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Materials declaration questionnaires - Basic guidelines

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Materials declaration questionnaires –

Basic guidelines

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MATERIALS DECLARATION QUESTIONNAIRES – BASIC GUIDELINES

FOREWORD

This first edition of IEC Guide 113 has been prepared in accordance with annex P of Part 1 of the ISO/IEC Directives by the Advisory Committee on Environmental Aspects (ACEA).

The text of this guide is based on the following documents:

Approval document	Report on voting
C/1180/DV	C/1202/RV

Full information on the voting for the approval of this guide can be found in the report on voting indicated in the above table.

MATERIALS DECLARATION QUESTIONNAIRES – BASIC GUIDELINES

1 Scope

One important aspect of product-related environmental protection is environmentally safe product recycling or disposal. This is possible only with the knowledge of the substances contained and the potential hazards to health and to the environment that they represent. Therefore, the manufacturer should know which environmentally relevant substances are contained in his products. Additionally, he should know the distribution and the concentrations of these substances. He should be able to give the required information to those who need it. The flow of information on material content involves several parties, as illustrated in figure 1.

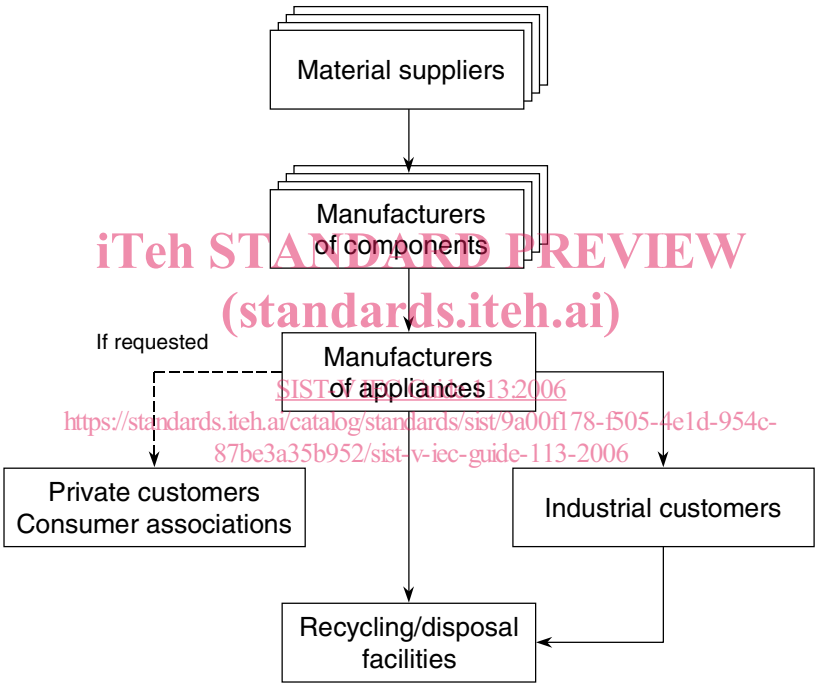

Figure 1 – Flow of information on materials content

This guideline is not prescriptive. It is rather written to assist companies which have to develop materials declaration questionnaires for products, for instance as part of purchase specifications. It intends to increase the harmonization and the comparability of the various questionnaires. This is supposed to lead to cost reduction, both for those sending questionnaires and for those answering them, but it must be kept in mind that the possibilities for harmonizing the materials declaration questionnaires are limited because of the differing needs of those requiring information, and because of the continual changes of the hazardous materials lists.

2 Definition

Within the meaning of this guide, products comprise, in particular, materials, components, subassemblies and appliances in the field of the electrotechnical and electronic industry.

3 Procedure for developing materials declaration questionnaires

Depending on the product, requirements, level of confidentiality, etc., materials declaration can take different forms, to be agreed between the parties involved. However, some basic points are common to all materials declarations and taking them into account will help to establish a sufficient level of uniformity, thus simplifying work and reducing costs.

A materials declaration always involves at least two parties, generally the purchaser (party demanding information) and the supplier (party supplying information). Later, other parties may make use of the original materials declaration, such as refurbishing companies, recyclers, exporters of second-hand equipment, etc. These third parties become in due course the party requiring information.

A number of questions should be settled between the purchaser and the supplier before a materials declaration can be defined. The most important ones are:

a) Which item (full product, component, part, sub-assembly, etc.) should be considered? Or should a declaration “tree” be used: finished product and components considered separately? If so, which level of detail is required?

b) Which criteria should be used to define substances to be declared?

c) Above which mass thresholds and/or concentrations should substances be declared?

d) Which units for quantities should be used?

These points should be settled by consensus between the purchaser and the supplier, preferably based on consensus between all actors in the supply chain. There are cases, however, when the purchaser may prescribe the substances to be declared and/or the mass thresholds or concentrations, without previous discussion. This is the case when regulatory reasons are behind the request for information.

In other cases, the choice of substances could be left to the supplier, such as when the purchaser only states the lists of restricted substances or the criteria.

In all cases, prior to elaborating any materials declaration, a clear statement regarding the above information in general should be provided to the supplier by the purchaser.

4 Principles of materials declaration questionnaires

a) Materials declaration questionnaires should respond to the particular product or product group (excluding packaging).

b) Materials declaration questionnaires should ask about the specific place or component in which a declared substance is situated.

c) Materials declaration questionnaires ask for substances which are intentionally utilized in products and should not ask for substances and residues of substances used in manufacturing processes.

d) Substances to be declared should be unambiguously identifiable by nomenclature, preferably by the Chemical Abstracts Service (CAS) registry number or other internationally used registry numbers.

NOTE 1 CAS registry numbers are given to chemical compounds. Since a chemical compound can have different names, the CAS registry number is used for unambiguous identification.

e) Weight limits above which components or parts of products are taken into consideration should be defined.

NOTE 2 Decisive factors can be the risks given by the contained substances and the end-of-life treatment. For example, it can be necessary to declare small switches containing mercury because they can lead to the contamination of shredded material. On the other hand, it may be acceptable to leave out minor flame-retarded plastic parts if the whole product will be incinerated.

f) Concentration limits for the substances in the materials declaration questionnaire should be defined. In the case of hazardous substances, concentration limits should preferably be based on an assessment of the risks involved.

NOTE 3 The threshold value could be 0,1 % by mass in accordance with the limit for the consideration of carcinogenic or mutagenic substances for classification. In the case of declaration of carcinogenic or mutagenic substances, this exact threshold value should be chosen. To simplify the materials declaration this concentration limit may also be used for all other substances.

g) Whenever possible, concentration values should refer to the proportions of the substances in their immediate vicinities, for example a toxic substance as stabilizer in an insulating layer or a carcinogenic substance as pigment in a plastic housing.

h) Materials declaration questionnaires may consider substances

- falling under relevant legal regulations (see annex A);
- falling under relevant international treaties;

NOTE 4 This covers materials whose movement and disposal are subject to international treaties such as the Basel Convention.

- hazardous to health or to the environment (see annex B). In most cases, these substances are concentrated in certain components or product parts (see annex C and 4b);
- relevant to end-of-life treatment;
- relevant in another respect, and not covered by the above categories.

i) The different categories of substances to be declared may be clearly identified on the materials declaration questionnaire.

j) In some cases it may be advantageous to group components together as a family.

It is advisable to use computer processable questionnaires.

NOTE 5 No weighting or hierarchy has been applied to the above list of principles.

Annex A

Examples of legally restricted substances (status 1998)

The following substances or groups of substances are concerned by legal regulations which affect putting on to the market products from the electrical and electronics industry. The table gives a rough survey of the situation in some economically important regions. The regulations range from restrictions for some applications to total bans with rare exceptions. For all restrictions and bans, concentration limits, which depend on the application concerned, are set.

It is the responsibility of the vendor to consult the most up-to-date registry of information in the relevant country.

Table A.1 – Restricted substances

	Restricted in		
	EU	**Japan**	**USA**
Asbestos	Yes	Yes	Yes
Cadmium and its compounds	Yes	No	Yes
Chlorinated fluorocarbons (CFCs)	Yes	Yes	Yes
Mercury (in batteries)	Yes	No (VIC*)	Yes
Polychlorinated biphenyls and terphenyls (PCBs and PCTs)	Yes	Yes	Yes
Polybrominated biphenyls and diphenylethers (PBBs and PBDEs)	No (VIC*)	No (VIC*)	No (VIC*)
* VIC = Voluntary industrial commitment not to use these substances			

Annex B

Examples of criteria for the declaration of hazardous substances

Substances which comply with the following criteria may be contained in materials declaration questionnaires.

Table B.1 – Possible criteria

Hazardous to health:	Carcinogenic, mutagenic, toxic for reproduction (CMR) Acutely or chronically toxic Easily transforms into CMR substances or toxic substances* Causes sensitization Radioactive
Hazardous to the environment:	Water-polluting Persistent + bioaccumulative Contributes to global warming Ozone depleting Leading to acidification Leading to soil contamination
* *Easily* means that the transformation of the substances in this group takes place under conditions (for example, temperature) not far from the processing or operating conditions. An example is the formation of poly-halogenated dioxins by processing thermoplastic moulding compounds containing additives which belong to this group.	