ECMA

Standardizing Information and Communication Systems

ECMA Technical Report TR/70

2nd Edition - June 1999

Product-related environmental attributes

.

ECMA

Standardizing Information and Communication Systems

Product-related environmental attributes

Brief History

The increased interest of public and institutional customers in environmental information stimulated the setting up of an ECMA Technical Committee working on the definition of product-related environmental attributes. ECMA TC38 was established formally by the ECMA General Assembly in December 1995. It includes experts from information technology, telecommunications and consumer electronics companies and organisations.

This Technical Report presents a catalogue of parameters related to the environment that are recommended for inclusion in product data declarations and specifications.

This second edition takes into consideration the comments received from users and users organisations. The data relevant to end of life management have been moved to a separate Technical Report.

Annex A presents a summary of attributes to be declared and examples of such declarations for a range of products.

This second edition of ECMA TR/70 has been adopted by the ECMA General Assembly of June 1999.

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1 Scope

This Technical Report identifies and describes environmental attributes and associated measurement methods related to the use of information and communication technology and consumer electronic products, according to known standards, guidelines and currently accepted practices.

The environmental attributes include:

– power consumption;
– emissions;
– data on materials;
– packaging data.

Although the attributes are listed without differentiation between product categories, it should be recognized that not all attributes necessarily apply to each product category.

The documented sample declarations in annex A may serve as guidance for the proper application of this Technical Report.

2 References

This clause lists the documents that are directly referred to in the body of this Technical Report.

At the time of publication, the edition indicated was valid. All standards are subjected to revision, and parties to agreements based on this Technical Report are encouraged to investigate the possibility of applying the most recent edition of the standards listed below.

Other documents of interest are listed in annex B.

2.1 ECMA

Standard ECMA-74 (1997)	Measurement of Airborne Noise Emitted by Information Technology and Telecommunications Equipment (ISO 7779)
Standard ECMA-109 (1996)	Declared Noise Emission Values of Information Technology and Telecommunications Equipment (ISO 9296)

2.2 ISO

ISO 3741:1988	Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for broad-band sources in reverberation rooms (mainly continuous)
ISO 3742:1988	Determination of sound power levels of noise sources - Precision methods for discrete-frequency and narrow-band sources in reverberation rooms (mainly discontinuous)
ISO 3744:1994	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane
ISO 3745:1977	Acoustics - Determination of sound power levels of noise sources - Precision methods for anechoic and semi-anechoic rooms
ISO 7779:1988	Measurement of airborne noise emitted by computer and business equipment
ISO 9296:1988	Declared noise emission values of computer and business equipment
ISO 11469:1993	Plastics - Generic identification and marking of plastic products
ISO 11690:1996	Acoustics - Recommended practice for the design of low-noise workplaces containing machinery
ISO 14001:1996	Environmental management systems - Specifications with guidance for use

2.3 IEC

IEC 107-1:1997	Methods of measurement on receivers for television broadcast transmissions. Part 1: General considerations. Measurements at radio and video frequencies

2.4 CEN/CENELEC

EN 45014	General criteria for suppliers declaration of conformance

2.5   European Union (EU)

89/336/EEC	EMC Directive
91/157/EEC	Directive on batteries and accumulators
93/86/EEC	Marking of batteries
94/62/EEC	Packaging Directive
98/101/EC	Amendment to the battery Directive

2.6   International agreements

The 1987 Montreal Protocol on Substances that deplete the Ozone Layer (September 1997 version)

2.7   Sweden

MPR II 1990:8/10   Testing emissions and other properties of VDUs

2.8   United States Environmental Protection Agency (US EPA)

Energy Star MOU   Memoranda of Understanding for energy efficient products

3   Definitions

For the purposes of this Technical Report the following definitions apply.

3.1   Acoustical noise

Unwanted sound in the human audible frequency range.

3.2   Chemical emissions

Release of gases, vapours and particulates from point or diffuse sources.

3.3   Environment

Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation. (ISO 14001)

3.4   Extendibility

The capability of adding new features to the product.

3.5   Hazardous material

Hazardous materials are those materials (e.g. corrosive, explosive, reactive, radioactive, carcinogenic, mutagenic, teratogenic or ecotoxic) that are regulated by various country regulations.

3.6   Modes of operation

3.6.1   Operational mode

A state in which the device performs its normal duties.

3.6.2   Inactive modes

These modes, identified as sleep, idle, deep sleep, identify modes in which the equipment is connected to an electrical supply and is ready to resume operational mode, with or without warming-up time. The definition of modes of operation is to be found in the system documentation.

3.6.3   OFF mode

The mode with the lowest power consumption when the device is connected to an electrical supply.

3.7   Noise emissions

Airborne sound radiated into the environment from a defined source (machine or equipment). (ISO 11690)

3.8   Power consumption

The number of watts (rms) drawn from the power source in a particular mode of operation.

3.9   Supplier

The party that supplies the product, process or service. It may be a supplier, distributor, importer, assembler, service organisation, etc. (EN 45014)

3.10 Upgradability

The capability of increasing the capacity of existing features in the product.

3.11 User

Any person who can be affected by the product.

4 Acronyms

CFC	chlorofluorocarbon	PCB	polychlorinated biphenyl
CRT	cathode ray tube	PCT	polychlorinated terphenyl
ELF	extra low frequency	SITO	Swedish IT organisation
EMC	electromagnetic compatibility	VCR	video cassette recorder
EPS	expanded polystyrene	VDU	visual display unit
HCFC	hydrogenated chlorofluorocarbon	VLF	very low frequency
LCD	liquid crystal display	VOC	volatile organic compound

5 Information to customers and users

The following information should be included in a suppliers declaration, as far as this is relevant to the specific product categories. A set of examples is given in annex A, but this does not limit the scope of this Technical Report.

5.1 Product information/description

The following should be provided where applicable. This list should include, but not be limited to:

- type of product;
- brand name;
- model number;
- supplier;
- weight and dimensional characteristics (e.g. metric units).

An appropriate environmental policy, management system or programme may be declared.

5.2 Extension of product lifetime

The design considerations of the basic unit, which allow the product features and product capability/profile to be enhanced, should be listed.

The following should be declared:

- upgradability/extendibility;
- availability of spare parts for the product after end of production in years;
- availability of service for the product after end of production in years.

The service warranty/policy offered by the supplier should be listed.

If spare part and service availability is restricted, restrictions should be listed.

5.3 Power consumption

All relevant products and equipment should list the power consumption in watts for all modes appropriate to the product type.

Some examples are:

Computers	Copiers	Monitors	Printers	TV sets/Audio
Sleep	Standby	Sleep mode	Low power mode	Standby passive
Off	Off	Deep sleep	Off mode	Off mode
		Off		

Measurement should be performed using the procedure specified by the EPA Energy Star programme for the appropriate product. Publication IEC 107-1 should be used for TV sets.

If a product allows multiple levels of energy saving modes, these should be listed in the product declaration.

Products following any other guidelines can list this information with the appropriate measurement in the appropriate section(s) of the product declaration (annex A). The measurement protocols associated with these guidelines should be followed.

5.4 Radio frequency emissions

The declaration should include a statement of compliance with radio frequency emission requirements, listing the applicable legislation and standards or by referring to, for example:

- Declaration of Conformity (e.g. supplier's declaration relating to the CE marking);
- And/or any other requirement.

5.5 ELF/VLF emissions from VDUs

A declaration should be made, as appropriate, to electromagnetic near-field emissions which emanate from a visual display unit (VDU) which is defined as a "device for the presentation of information by the controlled excitation of a screen, regardless of the display technology or power source". This definition does not include displays used solely as machine status indicators or displays incapable of displaying more than four lines of text.

Public perception and increased requests from customers related to electromagnetic field emissions which emanate from monitors led to the Swedish guideline MPR II - 1990:8 for Band I and II ranges in both electric and magnetic fields, as well as electrostatic fields.

NOTE
This clause applies only to computer monitors and notebooks.

5.6 Acoustical noise

Noise emission information for relevant products should be provided as **declared sound power levels LwAd** and **sound pressure levels LpAm** for the operational and idle modes, the modes should be specified. For the sound pressure level, the measurement distance should be declared.

Measurements should be made according to standards ISO 3741, ISO 3742, ISO 3744 or ISO 3745 and the result declared according to ECMA-109 (ISO 9296:1988).

If a specific standard for the product is available, this standard should be used, e.g. for IT and telecommunication equipment, ECMA-74 (ISO 7779:1988).

5.7 Chemical emissions

Due to the lack of an international standard for measurement of chemical emissions (e.g. ozone, VOC, dust), it is recommended that the emission values are reported in terms of concentration (e.g. $mg/m^{3)}$ and/or emission rate (e.g. mg/hour) in full operation of the product. The measurement protocol shall be listed on the declaration.

NOTE
Recognising the need for such a standard, ECMA TC38 has set up a Task Group to draft such a standard.

5.8 Materials

A declaration should be made for at least the following substances (covered by legislation and/or voluntary initiatives) that they are not present in concentrations exceeding the natural background levels:

- asbestos;
- cadmium (in plastic materials, CRTs, packaging and inks);
- mercury;
- ozone depleting substances, according to those categories that are already banned in the Montreal protocol. ;
- chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
- lead contained in mechanical plastic parts heavier than 25 g;
- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

NOTE
Companies may however quote to a mechanical plastic part weight above 50 g instead of above 25 g.

The presence of any of the above listed substances which exceed natural background levels should be declared.

Determination of the material composition should be conducted in accordance with accepted industry practices.

5.9 Disassembly

The declaration should list any design feature that has been included in the product to facilitate disassembly and/or recycling by professionals.

For example:
- statement that mechanical plastic parts heavier than 25 g are marked according to ISO 11469;
- inclusion of snap-fit assembly;
- number and type of joints and fixings for major components.

5.10 Batteries

The following items should be declared for all batteries or accumulators contained in the product:

- the type of battery or accumulator (e.g. nickel-cadmium) used;
- its weight;
- batteries used in the product are in conformance with the EU Directives 91/157/EEC ('hazardous substances'), 98/101/EC (amendment) and EU Directive 93/86/EEC ('marking requirements') and any other applicable national or regional regulations;
- information concerning the handling of the batteries in the product including proper installation, removal and disposal is given in the product documentation.

5.11 Product packaging

The following should be declared:

- type and weight of packaging materials (e.g. wood, paper/cardboard, plastic, etc.);
- marking of packaging materials (e.g. according to ISO 11469 or DIN 6120);
- any supplier initiated take-back schemes for used packaging;
- packaging should be in conformance with national guidelines, regulations and/or standards such as those implementing the EU Directive 94/62/EEC.

Various country and EU initiatives could include disposal, reuse and/or recycling instructions, types of materials permitted/banned, etc. Local ordinances may also apply.

5.12 Other take-back information

Statements on availability of take-back schemes for products and consumables should be given.

5.13 Documentation

The range of post-consumer recycled content should be declared. The paper bleaching method should be specified.

Annex A

Declaration of product environmental attributes

This annex contains a set of templates for eco-declarations, intended as examples to help in the application of this Technical Report. The scope of this TR is not limited to these examples.

Alternative media (electronic files, electronic transfer, other) and identification technologies (bar-codes, identification units, other) may be used for automated transfer and exchange of the data in these declarations.

Table A.1 – Overview of attributes to be declared for selected product categories

Declaration item and clause	Cam-corder	Copier/ Printer	Hi-fi System	Mobile phone	Monitor	Note-book	PC	P.D.A	Server	S.U.C	TV (CRT)	VCR
Product information/description - 5.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Voluntary environmental programme	V	V	V	V	V	V	V	V	V	V	V	V
Extension of product lifetime - 5.2												
▪ Service availability	Y	Y	Y	Y	Y	Y	Y	Y	Y	N/A	Y	Y
▪ Upgradability	N/A	V	V	V	N/A	Y	Y	Y	Y	N/A	*V	N/A
▪ Extendibility	V	V	V	V	N/A	Y	Y	Y	Y	N/A	*V	N/A
Power consumption - 5.3												
▪ Data for applicable modes	Y	Y	Y	Y	Y	Y	Y	Y	V	N/A	Y	Y
Radio frequency emissions - 5.4	V	V	V	V	V	V	V	V	V	N/A	V	V
ELF/VLF emissions from VDUs - 5.5	N/A	N/A	N/A	N/A	V (*)	V	N/A	N/A	N/A	N/A	N/A	N/A
Acoustical noise - 5.6	V	Y	V	N/A	**N/A	Y	Y	N/A	Y	N/A	N/A	V
Chemical emissions* - 5.7**	***	V	***	***	***	***	***	***	***	***	***	***
Materials - 5.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Disassembly - 5.9	V	Y	V	V	Y	Y	Y	Y	Y	Y	V	V
Batteries - 5.10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Packaging - 5.11	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Other take back information - 5.12	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Documentation - 5.13	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

*: *V applies to digital and Internet TV only, N/A applies to all other types of TV*
**: *V if equipped with a fan*
***: *A specific task group is working on the subject*

Attributes which are not applicable or where nothing can be declared should be left out.

The declaration items indicated with

- *Y shall be included in a product declaration according to ECMA TR/70*
- *N/A not applicable*
- *V may be included in a product declaration according to ECMA TR/70*
- *(*) N/A to a LCD monitor*

Product environmental attributes declaration form according to ECMA-TR/70

Camcorder

Supplier's Name: ....

Supplier's Address: ....

**declares (based on product specification or test results obtained from sample testing,)
that the product**

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system, not including projecting parts & controls)

conforms to the following voluntary environmental programme requirements:

- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Extension of lifetime**
  The system is extendible as follows:
  - …
  - …

  The manufacturer offers
  - spare parts availability .... years after end of production
  - service availability .... years after end of production
  - warranty .... years

- **Power consumption**
  - a.c. power adapter type:
    - Without load .... W
    - While loading average loading process .... W
    - Charging time, full charge .... min

- **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  - the product complies with 89/336/EEC CE-mark (EMC-Directive);
  - or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

- **Acoustical noise**
  declared **sound** power level **sound** pressure level at .... distance
      record mode: .... bel record mode .... dB(A)
  Record mode is defined as …

- **Materials**

  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury (except fluorescent lamp of back light);
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

  in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Remote control battery: Memory back-up battery:
  - Battery type   ....   - Battery type   ....
  - Weight: ....   - Weight: ....

  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Copier

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

* …

conforms to the environmental specifications, as listed in the ECO-declaration below:

* **Extension of lifetime**
  The system is upgradable/extendible as follows:
  * …
  * …

  The manufacturer offers
  * spare parts availability   .... years after end of production
  * service availability   .... years after end of production (depends on service level agreement, business to business)
  * warranty   .... years (depends on service level agreement, business to business)

* **Power consumption**
  * Standby   .... W
  * OFF mode: .... W according to Energy Star

* **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  * the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  * or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

* **Acoustical noise**
  declared **sound** power level   **sound** pressure level at   .... distance
  operational mode(s):   .... bel   operational mode(s)   .... dB(A)
  idle mode: .... bel   idle mode   .... dB(A)
  Operational mode is defined as …

* **Chemical emissions:**
  Ozone   ………. mg/m^3
  Dust   ………. mg/m^3
  Styrene   ………. mg/m^3

  The measuring methods should be stated.

- **Materials**

  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury;
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

  in concentrations exceeding the natural background levels.

  The flame retardant system should be specified.

- **Disassembly**

  The system is designed for disassembly, by using:
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Memory back-up battery:
  - Battery type   ....
  - Weight: ....

  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructions concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.

Product environmental attributes declaration form according to ECMA-TR/70

Hi-fi systems

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Extension of lifetime**
  The system is upgradable/extendible as follows:
  - …
  - …

  The manufacturer offers
  - spare parts availability .... years after end of production
  - service availability .... years after end of production
  - warranty .... years

- **Power consumption**
  - Standby passive .... W
  - Standby active (if available) .... W
  - OFF mode: .... W

- **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  - the product complies with 89/336/EEC CE-mark (EMC-Directive);
  - or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

- **Acoustical noise**
  declared **sound** power level   **sound** pressure level at   .... distance
       Play mode: .... bel   Play mode   .... dB(A)
  Play mode is defined as …

- **Materials**
  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury;

- ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
- chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
- lead contained in mechanical plastic parts heavier than 25 g;
- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**
  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**
  The product or accessories contains the following batteries:
  Remote control battery:
  - Battery type   ....
  - Weight: ....
  Memory back-up battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**
  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**
  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Mobile phone

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....
Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x 8 cm x 3 cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

• …

conforms to the environmental specifications, as listed in the ECO-declaration below:

• **Extension of lifetime**
   The system is upgradable/extendible as follows:

   • …
   • …

   The manufacturer offers
   • spare parts availability   .... years after end of production
   • service availability   .... years after end of production
   • warranty   .... years

• **Power consumption**
   • a.c. power adapter type:
      • Without load   .... W
      • While loading average loading process   .... W
   • Charging time, full charge   .... min

• **Radio frequency emissions**
   Regarding conformance with radio frequency emissions requirements,
   • the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
   • or is covered by a separate declaration of conformity.

   NOTE
   Chose the applicable option

• **Materials**
   The above described product does not contain:
   • asbestos;
   • cadmium (in plastic materials, packaging and inks);
   • mercury;
   • ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
   • chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
   • lead contained in mechanical plastic parts heavier than 25 g;

- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Memory back-up battery:
  - Battery type   ....
  - Weight: ....

  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Monitor (CRT type)

Supplier's Name: ....
Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....
Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

* …

conforms to the environmental specifications, as listed in the ECO-declaration below:

* **Extension of lifetime**
  The manufacturer offers
  * spare parts availability .... years after end of production
  * service availability .... years after end of production
  * warranty .... years

* **Power consumption**
  * sleep .... W
  * deep sleep .... W
  * OFF mode: .... W

* **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  * the product complies with 89/336/EEC CE-mark (EMC-Directive);
  * or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

* **ELF/VLF emissions**
  The above described product complies with the Swedish guideline:
  * MPR II-1990:8

* **Materials**
  The above described product does not contain:
  * asbestos;
  * cadmium (in plastic materials, packaging and inks);
  * mercury;
  * ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  * chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  * lead contained in mechanical plastic parts heavier than 25 g;

- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  No batteries contained in this product.

- **Packaging**
  - Type (e.g. carton and/or EPS) ....
  - Weight ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Monitor (LCD type)

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

* …

conforms to the environmental specifications, as listed in the ECO-declaration below:

* **Extension of lifetime**
  The manufacturer offers
  * spare parts availability   .... years after end of production
  * service availability   .... years after end of production
  * warranty   .... years

* **Power consumption**
  * sleep   .... W
  * deep sleep   .... W
  * OFF mode: .... W

* **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  * the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  * or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

* **Materials**
  The above described product does not contain:
  * asbestos;
  * cadmium (in plastic materials, packaging and inks);
  * ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  * chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  * lead contained in mechanical plastic parts heavier than 25 g;
  * PCB or PCT;
  * polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.
  in concentrations exceeding the natural background levels.
  Mercury contained in backlighting system … mg.

- **Disassembly**
  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**
  No batteries contained in this product.

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**
  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**
  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Notebook

Supplier's Name:	....
Supplier's Address:	....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type:	....
Model Number:	....
Weight:	… kg (non-packaged system)
Dimension:	… cm x 8 cm x 3 cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:
- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Extension of lifetime**
  The system is upgradable/extendible as follows:
  - memory
  - hard drive
  - card slots
  - attachable devices

  The manufacturer offers
  - spare parts availability .... years after end of production
  - service availability .... years after end of production
  - warranty .... years

- **Power consumption (connected to the mains, not charging)**
  - sleep .... W
  - deep sleep .... W
  - OFF mode: .... W

- **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  - the product complies with 89/336/EEC CE-mark (EMC-Directive);
  - or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

- **ELF/VLF emissions**
  The above described product complies with the Swedish guideline:
  - MPR II-1990:8

- **Acoustical noise**

declared **sound** power level		**sound** pressure level at	.... distance
operational mode:	.... bel	operational mode	.... dB(A)
idle mode:	.... bel	idle mode	.... dB(A)

  Operational mode is defined as …

- **Materials**

  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

  in concentrations exceeding the natural background levels.
  Mercury contained in backlighting system … mg

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:
  Memory back-up battery:
  - Battery type ....
  - Weight: ....

  Main battery:
  - Battery type ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS) ....
  - Weight ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Personal computer

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:
- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Extension of lifetime**
  The system is upgradable/extendible as follows:
  - Processor
  - Memory
  - Cache
  - RAM
  - Video
  - Hard disk capacity
  - Slots ….
  - Bays ….

  The manufacturer offers
  - spare parts availability .... years after end of production
  - service availability .... years after end of production
  - warranty .... years

- **Power consumption**
  - sleep .... W
  - OFF mode: .... W

- **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  - the product complies with 89/336/EEC CE-mark (EMC-Directive);
  - or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

- **Acoustical noise**
  declared **sound** power level   **sound** pressure level at .... distance
      operational mode: .... bel   operational mode .... dB(A)
      idle mode: .... bel   idle mode .... dB(A)
  Operational mode is defined as …

- **Materials**

  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury;
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

  in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:
  Memory back-up battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

**Personal digital assistant
(P.D.A)**

Supplier's Name: ....
Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....
Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

• …

conforms to the environmental specifications, as listed in the ECO-declaration below:

• **Extension of lifetime**
  The system is upgradable/extendible as follows:
  • memory
  • slots

  The manufacturer offers
  • spare parts availability   .... years after end of production
  • service availability   .... years after end of production
  • warranty   .... years

• **Power consumption (connected to the mains – not charging)**
  • sleep   .... W
  • deep sleep   .... W
  • OFF mode: .... W

• **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  • the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  • or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

• **Materials**
  The above described product does not contain:
  • asbestos;
  • cadmium (in plastic materials, packaging and inks);
  • ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  • chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  • lead contained in mechanical plastic parts heavier than 25 g;
  • PCB or PCT;

- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

Mercury contained in the back lighting system … mg

- **Disassembly**

  The system is designed for disassembly, by using:

  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Main battery:

  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:

  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:

  - proper removal
  - proper disposal

- **Packaging**

  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:

  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.

  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:

  - …

Product environmental attributes declaration form according to ECMA-TR/70

Printer

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Extension of lifetime**
  The system is upgradable/extendible as follows:
  - …
  - …

  The supplier offers to user
  - spare parts availability .... years after end of production
  - service availability .... years after end of production
  - warranty .... years
- **Power consumption**
  - low power mode: .... W
  - OFF mode: .... W according to Energy Star

- **Acoustical noise**
  declared **sound** power level   **sound** pressure level at   .... distance
      operational mode: .... bel   operational mode   .... dB(A)
  Operational mode is defined as … in accordance with ISO 9296 and ISO 7779.
  (describe operational mode, e.g. at 5 pages/min in normal print/copy mode)

- **Materials**
  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury;
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.
  in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries (if applicable)**

  The product or accessories contains the following batteries:

  Remote control battery:
  - Battery type   ....
  - Weight: ....

  Memory back-up battery:
  - Battery type   ....
  - Weight: ....

  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Server

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

• …

conforms to the environmental specifications, as listed in the ECO-declaration below:

• **Extension of lifetime**
  The system is upgradable/extendible as follows:
  • …
  • …

  The manufacturer offers
  • spare parts availability   .... years after end of production
  • service availability   .... years after end of production (depends on service level agreement)
  • warranty   .... years (depends on service level agreement)

• **Power consumption**
  • Would give voluntarily the maximum power rating

• **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  • the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  • or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

• **Acoustical noise**
  declared **sound** power level   **sound** pressure level at   .... distance
    operational mode: .... bel   operational mode   .... dB(A)
  Operational mode is defined as … in accordance with ISO 9296 and ISO 7779.

• **Materials**
  The above described product does not contain:
  • asbestos;
  • cadmium (in plastic materials, packaging and inks);
  • mercury;
  • ozone depleting substances, according to those categories that are already banned in the Montreal protocol;

- chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
- lead contained in mechanical plastic parts heavier than 25 g;
- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**
  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**
  The product or accessories contains the following batteries:
  Memory back-up battery:
  - Battery type   ....
  - Weight: ....
  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS)   ....
  - Weight   ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Custoifmers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**
  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**
  The documentation is made under use of post-consumer recycled paper.
  The paper is bleached by the following method:

Product environmental attributes declaration form according to ECMA-TR/70

Single use camera
(SUC)

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

- …

conforms to the environmental specifications, as listed in the ECO-declaration below:

- **Materials**
  The above described product does not contain:
  - asbestos;
  - cadmium (in plastic materials, packaging and inks);
  - mercury;
  - ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  - chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  - lead contained in mechanical plastic parts heavier than 25 g;
  - PCB or PCT;
  - polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.
  in concentrations exceeding the natural background levels.

- **Disassembly**
  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**
  The product or accessories contains the following batteries:
  Main battery:
  - Battery type   ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

The documentation includes instructional information concerning:
- proper removal
- proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS) ....
  - Weight ....

The packaging materials are marked according to (e.g. ISO 11469):

The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

The following guidelines and/or regulations apply:
- …

- **Take back information**
  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**
  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

TV sets (CRT)

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

• …

conforms to the environmental specifications, as listed in the ECO-declaration below:

• **Extension of lifetime**
  The system is upgradable/extendible as follows (applies only to Digital/Internet TV):
  • …
  • …

  The manufacturer offers
  • spare parts availability   .... years after end of production
  • service availability   .... years after end of production
  • warranty   .... years

• **Power consumption**
  • Standby passive   .... W
  • Standby active (if available) .... W
  • OFF mode: .... W

• **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  • the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  • or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

• **Materials**
  The above described product does not contain:
  • asbestos;
  • cadmium (in plastic materials, packaging, inks and CRT);
  • mercury;
  • ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
  • chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
  • lead contained in mechanical plastic parts heavier than 25 g;
  • PCB or PCT;

- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Remote control battery:
  - Battery type ....
  - Weight: ....

  Memory back-up battery:
  - Battery type ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS) ....
  - Weight ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Product environmental attributes declaration form according to ECMA-TR/70

Video Cassette Recorder (VCR)

Supplier's Name: ....

Supplier's Address: ....

declares (based on product specification or test results obtained from sample testing,) that the product

Product Name and type: ....

Model Number: ....

Weight: … kg (non-packaged system)

Dimension: … cm x … cm x … cm (**h** x **w** x **d,** non-packaged system)

conforms to the following voluntary environmental programme requirements:

* …

conforms to the environmental specifications, as listed in the ECO-declaration below:

* **Extension of lifetime**
  The system is upgradable/extendible as follows:
  * …
  * …

  The manufacturer offers
  * spare parts availability   .... years after end of production
  * service availability   .... years after end of production
  * warranty   .... years

* **Power consumption**
  * Standby mode I (e.g. display on)   .... W
  * Standby mode II (e.g. display off)   .... W
  * OFF mode: .... W

* **Radio frequency emissions**
  Regarding conformance with radio frequency emissions requirements,
  * the product complies with 89/336/EEC   CE-mark   (EMC-Directive);
  * or is covered by a separate declaration of conformity.

  NOTE
  Chose the applicable option

* **Acoustical noise**
  declared **sound** power level   **sound** pressure level at   .... distance
     Play mode: .... bel   Play mode   .... dB(A)
  Play mode is defined as …

* **Materials**
  The above described product does not contain:
  * asbestos;
  * cadmium (in plastic materials, packaging and inks);
  * mercury;

- ozone depleting substances, according to those categories that are already banned in the Montreal protocol;
- chloroparaffins with chain length 10-13 C atoms, chlorination greater than 50% contained in mechanical plastic parts heavier than 25 g;
- lead contained in mechanical plastic parts heavier than 25 g;
- PCB or PCT;
- polybrominated biphenyls and their ethers (CAS 32534-81-9, 32536-52-0, 1163-19-5, 13654-09-6) contained in mechanical plastic parts heavier than 25 g.

in concentrations exceeding the natural background levels.

- **Disassembly**

  The system is designed for disassembly, by using:
  - e.g. marking of plastic parts >25 g according to ISO 11469
  - e.g. screws one type
  - e.g. snap-in features
  - ...

- **Batteries**

  The product or accessories contains the following batteries:

  Remote control battery:
  - Battery type ....
  - Weight: ....

  Memory back-up battery:
  - Battery type ....
  - Weight: ....

  The batteries are in conformance with:
  - 91/157/EEC (hazardous substances)
  - 93/86/EEC (marking)
  - 98/101/EC (amendment to 91/157/EEC)

  The documentation includes instructional information concerning:
  - proper removal
  - proper disposal

- **Packaging**
  - Type (e.g. carton and/or EPS) ....
  - Weight ....

  The packaging materials are marked according to (e.g. ISO 11469):

  The supplier offers packaging take back and recycling services in many locations throughout the world. Public packaging recovery systems might also be used where possible. Customers are advised to contact their supplier representatives for additional information.

  The following guidelines and/or regulations apply:
  - …

- **Take back information**

  The supplier offers take back and recycling services for products and consumables in many locations throughout the world. Customers are advised to contact their supplier representatives for additional information.

- **Documentation**

  The documentation is made under use of post-consumer recycled paper.
  - Post-consumer content: .....% to %.........

  The paper is bleached by the following method:
  - …

Annex B

Bibliography

This annex lists documents that are of interest for the users of this Technical Report. This list does not pretend to represent an exhaustive survey, nor do all the listed documents apply to every product class within the scope of the Technical Report.

B.1 ECMA

Standards

ECMA-108   Measurement of high frequency noise emitted by computer and business equipment (ISO 9295)

ECMA-160   Determination of sound power levels of computer and business equipment using sound intensity measurements; scanning method in controlled rooms

ECMA-172   Procedure for the measurement of emissions of electric and magnetic fields from VDUs from 5 Hz to 400 kHz

Technical Reports

ECMA TR/27   Methods for the prediction of installation noise levels

ECMA TR/56   Recommended measuring method for Ozone emissions

ECMA TR/62   Product noise emission of computer and business equipment

B.2 ISO

ISO 4871:1996   Acoustics - Declaration and verification of noise emission values of machinery and equipment

ISO 7574:1985   Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment (five parts)

ISO 7708:1995   Air quality - particle size fraction definitions for health related sampling

ISO 9295:1988   Measurement of high frequency noise emitted by computer and business equipment

ISO/IEC 11159:1996   Office equipment - Minimum information to be included in specifications sheets - Copying machines

ISO/IEC 11160   Office equipment - Minimum information to be included in specifications sheets - Printers - Part1 and Part2

ISO 11690-2:1996   Acoustics - Recommended practice for the design of low-noise workplaces containing machinery - Part 2: Noise control measures

ISO/DIS 14004:1996   Environmental management systems - General guidelines on principles, systems and supporting techniques

ISO/DIS 14010:1996   Guidelines for environmental auditing - General principles

ISO/DIS 14011:1996   Guidelines for environmental auditing - Audit procedures - Auditing of environmental management systems

ISO/DIS 14012:1996   Guidelines for environmental auditing - Qualification criteria for environmental auditors

ISO 14021   Environmental labels and declarations - Self-declaration environmental claims - Guidelines and definition and usage of terms

ISO 14040   Environmental management - Life cycle assessment - Principles and framework

ISO 14050   Environmental management - Vocabulary

B.3 IEC

IEC Guide 109   Environmental aspects - Inclusion in electrotechnical product standards

IEC 950:1991   Safety of information technology equipment including electrical business equipment

B.4   CEN

pr EN 13428	Packaging - Avoidance of packaging waste by protection of resources
pr EN 13429	Packaging - Reuse
pr EN 13430	Packaging - Requirements for Packaging suitable for Material Recycling
pr EN 13431	Packaging - Requirements for Packaging suitable for Thermal Recovery including Definition of the Minimum Calorie Value
pr EN 13432	Requirements for Recovery of Packaging by Composting or biological Degradation - Testing Scheme and Criteria for the Classification of Packagings
PR EN 50279	Visual Display Units – Measuring methods for low frequency electric and magnetic fields

B.5   European Union (EU)

VDI Berichte Nr. 1122, 1994	The European collaboration action indoor air quality and its impact on man: scope, purpose, implementation, results and ongoing activities
89/391/EEC	Council directive on the minimum Health & Safety requirements regarding the exposure of workers to the risk arising from physical agents
EUR 13 593	Environment and quality of life: Guideline for the characterization of volatile organic compounds emitted from indoor materials and products using small test chambers

B.6   Germany

RAL-UZ 78	July 1994 and March 1996: Basic criteria for the award of the environmental label - Environmentally acceptable workstation computers
ZVEI	Substances contained in products of the electrical/ electronic industry, Germany, 1995.

B.7   Sweden

SITO, May 16, 1995	Product declaration for computers
SITO, March 1996	Eco Declaration - Copiers
SITO, May 16, 1995	Product declaration - Monitors
SITO, May 16, 1995	Product declaration - Copiers
SITO, May 16, 1995	Product declaration - Fax Machines
SITO, May 16, 1995	Product declaration - Toner
SITO, May 16, 1995	Product declaration - Ink cartridges
SITO, May 16, 1995	Product declaration - Printers
TCO '95	Test methods for environmental. labelling of computer systems, 2nd edition May 22, 1995

B.8   Swiss Federal Office of Energy

E2000	Ordinance on Energy Use 1996
730.01	Ordinance on Energy Use, 22 January 1992, Appendix 7 - 13
730.011.1	Ordinance on energetical testing procedures for telefax machines, 18 May 1994
730.011.2	Ordinance on energetical testing procedures for Copiers with Electrostatic Copying Processes for Normal Paper, 29 August 1994
730.011.5	Ordinance on energetical testing procedures for printers, 29 August 1994
730.017.3	Ordinance on energetical testing procedures for home video recorders, 29 August 1994
730.017.1	Ordinance on energetical testing procedures for mains operated television sets, 29 August 1994

B.9   United States Environmental Protection Agency (US EPA)

Energy Star Program	Memorandum of understanding for: computer, copier, monitor, printer, fax
EPA/600/4-84/041	Compendium of methods for the determination of toxic organic compounds in ambient air

B.10 Perkin-Elmer

No. 33   Thermal Desorption applications: Overview of sample strategies for organic pollutants in ambient air
No. 34   Field preparation and stabilization of volatile organic constituents
No. 35   On-line air analysis for volatile organic precursors
No. 36   Sample and analysis of Polychlorinated Biphenyls (PCB's)
No. 37   Sampling and analysis of atmospheric monoterpenes
No. 39   US EPA Monitoring Method TO-14