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Environmental Information on Electrical and Electronic Equipment (EIEEE)

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ENVIRONMENTAL INFORMATION ON ELECTRICAL AND ELECTRONIC EQUIPMENT (EIEEE)

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IEC-PAS 62545 has been processed by IEC technical committee 111: Environmental standardization for electrical and electronic products and systems.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
111/86/NP	111/93/RVN

Following publication of this PAS, the technical committee or subcommittee concerned will investigate the possibility of transforming the PAS into an International Standard.

This PAS shall remain valid for an initial maximum period of 3 years starting from the date of publication. The validity may be extended for a single three-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

INTRODUCTION

Global awareness of the urgency of preserving the natural environment has been resulting in the developments of local, national, and/or international regulations on products, a growing consciousness of consumers of products environmental impacts, and generally speaking a growing involvement of every stakeholder in these matters.

This is resulting in an increasing need of exchanges of environmental information between all actors of the product life cycle, from the raw material provider to the recycler, through the manufacturer and the finished product end user. At every stage, needs in terms of content and format of environmental information are different, and possible solutions to fit these needs are multiple. But the key actor of this chain is definitely the producer, who must put on the market products, which:

- are in conformity with the relevant environmental regulations,
- fulfil the technical and environmental requirements/expectations of users.

Every producer is then led to collect the necessary information upstream of the manufacturing stage, and deliver product-related environmental information downstream.

Upstream information is so far being collected by individual producers from their numerous suppliers. This means that every supplier is receiving as many requests as he has customers. Though these requests generally deal with the same items, they are all different and require customized answers.

In the same way, producers have to answer as many questionnaires as they have customers, or to provide consumers with the information they are expecting. This long-standing situation is more and more difficult to manage for companies because of the growing number of questionnaires, most often very different in contents and format, and the increasing number of answers to be provided. It is thus costly and burdensome for:

- every supplier to reply to a lot of different questionnaires,
- every producer to manage a huge quantity of data, and to deliver proper information.

But the main concern about the current situation is that it doesn't ensure a level playing field on the market. Current rules of play appear insufficient to avoid misunderstanding between stakeholders, mistakes, false claims, which eventually lead to market distortion.

There are therefore clear and urgent needs for standardization to structure and harmonize these exchanges of information.

At that time, many different ways of meeting these needs for providing environmental product information exist. But existing systems all present some deficiencies (see Annex A), that this PAS claims to solve.

ENVIRONMENTAL INFORMATION ON ELECTRICAL AND ELECTRONIC EQUIPMENT (EIEEE)

1 Scope

This PAS provides guidelines on generic environmental attributes to be considered by product committees when preparing a declaration frame suited to a concerned product category to disclose credible, relevant, and harmonized product related environmental information to who needs or requests it. As a result, generic requirements to be followed by upstream suppliers to deliver necessary information to downstream producers are also specified.

This PAS is stand-alone and only applicable if relevant requirements on environmental aspects and impacts information does not exist in relevant product standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC/TR 62139:2004, *Guidelines for the addition of environmental aspects in product standards specific to TC23*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 14001:2004, *Environmental management systems – Requirements with guidance for use*

ISO 14020:2000, *Environmental labels and declarations – General principles*

ISO 14040:2006, *Environmental management – Life cycle assessment – Principles and framework*

ISO 14050:2002, *Environmental management – Vocabulary*

IEC Guide 109:2003, *Environmental aspects – Inclusion in electrotechnical product standards*

IEC Guide 114:2005, *Environmentally conscious design - Integrating environmental aspects into product design and development of electrotechnical products*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations are used.

NOTE In this PAS, the word “product” can be used in place of, and to mean “product family”, whose products have no significant difference from an environmental point of view.

3.1 Terms and definitions

3.1.1
manufacturer
any person, company or organisation with ultimate responsibility

- to verify compliance with the appropriate standard(s),
- to provide product information

3.1.2
producer
any person who puts electrical and electronic equipment (EEE) on the market, i.e.

- either manufactures and sells EEE under his own trademark,
- or re-sells EEE manufactured by others, under his own trademark,
- or imports or exports EEE

3.1.3
distributor
any person who provides EEE on a commercial basis to the party who is going to use it

3.1.4
end-user
any person who uses an EEE

3.1.5
stakeholder
any person or institution having a stake in the outcome of a situation or decision

NOTE Stakeholders may include: employees, labour unions, government agencies, regulators, non-governmental organizations (NGOs), academic institutions, research groups, customers, suppliers, religious groups, indigenous people, youth, and media.

3.1.6
bill of materials
list of constitutive elements of a product / subassembly / component / material

3.1.7
environmental aspect
element of an organization's activities, products or services that can interact with the environment

NOTE 1 A significant environmental aspect is an environmental aspect that has, or can have, a significant environmental impact.

NOTE 2 For example, energy consumption is, in many cases, the major environmental aspect of electrical or electronic products.

[IEC Guide 109, definition 3.4, as taken from ISO 14001]

3.1.8
environmental impact
change to the environment, whether adverse or beneficial, wholly or partly resulting from an organization's activities, products or services.

NOTE For example, energy consumption of a product has several environmental impacts through the energy production process, such as contributions to the greenhouse effect or to acidification of the environment.

[IEC Guide 109, definition 3.5, as taken from ISO 14001]

3.1.9
life cycle
consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal

[IEC Guide 109, definition 3.8, as taken from ISO 14040]

3.1.10
life cycle thinking
LCT
consideration of all relevant environmental aspects (of a product) during the entire (product) life cycle

[IEC Guide 109, definition 3.10]

3.1.11
life cycle approach
LCAp
methodology to take account of all phases of the product life cycle (including manufacturing, distribution, use and disposal) in order to identify its significant environmental aspects and get a true global improvement of environmental performances.

[IEC/TR 62139, definition 3.3, modified]

3.1.12
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

[IEC Guide 109, definition 3.9, modified, as taken from ISO 14040]

3.1.13
life cycle inventory analysis
LCI
phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a given product throughout its life cycle

[ISO 14050 – definition 5.3.1]

3.1.14
environmental information on EEE
EIEEE
set of information describing the environmental aspects of the product along its life cycle (material production, manufacturing, distribution, use and end of life)

3.1.15
product environmental profile
PEP
particular form of EIEEE which describes both environmental aspects and environmental impacts of the product along its life cycle (material production, manufacturing, distribution, use and end of life)

3.1.16
eco-solutions
products or services allowing reduction of environmental impacts of a system in which they are a component

NOTE Examples of such eco-solutions are speed-drivers, movement detectors, heating regulators, whose functions can offer significant contributions to reduction of energy consumptions in buildings, plants, etc.

3.1.17
functional unit
quantified performance of a product system for use as a reference unit in a life cycle assessment study

[ISO 14025, definition 3.14]

3.1.18
environmentally homogeneous product category
EHPC
group of products that have equivalent functional unit(s) and equivalent technical option(s) and that present environmental impacts which can be extrapolated from one product to another (e.g. in a linear function of product mass)

NOTE This definition is an adaptation of the definition of "product category" given in ISO 14025, definition 3.12, to address the diversity of EEE.

3.1.19
reference product
representative product of the EHPC used for extrapolating environmental impacts of any product of the EHPC

3.1.20
life cycle impact category indicator
quantifiable representation of an impact category

[ISO 14050, definition 5.3.2.1.1]

NOTE Examples of commonly used indicators are given in Annex A.

3.1.21
hazardous waste
specific waste having a certain level of toxicity and requiring a special treatment

3.1.22
non-hazardous waste
waste without toxicity

3.1.23
waste treatments
operations which aim at reducing the amount of ultimate residues to be disposed of in landfill

NOTE 1 Examples of waste treatments :

a) re-use: waste treatment allowing a part of the used product (part, component or sub-assembly) to be used again either for identical or different function;

b) recycling: waste treatment allowing the waste to be reused either partially or totally in the manufacturing process of either a similar or different product;

c) energy recovery: waste treatment allowing the waste to be transformed to recover a certain amount of energy.

NOTE 2 A typical energy evaluation consists in using thermal energy contained in waste, by burning it and recovering the released energy e.g. for building heating or electricity production.