



IEC 62474

Edition 2.0 2018-11
REDLINE VERSION

INTERNATIONAL STANDARD



Material declaration for products of and for the electrotechnical industry

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 01.110; 13.020.01; 29.100

ISBN 978-2-8322-6338-9

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	6
1 Scope.....	9
2 Normative references	9
3 Terms and definitions	10
4 Requirements for material declarations.....	14
4.1 General.....	19
4.1.1 Overview	19
4.1.2 Conformity to the IEC 62474 standard	22
4.1.3 General requirements	23
4.2 Base data requirements	23
 4.2.1 Products	23
 4.2.2 Product parts	23
 4.2.3 Substances or substance groups listed in the IEC 62474 database with a mandatory reporting requirement.....	23
 4.2.4 Other requirements	23
4.3 Additional requirements	23
 4.3.1 Product parts	23
 4.3.2 Material classes (optional).....	23
 4.3.3 Materials (optional).....	23
 4.3.4 Substances or substance groups listed in the IEC 62474 database with a mandatory reporting requirement.....	23
 4.3.5 Substances or substance groups listed in the IEC 62474 database with an optional reporting requirement, as reference substances or substances or substance groups not listed in the IEC 62474 database	23
 4.3.6 Other requirements	23
4.2 Business information.....	23
4.3 Product information.....	23
4.4 Declaration for compliance requirements	23
4.4.1 General information	23
4.4.2 DSs and DSGs with mandatory reporting requirements.....	23
4.4.3 DSs and DSGs with optional reporting requirements.....	25
4.5 Composition declaration requirements	25
4.5.1 General requirements	25
4.5.2 Product parts	25
4.5.3 Materials	26
4.5.4 DSs and DSG substance(s) with mandatory reporting requirements.....	27
4.5.5 DSs and DSG substance(s) with optional reporting requirements.....	28
4.5.6 Other substance(s)	28
4.6 Material class declaration	28
4.7 Other information	29
4.7.1 Query lists	29
4.7.2 Attachments	29
4.7.3 Requester/responder mode.....	29
4.7.4 Distribution mode	29

5	Criteria and thresholds for substances DSs, DSGs and material classes in the IEC 62474 database	19
5.1	General.....	29
5.2	Declarable substances DSs and DSGs criteria.....	29
5.3	Material class criteria.....	31
5.4	Reporting threshold levels and reportable applications for declarable substance groups and declarable substances DSs and DSGs.....	31
5.5	Threshold levels for material classes	31
5.6	Reference substances in the IEC 62474 database	31
6	Criteria for exemption lists in the IEC 62474 database.....	32
7	IEC 62474 database data format and exchange.....	32
7.1	General.....	32
7.2	Data exchange format.....	32
7.3	Data exchange.....	33
7.3.1	Two-way and one-way data exchange	33
7.3.2	Data exchange specification in the IEC 62474 database	33
7.3.3	Additional data exchange requirements	33
7.3.4	XML file	33
7.4	Criteria for the IEC 62474 database maintenance of data format and exchange information format.....	34
8	IEC 62474 database maintenance	34
8.1	General.....	34
8.2	IEC 62474 database update process.....	34
8.3	Reclassification and removal of substance groups and substances DSs and DSGs from the IEC 62474 database DSL.....	35
8.4	Maintenance of exemption lists in the IEC 62474 database.....	35
8.5	Maintenance of data format part exchange format of the IEC 62474 database	36

~~Annex A (informative) Examples corresponding to Clause 4 – Requirements for material declaration~~

~~Annex B (informative) Examples corresponding to Clause 6 – Data format and exchange~~

~~Annex C (informative) Examples corresponding to Clause 7 – IEC 62474 database management.....~~

~~Annex D (informative) Additional information~~

~~Annex E (informative) Declaration examples as XML files.....~~

Annex A (informative) Simplified representation of data exchange format 48

Bibliography..... 72

~~Figure 1 – Conceptual diagram for base requirements~~

~~Figure 2 – Conceptual diagram for additional requirements.....~~

~~Figure A.1 – Schematic representation of products versus product parts along the supply chain~~

~~Figure C.1 – Guidance to validation team on C-1 substance/ substance group change request review.....~~

Figure 1 – IEC 62474 principles	8
Figure 2 – Material declaration capabilities	20
Figure 3 – Material declaration structure	21
Figure 4 – Data model for a declaration for compliance.....	21
Figure 5 – Data model for a composition declaration.....	22
Table A.1 – Base data requirements – Business information	
Table A.2 – Example 1 – base data requirements – Substance/substance group information	
Table A.3 – Additional requirements – Business information	
Table A.4 – Additional requirements – Product part/material/substance group/substance information.....	
Table A.5 – Additional requirements – Material class information.....	
Table A.6 – Base data requirements – Business information.....	
Table A.7 – Example 2 – Base data requirements – Substance/substance group information	
Table A.8 – Additional requirements – Business information	
Table A.9 – Additional requirements – Product part/material/substance group/substance information.....	
Table A.10 – Additional Requirements – Material class information.....	
Table A.11 – Additional requirements – Business information	
Table A.12 – Additional requirements – Product part/material/substance group/substance information.....	
Table A.13 – Additional requirements – material class information.....	
Table D.1 – Comparison of IEC 62474 material classes to automotive industry material classes	
Table 1 – Declarable substances DSs and DSGs criteria	30
Table B.1 A.1 – Data element types of a material declaration	49

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MATERIAL DECLARATION FOR PRODUCTS OF
AND FOR THE ELECTROTECHNICAL INDUSTRY****FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 62474 has been prepared by IEC Technical Committee 111: Environmental standardization for electrical and electronic products and systems.

This second edition cancels and replaces the first edition published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) The material classes and exemption lists capabilities have been improved.
- b) The introduction and scope have new diagrams and information to give a better overview of the standard and identify what information is mandatory, optional or conditionally mandatory.
- c) Definitions have been added. Minimum requirements to be in conformance with the IEC 62474 standard are defined, including XML format as the officially accepted format. By defining an authority, list identity and list version, the standard format could be used for lists other than the IEC 62474 database.
- d) Terms have been aligned for consistency throughout the document. For example, the "IEC 62474 database" was previously referred to as "IEC 62474 database", "IEC 62474", "IEC 62474 Database", "IEC 62474 DB".
- e) The annexes have been removed as they are now contained within documents managed by the validation team 62474 (VT 62474). Annex A (Annex B in the previous edition) is provided for non-XML users as a reference only.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
111/498/FDIS	111/503/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62474 series, published under the general title *Material declaration for products of and for the electrotechnical industry*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

~~The electrotechnical industry tracks and declares specific information about the material composition of its products for compliance and environmentally conscious design requirements. The electrotechnical industry needs to gather information about the composition of products and product parts that are purchased from suppliers for incorporation into their products. Currently material declarations are driven by individual product manufacturer's specifications and there is no internationally accepted standardization. This results in economic inefficiencies. To simplify requirements across the supply chain and to improve economic efficiencies, it is necessary to standardize the exchange of material composition data and provide requirements for material declarations.~~

~~This International Standard benefits the electrotechnical industry by establishing requirements for reporting of substances and materials, standardizing protocols, and facilitating transfer and processing of data.~~

This document benefits the electrotechnical industry by establishing requirements for reporting of material declaration data, standardizing protocols, and facilitating the transfer and processing of data. Material declarations are used by the electrotechnical industry to track and declare specific product information used for compliance and/or environmentally conscious design (ECD) considerations. To simplify requirements across the supply chain and to improve economic efficiencies, it is important to standardize the exchange of product, product part, material and substance data, and provide requirements within material declarations.

IEC 62474 is made of two parts: this document, which contains requirements for material declarations and a database containing information such as a declarable substance list (DSL), exemption list and data exchange format (see Clause 8).

This document defines the two most common types of material declarations and their requirements:

- 1) Declaration for compliance – is always at a product level in reference to the list of declarable substances and declarable substance groups within the IEC 62474 declarable substance list (DSL).
- 2) Composition declaration – is the much more detailed product part level reporting down to individual substances contained within the IEC 62474 DSL.

The IEC 62474 database is maintained by the validation team (VT 62474) which updates information in the IEC 62474 database based on requirements specified in the IEC 62474 standard (see Clause 8).

By fulfilling the requirements of the IEC 62474 standard and based on the information from the IEC 62474 database, two types of declaration can be created as shown in Figure 1 below.

- a declaration for compliance which is the information required to determine product compliance with substance regulations and market needs (see 4.4);
- a composition declaration that is the information required to assess where declarable substances above threshold are contained in the product (see 4.5).

The transmission of information in the supply chain can be done in two modes:

- Distribution mode: The supplier provides material declaration data about their product(s) to a recipient.
- Requester/responder mode: The requester determines the type of material declaration(s) the responder will provide.

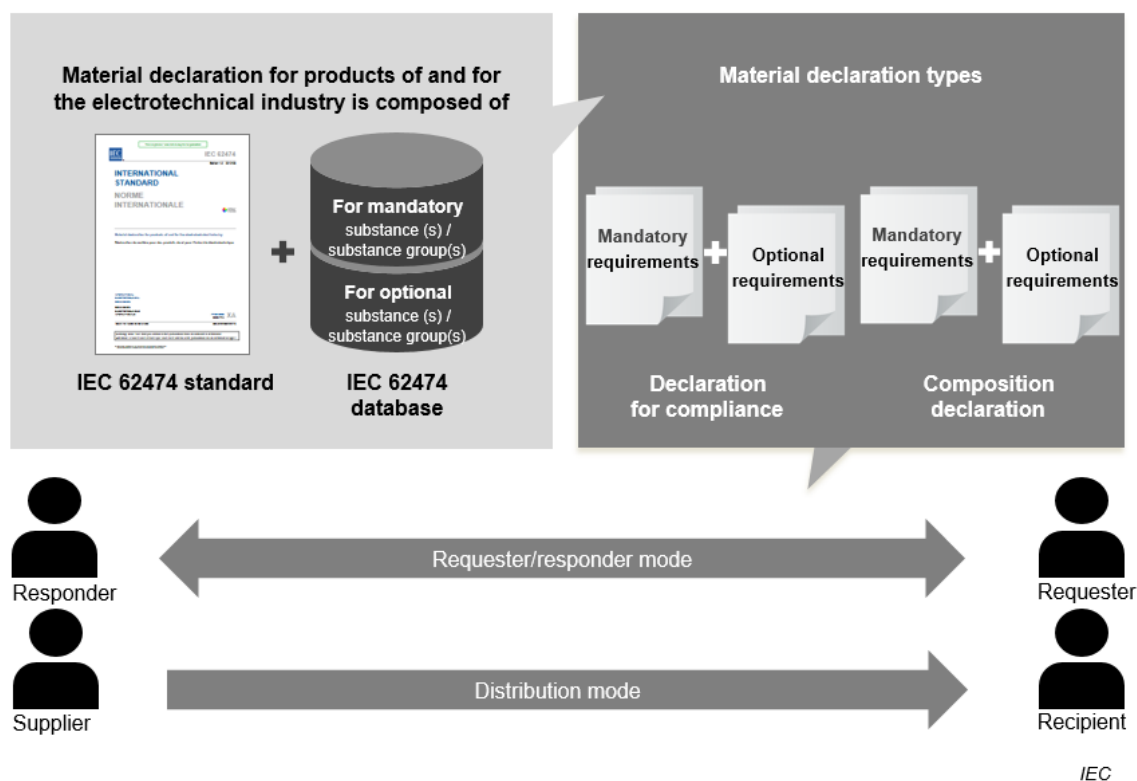


Figure 1 – IEC 62474 principles

The IEC 62474 principles are determined in the following clauses:

- Clause 4 specifies requirements for material declarations.
- Clause 5 specifies the criteria and thresholds for declarable substances (DSs), declarable substance groups (DSGs) and material classes in the IEC 62474 database.
- Clause 6 specifies the criteria for exemption lists in the IEC 62474 database.
- Clause 7 specifies the IEC 62474 database data format and exchange requirements with further information in Annex A (informative).
- Clause 8 specifies the IEC 62474 database maintenance process.

MATERIAL DECLARATION FOR PRODUCTS OF AND FOR THE ELECTROTECHNICAL INDUSTRY

1 Scope

This document specifies the procedure, content, and form relating to material declarations for products and accessories of ~~companies~~ organizations operating in and supplying to the electrotechnical industry. Process chemicals, emissions during product use and product packaging material are not in the scope of this document.

The main intended use of this document is to provide data ~~to downstream manufacturers up and down the supply chain~~ that:

- allows ~~them~~ organizations to assess products against substance ~~restriction~~ compliance requirements,
- ~~they can use~~ allows organizations to use this information in their environmentally conscious design process and across all product life cycle phases.

~~Clause 4 specifies requirements for a material declaration.~~

~~Clause 5 specifies the criteria for declarable substances and material classes in the IEC 62474 database associated with this standard.~~

~~Clause 6 specifies the data format and exchange requirements to be included in the IEC 62474 database.~~

~~Clause 7 specifies the process to regularly update and maintain the IEC 62474 database.~~

~~Although this International Standard specifies base requirements, it offers flexibility to product manufacturers and suppliers in the selection of additional requirements or information.~~

This document specifies mandatory declaration requirements and also provides optional declaration requirements.

This document does not ~~provide~~ suggest any specific method or process to capture material ~~composition data~~ declaration data in the supply chain. However, it provides a data format used to transfer information within the supply chain. Organizations have the flexibility to determine the most appropriate method to capture material ~~composition~~ declaration data without compromising data utility and quality. This document is intended to allow reporting based on engineering judgement, supplier material declarations, and/or ~~on~~ sampling and testing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61360-1, *Standard data element types with associated classification scheme* ~~for electric items~~ – Part 1: Definitions – Principles and methods

IEC 61360-2, *Standard data element types with associated classification scheme for electric components – Part 2: EXPRESS dictionary schema*

~~IEC 61360-5, *Standard data element types with associated classification scheme for electric components – Part 5: Extensions to the EXPRESS dictionary schema*~~

ISO/IEC Directives, IEC Supplement: ~~2011~~, *Procedures specific to IEC*

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Material declaration for products of and for the electrotechnical industry

**Déclaration de matières pour des produits de et pour l'industrie
électrotechnique**

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	8
4 Requirements for material declarations.....	12
4.1 General.....	12
4.1.1 Overview	12
4.1.2 Conformity to the IEC 62474 standard	15
4.1.3 General requirements	16
4.2 Business information.....	16
4.3 Product information.....	16
4.4 Declaration for compliance requirements	16
4.4.1 General information	16
4.4.2 DSs and DSGs with mandatory reporting requirements.....	16
4.4.3 DSs and DSGs with optional reporting requirements.....	18
4.5 Composition declaration requirements	18
4.5.1 General requirements	18
4.5.2 Product parts	18
4.5.3 Materials	19
4.5.4 DSs and DSG substance(s) with mandatory reporting requirements.....	20
4.5.5 DSs and DSG substance(s) with optional reporting requirements.....	21
4.5.6 Other substance(s)	21
4.6 Material class declaration	21
4.7 Other information	22
4.7.1 Query lists	22
4.7.2 Attachments	22
4.7.3 Requester/responder mode.....	22
4.7.4 Distribution mode.....	22
5 Criteria and thresholds for DSs, DSGs and material classes in the IEC 62474 database	22
5.1 General.....	22
5.2 DSs and DSGs criteria	22
5.3 Material class criteria	23
5.4 Reporting threshold levels and reportable applications for DSs and DSGs	24
5.5 Threshold levels for material classes	24
5.6 Reference substances in the IEC 62474 database	24
6 Criteria for exemption lists in the IEC 62474 database.....	24
7 IEC 62474 database data format and exchange.....	24
7.1 General.....	24
7.2 Data exchange format.....	25
7.3 Data exchange.....	25
7.3.1 Two-way and one-way data exchange	25
7.3.2 Data exchange specification in the IEC 62474 database	25
7.3.3 Additional data exchange requirements	26
7.3.4 XML file	26

7.4	Criteria for the IEC 62474 database maintenance of data exchange format.....	26
8	IEC 62474 database maintenance	26
8.1	General.....	26
8.2	IEC 62474 database update process.....	26
8.3	Reclassification and removal of DSs and DSGs from the IEC 62474 DSL.....	27
8.4	Maintenance of exemption lists in the IEC 62474 database	27
8.5	Maintenance of data exchange format.....	28
	Annex A (informative) Simplified representation of data exchange format	29
	Bibliography.....	35
	Figure 1 – IEC 62474 principles	7
	Figure 2 – Material declaration capabilities	13
	Figure 3 – Material declaration structure	14
	Figure 4 – Data model for a declaration for compliance.....	14
	Figure 5 – Data model for a composition declaration.....	15
	Table 1 – DSs and DSGs criteria	23
	Table A.1 – Data element types of a material declaration.....	30

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MATERIAL DECLARATION FOR PRODUCTS OF
AND FOR THE ELECTROTECHNICAL INDUSTRY**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62474 has been prepared by IEC Technical Committee 111: Environmental standardization for electrical and electronic products and systems.

This second edition cancels and replaces the first edition published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) The material classes and exemption lists capabilities have been improved.
- b) The introduction and scope have new diagrams and information to give a better overview of the standard and identify what information is mandatory, optional or conditionally mandatory.
- c) Definitions have been added. Minimum requirements to be in conformance with the IEC 62474 standard are defined, including XML format as the officially accepted format. By defining an authority, list identity and list version, the standard format could be used for lists other than the IEC 62474 database.

- d) Terms have been aligned for consistency throughout the document. For example, the “IEC 62474 database” was previously referred to as “IEC 62474 database”, “IEC 62474”, “IEC 62474 Database”, “IEC 62474 DB”.
- e) The annexes have been removed as they are now contained within documents managed by the validation team 62474 (VT 62474). Annex A (Annex B in the previous edition) is provided for non-XML users as a reference only.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
111/498/FDIS	111/503/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62474 series, published under the general title *Material declaration for products of and for the electrotechnical industry*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This document benefits the electrotechnical industry by establishing requirements for reporting of material declaration data, standardizing protocols, and facilitating the transfer and processing of data. Material declarations are used by the electrotechnical industry to track and declare specific product information used for compliance and/or environmentally conscious design (ECD) considerations. To simplify requirements across the supply chain and to improve economic efficiencies, it is important to standardize the exchange of product, product part, material and substance data, and provide requirements within material declarations.

IEC 62474 is made of two parts: this document, which contains requirements for material declarations and a database containing information such as a declarable substance list (DSL), exemption list and data exchange format (see Clause 8).

This document defines the two most common types of material declarations and their requirements:

- 1) Declaration for compliance – is always at a product level in reference to the list of declarable substances and declarable substance groups within the IEC 62474 declarable substance list (DSL).
- 2) Composition declaration – is the much more detailed product part level reporting down to individual substances contained within the IEC 62474 DSL.

The IEC 62474 database is maintained by the validation team (VT 62474) which updates information in the IEC 62474 database based on requirements specified in the IEC 62474 standard (see Clause 8).

By fulfilling the requirements of the IEC 62474 standard and based on the information from the IEC 62474 database, two types of declaration can be created as shown in Figure 1 below.

- a declaration for compliance which is the information required to determine product compliance with substance regulations and market needs (see 4.4);
- a composition declaration that is the information required to assess where declarable substances above threshold are contained in the product (see 4.5).

The transmission of information in the supply chain can be done in two modes:

- Distribution mode: The supplier provides material declaration data about their product(s) to a recipient.
- Requester/responder mode: The requester determines the type of material declaration(s) the responder will provide.

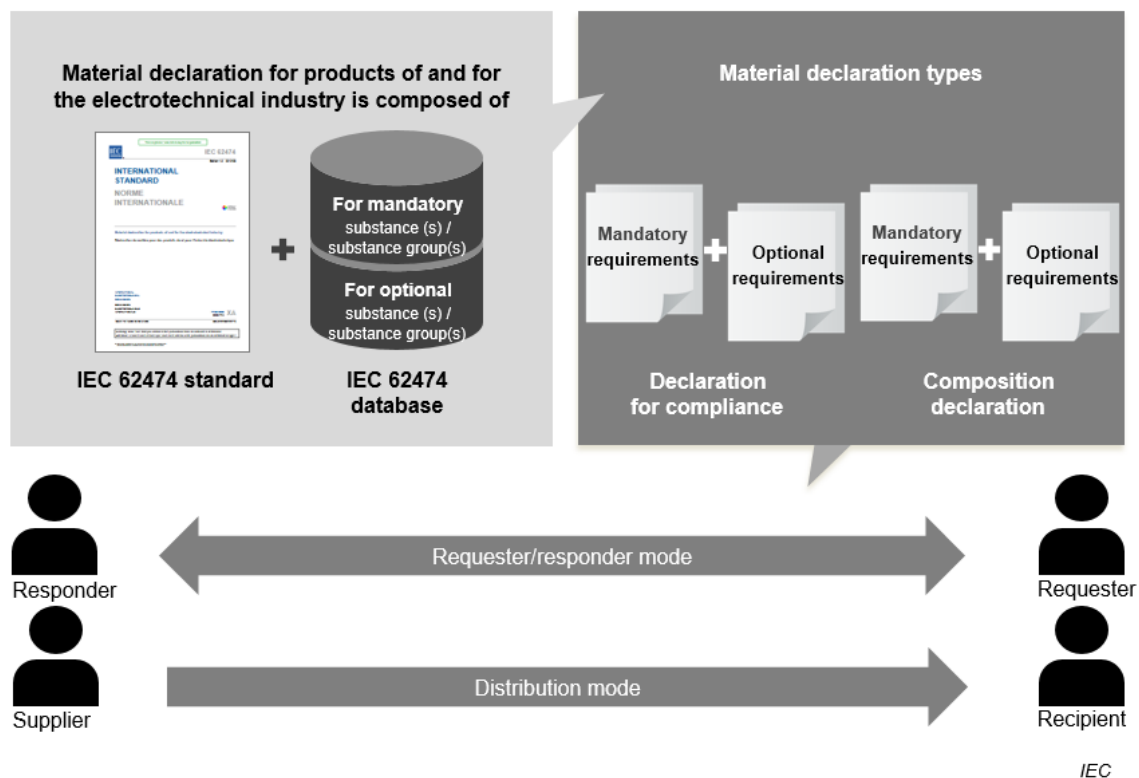


Figure 1 – IEC 62474 principles

The IEC 62474 principles are determined in the following clauses:

- Clause 4 specifies requirements for material declarations.
- Clause 5 specifies the criteria and thresholds for declarable substances (DSs), declarable substance groups (DSGs) and material classes in the IEC 62474 database.
- Clause 6 specifies the criteria for exemption lists in the IEC 62474 database.
- Clause 7 specifies the IEC 62474 database data format and exchange requirements with further information in Annex A (informative).
- Clause 8 specifies the IEC 62474 database maintenance process.

MATERIAL DECLARATION FOR PRODUCTS OF AND FOR THE ELECTROTECHNICAL INDUSTRY

1 Scope

This document specifies the procedure, content, and form relating to material declarations for products and accessories of organizations operating in and supplying to the electrotechnical industry. Process chemicals, emissions during product use and product packaging material are not in the scope of this document.

The main intended use of this document is to provide data up and down the supply chain that:

- allows organizations to assess products against substance compliance requirements,
- allows organizations to use this information in their environmentally conscious design process and across all product life cycle phases.

This document specifies mandatory declaration requirements and also provides optional declaration requirements.

This document does not suggest any specific method or process to capture material declaration data in the supply chain. However, it provides a data format used to transfer information within the supply chain. Organizations have the flexibility to determine the most appropriate method to capture material declaration data without compromising data utility and quality. This document is intended to allow reporting based on engineering judgement, supplier material declarations, and/or sampling and testing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61360-1, *Standard data element types with associated classification scheme – Part 1: Definitions – Principles and methods*

IEC 61360-2, *Standard data element types with associated classification scheme for electric components – Part 2: EXPRESS dictionary schema*

ISO/IEC Directives, IEC Supplement, *Procedures specific to IEC*

SOMMAIRE

AVANT-PROPOS	40
INTRODUCTION.....	42
1 Domaine d'application	45
2 Références normatives	45
3 Termes et définitions	45
4 Exigences pour les déclarations de matières	50
4.1 Généralités	50
4.1.1 Vue d'ensemble	50
4.1.2 Conformité à la norme IEC 62474	54
4.1.3 Exigences générales	54
4.2 Informations commerciales	54
4.3 Informations sur le produit	54
4.4 Exigences de déclaration pour conformité	55
4.4.1 Informations générales	55
4.4.2 DS et DSG avec exigences de déclaration obligatoires	55
4.4.3 DS et DSG avec exigences de déclaration facultatives	56
4.5 Exigences de déclaration de composition.....	57
4.5.1 Exigences générales	57
4.5.2 Parties de produits	57
4.5.3 Matières	58
4.5.4 DS et substance(s) de DSG avec exigences de déclaration obligatoires	58
4.5.5 DS et substance(s) de DSG avec exigences de déclaration facultatives	60
4.5.6 Autre(s) substance(s)	60
4.6 Déclaration de classes de matières.....	60
4.7 Autres informations	61
4.7.1 Listes des requêtes	61
4.7.2 Pièces jointes	61
4.7.3 Mode demandeur/déclarant	61
4.7.4 Mode diffusion	61
5 Critères et seuils pour les DS, DSG et classes de matières dans la base de données de l'IEC 62474.....	61
5.1 Généralités	61
5.2 Critères applicables aux DS et DSG.....	62
5.3 Critères de classes de matières	63
5.4 Niveaux de seuil de déclaration et applications à déclarer pour les DS et DSG.....	63
5.5 Niveaux de seuil pour des classes de matières	63
5.6 Substances de référence dans la base de données de l'IEC 62474	63
6 Critères applicables aux listes d'exemptions dans la base de données de l'IEC 62474.....	64
7 Format et échange de données de la base de données de l'IEC 62474	64
7.1 Généralités	64
7.2 Format d'échange de données	64
7.3 Échange de données	65
7.3.1 Échange de données bidirectionnel et unidirectionnel	65
7.3.2 Spécification de l'échange de données dans la base de données de l'IEC 62474.....	65

7.3.3	Exigences d'échanges de données supplémentaires	65
7.3.4	Fichier XML	66
7.4	Critères de maintenance de format d'échange de données de la base de données de l'IEC 62474	66
8	Maintenance de la base de données de l'IEC 62474	66
8.1	Généralités	66
8.2	Processus de mise à jour de la base de données de l'IEC 62474	66
8.3	Reclassification et retrait de DS et DSG de la DSL de l'IEC 62474.....	67
8.4	Maintenance des listes d'exemptions dans la base de données de l'IEC 62474	67
8.5	Maintenance du format d'échange de données	68
Annexe A (informative) Représentation simplifiée du format d'échange de données		69
Bibliographie.....		76
Figure 1 – Principes de l'IEC 62474		43
Figure 2 – Possibilités de la déclaration de matières.....		50
Figure 3 – Structure de la déclaration de matières		52
Figure 4 – Modèle de données pour une déclaration pour conformité.....		52
Figure 5 – Modèle de données pour une déclaration de composition.....		53
Tableau 1 – Critères applicables aux DS et DSG		62
Tableau A.1 – Types de données d'une déclaration de matières		70

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

DÉCLARATION DE MATIÈRES POUR DES PRODUITS DE ET POUR L'INDUSTRIE ÉLECTROTECHNIQUE

AVANT-PROPOS

- 1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets et de ne pas avoir signalé leur existence.

La Norme internationale IEC 62474 a été établie par le comité d'études 111 de l'IEC: Normalisation environnementale pour les produits et les systèmes électriques et électroniques.

Cette deuxième édition annule et remplace la première édition parue en 2012. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) Les possibilités des classes de matières et listes d'exemptions ont été améliorées.
- b) L'introduction et le domaine d'application comportent de nouveaux schémas et de nouvelles informations permettant de donner un meilleur aperçu de la norme et d'identifier les informations obligatoires, facultatives ou obligatoires sous conditions.
- c) Des définitions ont été ajoutées. Des exigences minimales devant être conformes à la norme IEC 62474 sont définies. Elles comprennent le format XML, considéré comme le

format officiellement reconnu. En définissant une autorité, un identifiant et une version de liste, le format de la norme peut être utilisé pour des listes autres que celles de la base de données de l'IEC 62474.

- d) Le document a été amélioré dans un souci d'homogénéisation des termes utilisés. Par exemple, la "base de données de l'IEC 62474" était référencée de différentes manières telles que "base de données de l'IEC 62474", "IEC 62474", "Base de données de l'IEC 62474", "BD IEC 62474".
- e) Les annexes ont été supprimées car elles sont contenues dans des documents gérés par l'équipe de validation 62474 (VT 62474). L'Annexe A (Annexe B de l'édition précédente) est destinée aux utilisateurs non XML, comme référence seulement.

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
111/498/FDIS	111/503/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62474, publiées sous le titre général *Déclaration de matières pour des produits de et pour l'industrie électrotechnique*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives au document recherché. A cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

IMPORTANT – Le logo "*colour inside*" qui se trouve sur la page de couverture de cette publication indique qu'elle contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer cette publication en utilisant une imprimante couleur.

INTRODUCTION

Le présent document apporte à l'industrie électrotechnique des avantages certains, en établissant les exigences de compte-rendu des données de déclaration de matières, en normalisant les protocoles et en facilitant le transfert et le traitement de données. Les déclarations de matières sont utilisées par l'industrie électrotechnique pour assurer le suivi et publier les informations spécifiques au produit en matière de conformité et/ou d'écoconception. Pour simplifier les exigences applicables à la chaîne logistique d'approvisionnement et améliorer l'efficacité économique du processus, il est important de normaliser l'échange des données concernant des produits, des parties de produits, des matières et des substances, et de préciser les exigences dans les déclarations de matières.

L'IEC 62474 est constitué de deux parties: le présent document, qui comprend les exigences en matière de déclarations de matières, et une base de données comprenant des informations telles qu'une liste des substances déclarables (DSL), une liste des exemptions et le format d'échange de données (voir l'Article 8).

Le présent document définit les deux types les plus courants de déclarations de matières et leurs exigences:

- 1) La déclaration pour conformité – se situe toujours au niveau du produit en référence à la liste de substances déclarables et de groupes de substances déclarables dans la liste de substances déclarables (DSL) de l'IEC 62474.
- 2) La déclaration de composition – est bien plus détaillée au niveau de la déclaration de la partie de produit et des substances individuelles contenues dans la DSL de l'IEC 62474.

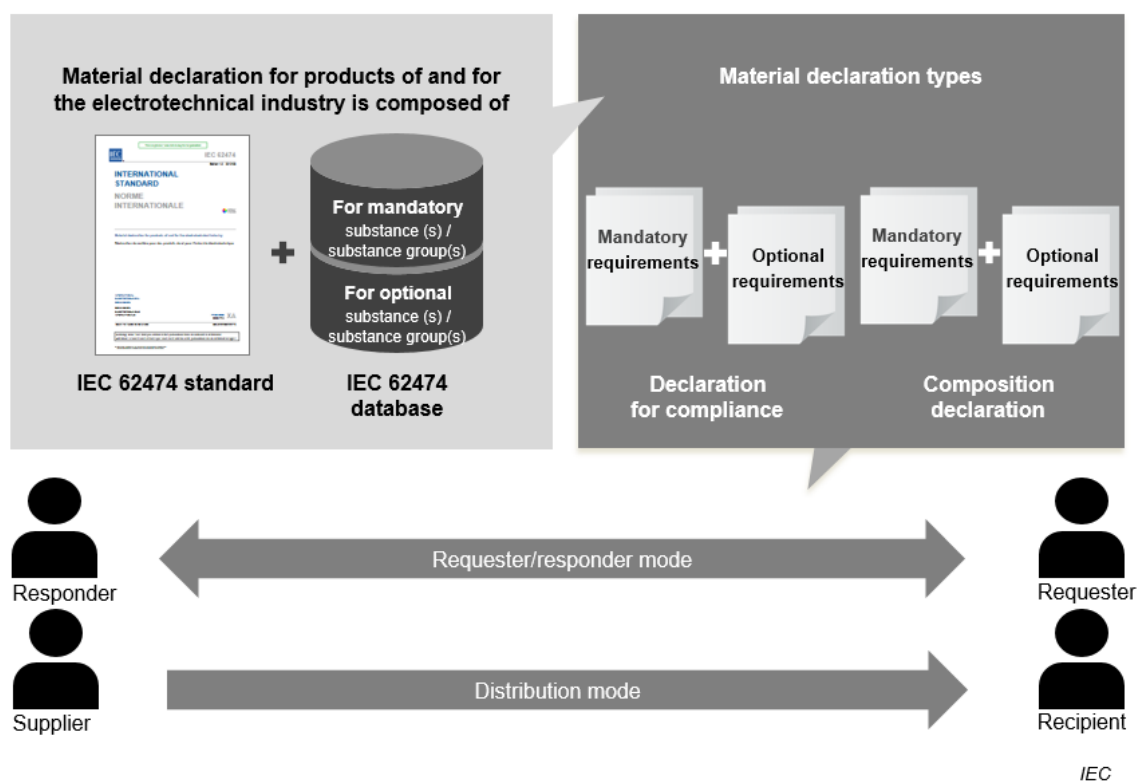
La base de données de l'IEC 62474 est tenue à jour par l'équipe de validation VT 62474 (VT – *validation team*) qui met à jour les informations de la base de données de l'IEC 62474 selon les exigences spécifiées dans la norme IEC 62474 (voir l'Article 8).

En suivant les exigences de la norme IEC 62474, et selon les informations de la base de données de l'IEC 62474, deux types de déclarations peuvent être créés comme représenté à la Figure 1 ci-après.

- une déclaration pour conformité qui comprend les informations exigées pour déterminer la conformité du produit eu égard à la réglementation des substances et aux besoins du marché (voir 4.4);
- une déclaration de composition qui comprend les informations exigées pour l'évaluation des substances déclarables au-dessus du seuil de déclaration et leur localisation dans le produit (voir 4.5).

Les informations peuvent être transmises dans la chaîne logistique d'approvisionnement selon deux modes différents:

- Mode diffusion: Le fournisseur fournit des données de déclaration de matières relatives à son ou ses produits à un destinataire.
- Mode demandeur/déclarant: Le demandeur détermine le type de déclaration(s) de matière que le déclarant fournit.



Anglais	Français
Material declaration for products of and for the electrotechnical industry is composed of	La déclaration de matières pour des produits de et pour l'industrie électrotechnique est composée de
IEC 62474 standard	Norme IEC 62474
For mandatory substance(s)/substance group(s)	Pour le(s) substance(s)/groupe(s) de substances obligatoire(s)
For optional substance(s)/substance group(s)	Pour le(s) substance(s)/groupe(s) de substances facultative(s)
IEC 62474 database	Base de données de l'IEC 62474
Material declaration types	Types de déclarations de matières
Mandatory requirements	Exigences obligatoires
Declaration for compliance	Déclaration pour conformité
Optional requirements	Exigences facultatives
Composition declaration	Déclaration de composition
Responder	Déclarant
Supplier	Fournisseur
Distribution mode	Mode diffusion
Requester/responder mode	Mode demandeur/déclarant
Requester	Demandeur
Recipient	Destinataire

Figure 1 – Principes de l'IEC 62474

Les principes de l'IEC 62474 sont établis dans les articles suivants:

- L'Article 4 spécifie les exigences applicables aux déclarations de matières.
- L'Article 5 spécifie les critères et les seuils pour les substances déclarables (DS), les groupes de substances déclarables (DSG) et les classes de matières dans la base de données de l'IEC 62474.

- L'Article 6 spécifie les critères pour les listes d'exemptions dans la base de données de l'IEC 62474.
- L'Article 7 spécifie les exigences de format et d'échange de données de la base de données de l'IEC 62474, des informations supplémentaires sont disponibles à l'Annexe A (informative).
- L'Article 8 spécifie le processus de maintenance de la base de données de l'IEC 62474.

DÉCLARATION DE MATIÈRES POUR DES PRODUITS DE ET POUR L'INDUSTRIE ÉLECTROTECHNIQUE

1 Domaine d'application

Le présent document décrit la procédure, le contenu et la forme des déclarations de matières pour les produits et les accessoires des organisations et des fournisseurs de l'industrie électrotechnique. Les processus chimiques, les émissions lors de l'utilisation du produit et les matières de conditionnement du produit ne relèvent pas du domaine d'application du présent document.

Le principal objectif du présent document est de fournir en amont et en aval de la chaîne logistique d'approvisionnement des données qui:

- permettent aux organisations d'évaluer des produits au vu des exigences de conformité des substances,
- peuvent être utilisées par les organisations dans le cadre de leur processus d'écoconception et dans toutes les phases du cycle de vie du produit.

Le présent document spécifie les exigences obligatoires et facultatives applicables aux déclarations de matières.

Le présent document ne propose aucune méthode ou aucun processus spécifique concernant la collecte des données des déclarations de matières dans la chaîne logistique d'approvisionnement. Il fournit toutefois un format de données utilisé pour communiquer les informations au sein de la chaîne logistique d'approvisionnement. Les organisations ont l'entière liberté de déterminer la méthode la plus appropriée de collecte des données des déclarations de matières pourvu que l'utilité et la qualité des données ne soient pas compromises. Il est prévu que le présent document permette l'élaboration de rapports fondés sur un jugement technique, des déclarations de matières de fournisseurs, et/ou des prélèvements et des essais.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 61360-1, *Types normalisés d'éléments de données avec plan de classification – Partie 1: Définitions – Principes et méthodes*

IEC 61360-2, *Types normalisés d'éléments de données avec plan de classification pour composants électriques – Partie 2: Schéma d'un dictionnaire EXPRESS*

ISO/IEC Directives, IEC Supplement, *Procedures specific to IEC* (disponible en anglais seulement)