



Ecolabelling of Primary batteries

Version 3.0 • 17 December 2002 – 14 September 2007

This is a translation of the criteria document in Swedish. In any case of dispute,
the original document should be taken as authoritative



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Joint Nordic ecolabelling

In November 1989, the Nordic Council of Ministers adopted a measure to implement a voluntary, positive ecolabelling scheme in the Nordic countries. The scheme is administered by the Nordic Ecolabelling Board. The board, among other things, chooses product groups and lay down the final criteria. Secretariats in the participating countries are responsible for implementing the scheme on national level.

The objective of ecolabelling is to provide information to consumers to enable them to select products that are the least harmful to the environment. Ecolabelling is intended to stimulate environmental concern in product development and a sustainable society.

In its work on ecolabelling Nordic Ecolabelling follows the ISO 14024 standard: "Environmental labels and declarations - Type 1 ecolabelling - Principles and Procedures". The product groups and environmental and performance requirements selected by Nordic Ecolabelling reflect the objectives, principles, practices and requirements of the standard. ISO 14024 includes the requirements that criteria should be objective, reasonable and verifiable, that interested parties should be given the opportunity to participate and that their comments are evaluated.

The criteria are based on evaluation of the environmental impacts during the actual products' life cycle. The criteria set requirements towards a number of these factors. Upon approved application all products found to meet the criteria are awarded the environmental label. Due to new knowledge and production methods the criteria must be updated regularly.

New revised criteria are presented at least 1 year prior to the expiry date. During the period of validity minor corrections may be adopted. These will normally not affect already approved licences. A handling fee is paid upon submission of a complete application. The turnover value of the product determines the additional annual fee.

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1 Introduction

The environmental impact of primary batteries can mainly be linked to the spread of metals.

The requirements for mercury, cadmium and lead content have been determined on the basis of the amounts of impurity present in the raw material. Batteries that require these metals for their operation cannot be ecolabelled.

The battery service time requirement has been made stricter compared with earlier criteria documents. Battery life can be increased by technical developments. An immediate environmental gain can be noted if the service time of a battery increases, the number of batteries sold decreases, raw material extraction decreases and thus reduces the spread of metals in the environment.

In addition to the criteria, there is a background document which is available from the ecolabelling organisation.

2 Definition of the product group

This document deals with primary (non-rechargeable) batteries of sizes LR20, LR14, LR6, LR03, 6 LR61, LR 8D425, LR1, 3 LR12, 4 LR25 (see Table 1, page 3) and button cells. See appendix 1 for information about the button cells included in this criteria document.

The document does not cover rechargeable batteries, for which there are special criteria.

3 Application instructions

Applicants should study the "Regulations for the Nordic Ecolabelling of Products" 2001-12-12 as well as the ecolabelling requirements in the criteria for primary batteries.

The applicant must submit the documentation stated under each individual requirement in Sections 4, 5 and 6 for primary batteries. The application must include a contents list showing which documentation is enclosed for each individual requirement.

In order for a product to be awarded an ecolabel, all requirements in the criteria must be fulfilled.

3.1 Documentation which must be accessible on site at the applicant/licence holder

The following documentation must be held by the licence holder for the period of the licence and must be available to be shown to the ecolabelling organisation:

- Copy of the entire application.
- Facts/basis of calculation for the documentation sent when the application was processed, for example results of testing of the batteries.
- Records of planned production changes and unexpected deviations in production in relation to this criteria document.
- All complaints about the ecolabelled products which are sent to the applicant.

4 Environmental requirements

4.1 Metal content

Metal content of the battery must not exceed the limit values specified below.

Metal	Content
Mercury	≤ 0.1 ppm
Cadmium	$\leq 1,0$ ppm
Lead	≤ 10 ppm

Test method, see Section 7.2.1

Documents required:

- *Reporting of metal content, including report from testing institute.*
- *The laboratory shall also certify that it satisfies the requirements in accordance with chapter 7.1.*

4.2 Packaging

PVC or other chlorinated plastics must not be used.

Documents required:

- *Certificate stating that PVC or other chlorinated plastics not are used in the packaging. See appendix 2*

4.3 Recovery systems for products and packaging

Relevant national regulations and legislation/industry-specific agreements regarding recovery systems for products and packaging must be fulfilled in the Nordic countries where the ecolabelled products are sold.

Documents required:

- *Copy of agreement and/or invoice copy for recovery system according to the product.*
- *Copy of agreement and/or invoice copy for recovery system according to the packaging.*

5 Requirements on effectiveness/performance

5.1 Service time

The requirements include a test of service time for different applications depending on the type of battery, see Table 1. In the table the designations are specified according to IEC 60086-2. Designations other than those in the table may occur on the market. Those batteries can also apply for certification if the dimensions match the LR series IEC 60086-2 and have corresponding working voltage. For other chemistries, documentation must be shown which state that these batteries are replaceable to common alkaline batteries in electrical and safety aspects.

The batteries must achieve the minimum service time stated in Table 1. For sizes LR6 and LR03, the batteries must pass both the stated tests in order to be approved.

Button cells must at least achieve the requirements on service time stated in the standard IEC 60086-2 Ed.10.12001-10. In the cases where the standard prescribes more than one test on service time at least one test must be fulfilled.

Table 1 Service time requirements on testing in accordance with IEC 60086-2, Ed.10.1, 2001-10.

Battery size	Application	Load	Period	Final voltage (V)	Minimum permitted service time
LR 20	Tape recorder	3.9 ohm	1 h/day	0.9	40.0 h
LR 14	Tape recorder	6.8 ohm	1 h/day	0.9	35.0 h
LR 6	Tape recorder	10 ohm	1 h/day	0.9	18.0 h
	Photo flash	1000 mA	1s/min, 1h/day	0.9	300 pulses
LR 03	Tape recorder	10 ohm	1 h/day	0.9	8.4 h
	Photo flash	600 mA	10s/min, 1h/day	0.9	250 pulses
6 LR 61	Toy	270 ohm	1 h/day	5.4	19.0 h
LR 8D425	Service output test	75 ohm	1 h/day	0.9	33 h
LR1	Paging test	10 ohm, 5 s/h 3000 ohm, 24 h/day		0.9	1092 h
3 LR12	Portable lighting	20 ohm	1 h/day	2.7	18 h
4 LR25	Portable lighting 2	9.1 ohm	30 min/day 8 h/day	3.6	21 h

If a battery, designated as in table 1, is designed for a specific application which is clearly marked for the consumer, the requirement on service time can be set for this specific application.

The specific application must still be included among those applications stated in the standard IEC 60086-2. The service time will be measured for the specific application according to standard IEC 60086-2 and minimum permitted service time should be 30% lower than the service time stated in the standard.

Test method, see Section 7.2.2

Documents required:

- *Results of discharging test as per Table 1, carried out by an impartial testing institution.*
- *A certificate confirming that the batteries have been tested in accordance with IEC 60086-1 as regards sample conditions and IEC 60086-2 according to table 1.*
- *A certificate showing that the testing institution is impartial and that it meets the general requirements set out in Section 7.1.*

6 Other requirements

6.1 Requirements of the authorities on safety, working environment and outdoor environment

The holder of an ecolabelling licence is responsible for ensuring that the regulations on safety, working environment, environmental legislation and plant-specific conditions/concessions in each producing country are followed in the production of ecolabelled products. If deviation is discovered the certificate can be withdrawn.

6.2 Environmental and quality control

Manufacturers of ecolabelled products must themselves, or through an agent/importer, have documented routines and instructions for ensuring:

- * that the requirements in the ecolabelling criteria are met,
- * that the requirements can be checked during the validity period of the licence,
- * the quality level as regards function and performance for the products covered by the licence,
- * that there is an organisational structure which can guarantee that the requirements in the ecolabelling criteria are met,
- * that there is a contact person to deal with for the ecolabelling organisation,
- * the traceability of the batteries,
- * that consumers can see which batteries are ecolabelled

Documents required:

- *Details on how the ecolabelling requirements are followed up, documented and reported on in day-to-day production.*

6.3 Marketing

Ecolabelled products shall be marketed in accordance with “Rules for Nordic ecolabelling of products”, 2002-12-12.

Documents required:

- *Details of how the marketing of ecolabelled products is organised, who is responsible for what.*
- *A certificate that the head of marketing has knowledge of "Regulations for Nordic Ecolabelling of products". See appendix 3.*

7 Analyses and inspection

7.1 Requirements on test institute/analysis laboratory

The testing institute/analysis laboratory must be impartial and competent. The testing institute/analysis laboratory must fulfil the general requirements in accordance with standard EN 45001/DS/EN/ISO/IEC 17025, or be an official GLP-approved analysis laboratory.

7.2 Analysis methods / Test methods

7.2.1 Metal content

The metal content is analysed in accordance with “Battery Industry Standard Analytical Method. For the determination of Mercury, Cadmium and Lead in Alkaline Manganese Cells Using AAS, ICP-AES and Cold Vapour, European Portable Battery association (EPBA), Battery Association of Japan (BAJ), National Electrical Manufacturers Association (NEMA; USA). April 1998”.

At least four examples of the product in question must be analysed. Analysis results stated with < ie “less than” are interpreted in the application as = ie “equal to”.

7.2.2 Service time

The batteries must be tested in accordance with IEC 60086-1, Ninth Edition, 2000-11 as regards to sample condition chapter 6 and IEC 60086-2, Edition 10.1, 2001-10 according to table 1.

7.3 Follow-up inspection

At follow-up inspection, a product with an ecolabelling licence may be inspected on the initiative of the ecolabelling organisation. Such an inspection may be done in many ways. Among other things, samples for analysis can be taken randomly in retail outlets and then analysed by an impartial testing institute. In this case the licence holder bears the cost of such an inspection if the product does not meet the requirements on which the ecolabelling licence is based.

8 Registration

If the licence is registered in another participating Nordic country, the following information must be documented by the applicant and sent to the ecolabelling organisation:

- application form for registration,
- copy of licence,
- certificate confirming that the product and packaging are identical to the product in the licence concerned,
- samples of product or packaging,
- information about marketing in accordance with appendix 3
- details about participation in systems for recovering products and packaging, under own management or in conjunction with an official recovery system.

9 Design of the ecolabel

The ecolabel and the allocated licence number (shown below as 000-000) shall be of the following design:



000 000
"Primary batteries"
possibly "Long-life"

The ecolabel must be placed on the packaging and/or the product.

See "Rules for Nordic ecolabelling of products" 2001-12-12, Appendix 3, for more detailed information about the design of the ecolabel.

10 Validity of the criteria document

This criteria document was confirmed by the Nordic Ecolabelling Council on 17 December 2002 and is valid until 14 September 2007.

During the validity period, the Nordic Ecolabelling Board may decide on adjustments, clarifications and/or extensions of the criteria, and a new version will then be issued. This does not normally involve any re-appraisal of licences that have been granted.

The Nordic Ecolabelling Board states which criteria will apply in the future at least 12 months before the current criteria version expires, i.e. on 14 September 2007.

11 Future criteria

In future criteria the following requirements will be evaluated:

- Requirements concerning the manufacture of batteries
- Requirements regarding the use of recovered metal in batteries
- Requirements regarding the material on the label of the cell.

Appendix 1

Designation of buttoncells

PR70, PR41, PR48, PR 43, PR44,
LR41, LR55, LR54, LR43, LR44,
SR62, SR63, SR65, SR64, SR60, SR67, SR66, SR58, SR68, SR59, SR69, SR41, SR57, SR55, SR48, SR56,
SR54, SR42, SR43, SR44,
CR 1025, CR1216, CR1220, CR1616, CR2012, CR1620, CR2016, CR2025, CR2320, CR2032, CR2330,
CR2430, CR2354, CR3032, CR2450,
BR1225, BR2016, BR2020, BR2320, BR2325, BR3032

Appendix 2

Packaging Certificate

We hereby certify that the packaging does not contain PVC or other chlorine-based plastics.

Date

Company name (licence applicant)

Person responsible

Phone

17 december 2002

Appendix 3

Marketing of ecolabelled products for which a licence application is made

We hereby confirm that we are familiar with the rules for using the Nordic ecolabel in accordance with “Rules for Nordic ecolabelling of products”.

We hereby give assurance that marketing will be pursued in accordance with these rules.

We also confirm that we are familiar with the contents of the criteria document for the ecolabelling of primary batteries.

We give assurance that those within our company who market the ecolabelled products will be informed of the criteria for ecolabelling of primary batteries and “Rules for Nordic ecolabelling of products”.

.....
Place/date	Company
.....
Contact person	Tel.
.....
Marketing manager	Phone

In the event of a change of personnel, a new confirmation must be sent to the ecolabelling organisation.