

**Material declaration for products of and for the  
electrotechnical industry**

This document is a preview generated by EVS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 62474:2012 sisaldab Euroopa standardi EN 62474:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 62474:2012 consists of the English text of the European standard EN 62474:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.06.2012.	Date of Availability of the European standard is 08.06.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 01.110, 13.020, 29.100, 31.020

### Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:  
Aru 10, 10317 Tallinn, Eesti; [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

### The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:  
Aru 10, 10317 Tallinn, Estonia; [www.evs.ee](http://www.evs.ee); phone 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English version

**Material declaration for products  
of and for the electrotechnical industry  
(IEC 62474:2012)**

Déclaration de matière pour des produits  
de et pour l'industrie électrotechnique  
(CEI 62474:2012)

Materialdeklaration für Produkte  
der elektrotechnischen Industrie  
und für die elektrotechnische Industrie  
(IEC 62474:2012)

This European Standard was approved by CENELEC on 2012-04-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 111/243/FDIS, future edition 1 of IEC 62474, prepared by IEC/TC 111 "Environmental standardization for electrical and electronic products and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62474:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-01-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-26

This standard refers to a database that is associated with it and that will be maintained by IEC/TC 111. Hence all elements relating to this database are to be disregarded in the context of EN 62474. This applies in particular to Clause 7.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Endorsement notice

The text of the International Standard IEC 62474:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62430	NOTE	Harmonized as EN 62430.
IEC 82045-1:2001	NOTE	Harmonized as EN 82045-1:2001 (not modified).
IEC 82045-2:2004	NOTE	Harmonized as EN 82045-2:2005 (not modified).
ISO 1043-1:2001	NOTE	Harmonized as EN ISO 1043-1:2001 (not modified).
ISO 1043-2:2000	NOTE	Harmonized as EN ISO 1043-2:2001 (not modified).
ISO 1043-3:1996	NOTE	Harmonized as EN ISO 1043-3:1999 (not modified).
ISO 1043-4:1998	NOTE	Harmonized as EN ISO 1043-4:1999 (not modified).
ISO 9000:2005	NOTE	Harmonized as EN ISO 9000:2005 (not modified).
ISO 14020:2000	NOTE	Harmonized as EN ISO 14020:2001 (not modified).
ISO 14024:1999	NOTE	Harmonized as EN ISO 14024:2000 (not modified).
ISO 14025:2006	NOTE	Harmonized as EN ISO 14025:2010 (not modified).
ISO 14040:2006	NOTE	Harmonized as EN ISO 14040:2006 (not modified).

**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

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

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61360-1	-	Standard data elements types with associated classification scheme for electric items - Part 1: Definitions - Principles and methods	EN 61360-1	-
IEC 61360-2	-	Standard data element types with associated classification scheme for electric components - Part 2: EXPRESS dictionary schema	EN 61360-2	-
IEC 61360-5	-	Standard data element types with associated classification scheme for electric components - Part 5: Extensions to the EXPRESS dictionary schema	EN 61360-5	-
ISO/IEC directives Supplement	2011	Procedures specific to IEC	-	-

Review generated by EVS

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	8
4 Requirements for material declaration.....	9
4.1 General.....	9
4.2 Base data requirements.....	11
4.2.1 Products.....	11
4.2.2 Product parts.....	11
4.2.3 Substances or substance groups listed in the IEC 62474 database with a mandatory reporting requirement.....	11
4.2.4 Other requirements.....	12
4.3 Additional requirements.....	12
4.3.1 Product parts.....	12
4.3.2 Material classes (optional).....	12
4.3.3 Materials (optional).....	12
4.3.4 Substances or substance groups listed in the IEC 62474 database with a mandatory reporting requirement.....	13
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.....	13
4.3.6 Other requirements.....	14
5 Criteria and thresholds for substances and material classes in the IEC 62474 database.....	14
5.1 General.....	14
5.2 Declarable substances criteria.....	15
5.3 Material class criteria.....	16
5.4 Reporting threshold levels and reportable applications for declarable substance groups and declarable substances.....	16
5.5 Threshold levels for material classes.....	17
5.6 Reference substances in the IEC 62474 database.....	17
6 Data format and exchange.....	17
6.1 General.....	17
6.2 Data format.....	17
6.3 Data exchange.....	18
6.3.1 Two-way and one-way data exchange.....	18
6.3.2 Data exchange specification in the IEC 62474 database.....	18
6.3.3 Additional data exchange requirements.....	18
6.3.4 XML file.....	18
6.4 Criteria for the IEC 62474 database maintenance of data format and exchange information.....	18
7 IEC 62474 database maintenance.....	18
7.1 IEC 62474 database update process.....	18
7.2 Reclassification and removal of substance groups and substances from the IEC 62474 database.....	19
7.3 Maintenance of data format part of the IEC 62474 database.....	19

Annex A (informative) Examples corresponding to Clause 4 – Requirements for material declaration .....	20
Annex B (informative) Examples corresponding to Clause 6 – Data format and exchange .....	31
Annex C (informative) Examples corresponding to Clause 7 – IEC 62474 database management .....	38
Annex D (informative) Additional information .....	47
Annex E (informative) Declaration examples as XML files .....	49
Bibliography .....	52
Figure 1 – Conceptual diagram for base requirements .....	10
Figure 2 – Conceptual diagram for additional requirements .....	10
Figure A.1 – Schematic representation of products versus product parts along the supply chain .....	29
Figure C.1 – Guidance to validation team on C-1 substance/ substance group change request review .....	45
Table 1 – Declarable substances criteria .....	15
Table A.1 – Base data requirements – Business information .....	21
Table A.2 – Example 1 – base data requirements – Substance/substance <i>group</i> information .....	21
Table A.3 – Additional requirements – Business information .....	21
Table A.4 – Additional requirements – Product part/material/substance group/substance information .....	22
Table A.5 – Additional requirements – Material class information .....	23
Table A.6 – Base data requirements – Business information .....	24
Table A.7 – Example 2 – Base data requirements – Substance/substance group information .....	24
Table A.8 – Additional requirements – Business information .....	24
Table A.9 – Additional requirements – Product part/material/substance group/substance information .....	25
Table A.10 – Additional Requirements – Material class information .....	26
Table A.11 – Additional requirements – Business information .....	26
Table A.12 – Additional requirements – Product part/material/substance group/substance information .....	27
Table A.13 – Additional requirements – material class information .....	28
Table B.1 – Data element types of a material declaration .....	32
Table D.1 – Comparison of IEC 62474 material classes to automotive industry material classes .....	47

## 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 is a preview generated by EVS

# MATERIAL DECLARATION FOR PRODUCTS OF AND FOR THE ELECTROTECHNICAL INDUSTRY

## 1 Scope

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

The main intended use of this International Standard is to provide data to downstream manufacturers that:

- allows them to assess products against substance restriction compliance requirements
- they can use 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 International Standard does not provide any specific method to capture material composition data. Organizations have the flexibility to determine the most appropriate method to capture material composition data without compromising data utility and quality. This International Standard is intended to allow reporting based on engineering judgment, supplier material declarations, or on sampling and testing.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 Supplement: 2011, *Procedures Specific to IEC*