

REDLINE VERSION



Material declaration for products of and for the electrotechnical industry

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

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- 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.
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This Redline version is not an official Standard and is intended to provide the user with an indication of what changes have been made to the previous version. Only the IEC International Standard provided in this package is to be considered the official Standard.

This Redline version provides you with a quick and easy way to compare all the changes between this standard and its 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,
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- amended.

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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.

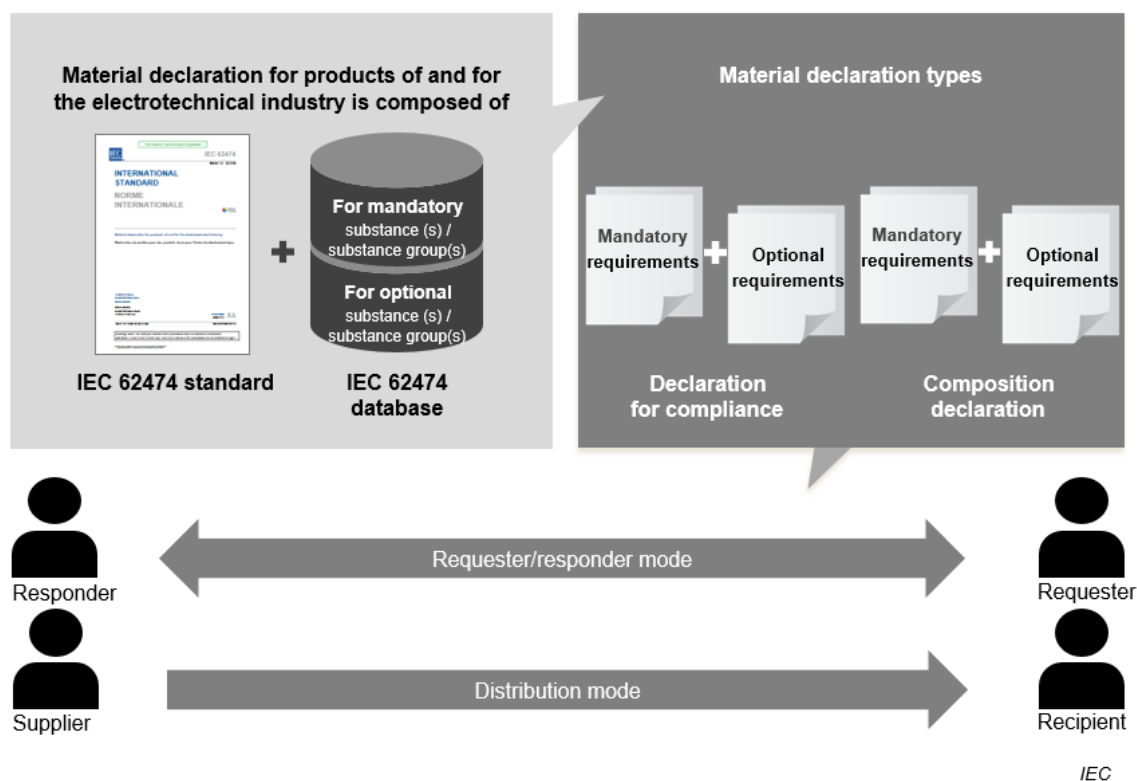


Figure 1 – IEC 62474 principles

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**

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INTRODUCTION

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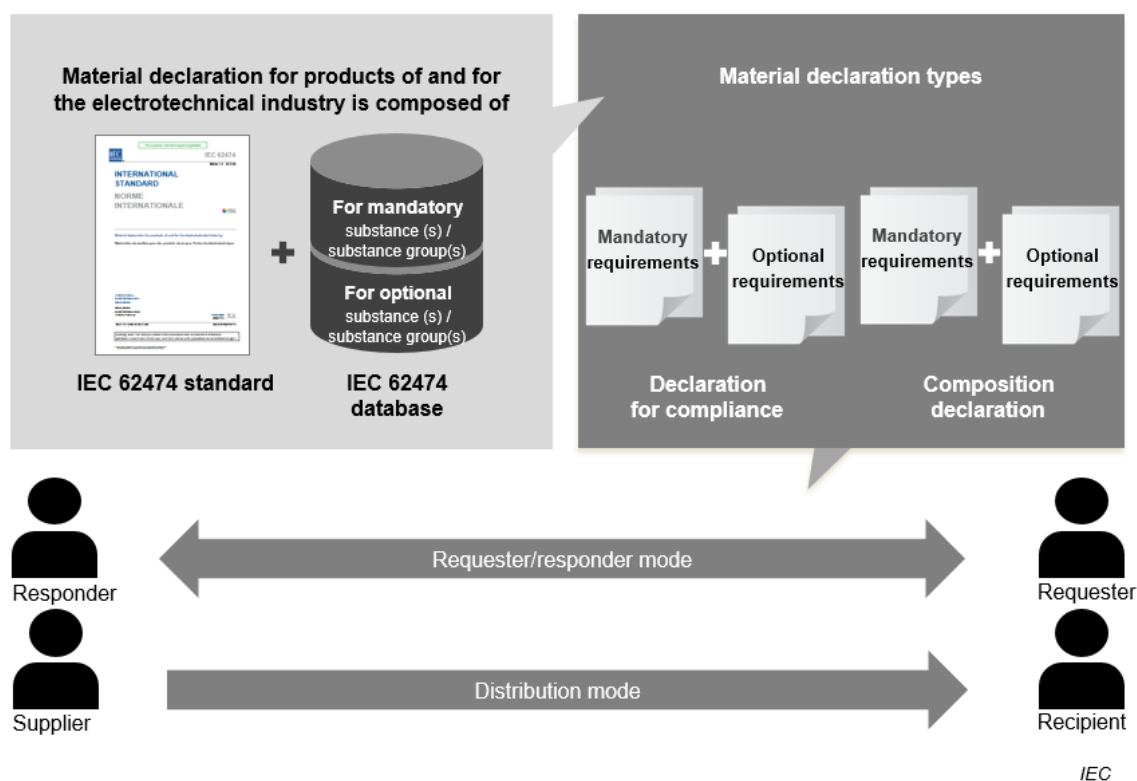


Figure 1 – IEC 62474 principles

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- 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.

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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.

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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.

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

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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

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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.

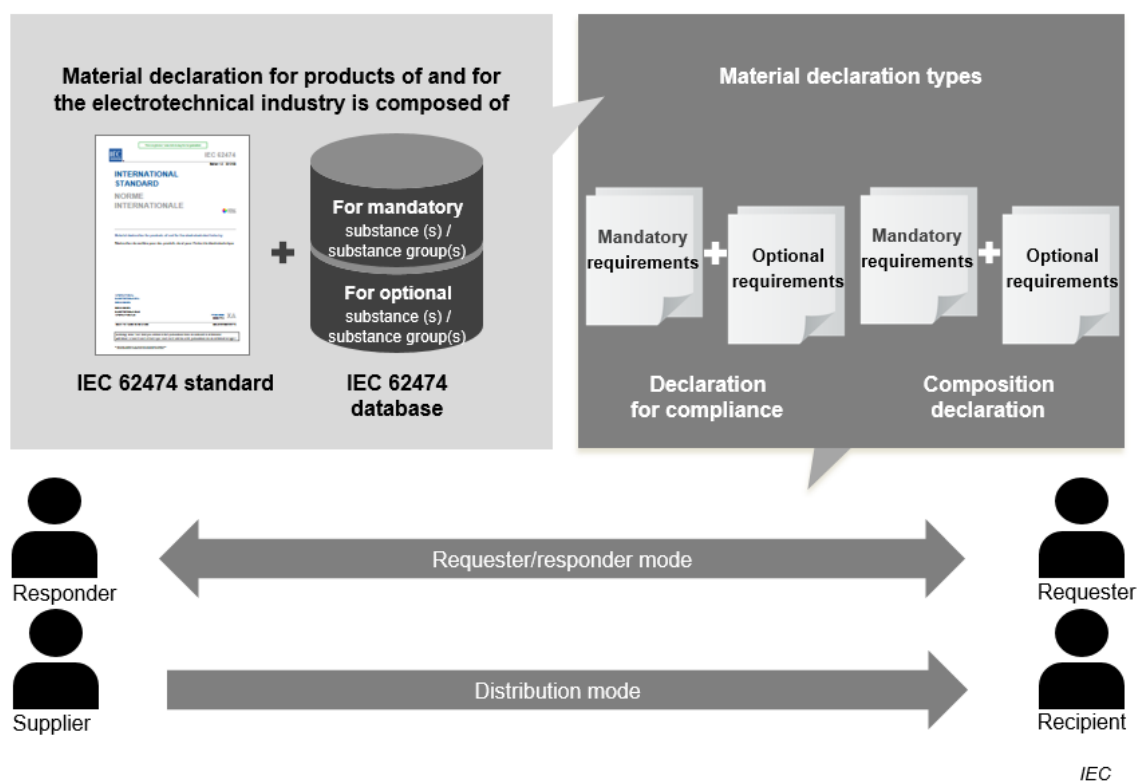
La base de données de l'IEC 62474 est tenue à jour par l'équipe de validation VT 62474 (VT – *validation team*) qui met à jour les informations de la base de données de l'IEC 62474 selon les exigences spécifiées dans la norme IEC 62474 (voir l'Article 8).

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)