle various concerns not addressed previously:

- As highlighted earlier, measures in relation to cationic and amphoteric surfactants – that is those used in fabric softeners and dishwasher products – were never fully addressed by previous measures.
- Since the development of the Directives, the Commission had declared that detergents legislation should be based on ultimate aerobic biodegradability (when the product is totally used by microorganisms in the presence of oxygen resulting in its breakdown to carbon dioxide, water and mineral salts), rather than primary degradation (meaning that structural changes are made to a surfactant by microorganisms resulting in the loss of its surface active properties) – the basis of the Directives. The declaration was a result of concerns that potentially toxic metabolites were persisting in the environment.
- Labelling of the content of detergents had been an issue for many years and in 1989 Recommendation [89/542/EEC](#) outlined provisions for this. However, purely as a Recommendation these measures were not binding and, it was felt, this should be remedied.

Summary of the Regulation

Regulation (EC) No 648/2004 is an internal market measure with its overarching objective being to establish rules that enable free movement of detergents and surfactants for detergents in the EU, while ‘ensuring a high degree of protection of the environment and human health’. Regulation (EC) No 648/2004 harmonizes rules in relation to the biodegradability of surfactants, restrictions and bans on surfactants on the grounds of biodegradability; information manufacturers must hold for use by Member State competent authorities and medical personnel; and labelling for detergents. In the measure detergents are defined as ‘any substance or preparation containing soaps and/or other surfactants intended for washing and cleaning processes’, whereas surfactants are defined as ‘any organic substance and/or

preparation used in detergents, which has surface-active properties and which consists of one or more hydrophilic and one or more hydrophobic groups of such a nature and size that it is capable of reducing surface tension of water, forming spreading or adsorption monolayers at the water/air interface, forming emulsions and/or microemulsions and/or micelles, and of the adsorption at the water/solid interface’.

Biodegradability of surfactants

Annex II of Regulation (EC) No 648/2004 outlines the test method, which should be used to assess for ultimate biodegradability. Surfactants and detergents containing surfactants that pass this test may be placed on the EU market. If a surfactant fails the ultimate degradation test, the level of primary degradation will be measured. If a detergent contains a surfactant that fails the test, manufacturers may apply to the Commission for derogation. The granting of derogation will depend on a number of factors connected to the extent of use of the product in question and also whether or not the detergent passed the primary degradation tests, outlined in Annex II. For tests to be considered reliable they must be completed in accordance with standards set for laboratories set in ISO/IEC 17025, Directive [2004/10/EC](#) and Directive 86/609/EEC.

Information to be provided by the manufacturer

Manufacturers must hold and make available to Member State competent authorities information on the testing of substances demonstrating compliance with Regulation (EC) No 648/2004. They should also make available without delay and free of charge ingredient datasheets to medical personnel.

Labelling

Under Regulation (EC) No 648/2004 information must appear in legible, visible and indelible characters on the packaging of detergents. This includes the name and trade name of the product; name or tradename/trademark, full address and telephone number of, who is responsible for placing the product on the market; details outlining where the manufacturers datasheet can be obtained; detergent ‘ingredients’ (according to guidance outlined in Annex VII of Regulation (EC) No 648/2004); instructions on use, dosage and special precautions if necessary.

Phosphates

There were still concerns as to the levels of phosphate entering the environment as a consequence of detergents. These concerns are not addressed by Regulation (EC) No 648/2004. However, the Regulation required that by 8 April 2007 the Commission shall evaluate, submit a report and, if justified, present a legislative proposal on the use of phosphates with a view to their gradual phase out/restriction. In addition, the Commission shall carry out a review of Regulation (EC) No 648/2004, specifically looking at biodegradability, by 8 April 2009. As a result Regulation (EU) No 259/2012 introduces obligations relating to phosphates in detergents for consumer laundry detergents and consumer automatic dishwasher detergents, limiting the phosphate content to (for standard loads) 0.5 g per cycle for laundry detergents and 0.3 g per dose for dishwasher cycles.

Development of Regulation (EC) No 648/2004

Regulation (EC) No 648/2004 is the culmination of activity in the EU since the adoption of the initial Directives. In 1989 Recommendation 89/542/EEC on labelling was published responding to continued concerns about the contents of detergents and levels of phosphate entering water supplies. Following on from this in 1998 the Commission issued Recommendation [98/480/EC](#) entitled 'concerning good environmental practice for household laundry detergents'. AISE (Association internationale de la savonnerie, de la détergence et des produits d'entretien which represents 90 per cent of the detergents industry on the EC) signed up to a voluntary agreement committing them to ensure compliance with elements of the Recommendation including reducing energy used per wash cycle; reducing per capita consumption of detergents; reducing per capita consumption of primary and secondary packaging; and reducing poor biodegradability. A review of the performance of Recommendation 98/480/EC ([COM\(2002\)287](#)) was annexed to the proposal for Regulation (EC) No 648/2004. This showed that while, by the end of 2000, the objective for poorly biodegradable organic ingredients (PBOs) had been exceeded, levels of detergent consumption and packaging consumption had only dropped by around half that necessary to meet the 2001 target. Further information on Recommendation 98/480/EC is given below.

The initial proposal ([COM\(2002\)485](#)) built on these earlier efforts covering new ground in EU policy by broadening the application of biodegradability testing, extending binding measures to ultimate biodegradability, altering the definitions of detergents and introducing a definition for surfactants. The initial proposal was weaker than the final Regulation, having been substantially amended by the Parliament and the Council. At their first reading MEPs proposed that derogation conditions in relation to biodegradability rules be made stricter and that labelling be according to substance groups in order to enable easy understanding by consumers. Parliament also raised concerns about phosphates and urged the Commission to table new legislation concerning their phase out and restriction, three years after the Regulation took effect. They also called for a proposal on the testing of anaerobic biodegradation.

In response to the Parliament's proposed amendments, the Commission adopted a modified proposal ([COM\(2003\)306](#)). This modified proposal was then taken to the Council, which adopted a Common Position, by qualified majority, with the Portuguese voting against the motion. In addition to accepting various Parliamentary amendments, the Council also adopted its own. These predominantly related to the clarification of text, with amendments to wording being made. The Commission accepted the Common Position, as it largely followed the lines of the amended proposal.

At the second reading of the proposal, Parliament adopted a compromise text which had been previously agreed by the Council and Parliament during earlier negotiations. The only point of contention was the Parliament's insistence that the Commission should present a proposal to ban or restrict phosphates within three years, whereas the Council proposed that this should be done in five years. Discussions concluded with the acceptance of the three-year timescale. Following the Parliament's second reading of the proposal the Council went on to approve the final text without debate.

Implementation of the Regulation

The European Commission has supported the development of guidance at European level to aid in the implementation of Regulation (EC) No 648/2004:

- European Committee of Organic Surfactants and their Intermediates. CESIO Guidance Document on the Application of Article 9(2) about the Evidence of Biodegradability for Regulation (EC) No 648/2004 on Detergents and Updating of MSDS documents.
- A joint A.I.S.E./CESIO/ECOSOL/FECC Guideline on Implementation of the Detergent Regulation with regard to the Biodegradability of Surfactants and Transmission of information for Surfactants Biodegradability.
- A.I.S.E. Guideline on Implementation of the Detergent Regulation Biodegradability of Surfactants and Annex VII (Labelling and Ingredient Datasheet).

The European Commission has published three Communications examining environmental concerns of detergents, as required by Article 16 of Regulation (EC) No 648/2004, and whether modified or new legislation would be needed.

A Communication concerning the use of phosphates in detergents ([COM\(2007\)234](#)) noted different approaches in the Member States. Italy, Belgium, Czech Republic, Germany and the Netherlands had already adopted legislation to reduce or ban phosphates in detergents to reduce eutrophication, with Sweden and France following suit. Austria, Ireland, Denmark and Finland relied on voluntary commitments by detergent formulators to phase-out phosphate-based detergents. Seven Member States had only phosphate-free laundry detergents. A 2002 study for the Commission had concluded that number of countries had reduced eutrophication through measures to reduce their phosphorus loads by 70–90 per cent, but that a ban on the use of phosphate-based detergents could achieve a phosphorus load reduction of only up to 40 per cent, which is not sufficient on its own to cause substantial eutrophication improvements. A further study published in 2006 concluded that there was considerable variation in the eutrophication risk in Europe as well as variability in the benefits of use of phosphate-free detergents. The results of the studies were discussed with delegates from Member States and industry in the Detergents Working Group. However, further action (including legislation) would need to take account of assessments of water status and pressures by the Member States in developing River Basin Management Plans under the Water Framework Directive [2000/60/EC](#).

A Communication concerning the biodegradation of the main non-surfactant organic detergent ingredients ([COM\(2009\)208](#)) concluded that there is no risk from these substances and, therefore, no further legislation is required. Any future uncertainties could be addressed through registration under the REACH Regulation (EC) No [1907/2006](#).

A Communication concerning anaerobic biodegradation ([COM\(2009\)230](#)) concluded that the lack of anaerobic degradation does not seem to be correlated with any apparent risk for the environment. Also concerns of toxicity of surfactants were not considered appropriate to new legislation and that this could be addressed through registration under the REACH Regulation (EC) No 1907/2006.

Enforcement and court cases

Three cases concerning Regulation (EC) No 648/2004 have resulted in judgments from the European Court of Justice:

- [C-66/04](#) of 08/09/2004. This case was brought by the United Kingdom against the European Parliament and Council of the European Union. The United Kingdom argued that Article 95(1) of the Treaty was the incorrect basis for adoption of the Regulation. The Court concluded that Article 95(1) was, in fact, an acceptable legal basis for the Regulation.
- [C-184/08](#) of 24/03/2009. Article 18 of the Regulation requires that by 8 October 2005, Member States had to ensure there was a sanction system to deal with an infringement of the Regulation. The ECJ ruled that Luxembourg had failed to comply with that requirement.
- [E-03/08](#) of 29/10/2008. The Court ruled in favour of the EFTA Surveillance Authority in a case against Iceland for failure to adopt national legislation to allow for the implementation of the Regulation.

Commission Recommendation 98/480/EC

On 22 July 1998, the Commission adopted a Recommendation concerning good environmental practice for household laundry detergents ([98/480/EC](#)). The Recommendation was a voluntary agreement between the detergent industry association AISE and the European Commission. It established five targets, relative to the situation existing in the 15 EU Member States in 1996, to be achieved by the end of 2001:

- Five per cent reduction in energy consumed per wash cycle for the product group (kWh/wash); base: 1.04 kWh.
- Ten per cent reduction in weight of household laundry detergents consumed *per capita* (kg/head); base: 9.94 kg.
- Ten per cent reduction in weight of the primary and secondary packaging of the product group consumed *per capita* (kg/head); base: 0.71 kg.
- Ten per cent reduction in weight of 'PBOs' consumed *per capita* (kg/head); base: 0.32 kg.
- Provide information to the consumers on how to use detergents in a better way.

In 2002 the Commission published a first report on the implementation of Recommendation 98/480/EC ([COM\(2002\)287](#)). In order to meet the five targets of the Recommendation, AISE developed a Code of Good Environmental Practice for the household laundry detergents for implementation in 18 countries (15 EU Member States, Iceland, Norway and Switzerland). As stipulated in Article 7 of the Recommendation, AISE provided for independent collection and processing of the statistics. For the reporting period 1996–1998, two of the targets for that period were fully achieved: the reduction of the PBOs and the information to consumers, but that much remained to be done to reduce consumption of detergents and of packaging.

In 2004 a second implementation report was published by the Commission ([COM\(2004\)134](#)), covering the period 1996–2001, that is to the deadlines in Recommendation 98/480/EC. The number of companies committed to the AISE Code had increased from 119 to 168, representing approximately 90 per cent of the EU market, despite a number of mergers in the

industry. Targets for energy and PBOs (latter reduced by 14.5 per cent) were exceeded, but the targets for consumption of detergents (reduced by 4.6 per cent) and packaging (reduced by 5.9 per cent) were not met.

Council of Europe Agreement

A European Agreement limiting the use of detergents by Members of the Council of Europe was signed or ratified by various members of the European Community between 1970 and 1980. A Protocol to this Agreement taking account of changes in Community legislation on this subject was presented for signature in October 1983. It was signed by Community members and entered into force on 1 November 1984. The Commission in May 1987 concluded that the European Community should not become a contracting party.

Further developments

The European Commission has proposed an amendment to Regulation (EC) No 648/2004 ([COM\(2010\)597](#)). The amendment would set a phosphorous content limit of 0.5 per cent of the total weight of the product in all laundry detergents on the EU market. This would apply from 1 January 2013. The European Commission concluded that an EU level limit of phosphates and other phosphorous compounds in household laundry detergent would reduce the contribution of phosphates from detergents to eutrophication and reduce the cost of phosphorous removal in waste water treatment plants. However, it also concluded that imposing such a limit in other types of detergents such as dishwasher detergents or professional detergents was 'premature due to the lack of technically and economically viable alternatives'.

Related Legislation

There are a number of other EU Directives that have a strong interaction with Directive 2008/105/EC:

- The REACH Regulation (EC) No [1907/2006](#).
- The Water Framework Directive [2000/60/EC](#).
- The Urban Waste Water Treatment Directive [91/271/EEC](#).