

© Copyright SEK Svensk Elstandard. Reproduction in any form without permission is prohibited.

Guidance for evaluation of products with respect to substance-use restrictions in electrical and electronic products

(IEC Technical Report 62476:2010)

ISSN 1651-1417

ICS 13.020.00; 43.040.10

Upplysningar om **sakinnehållet** i rapporten lämnas av
SEK Svensk Elstandard.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Framework for evaluation of product.....	7
5 Restricted substance controls (RSC) considerations.....	9
5.1 Product planning and design considerations.....	9
5.2 Sources of Information/data	10
5.2.1 Data selection strategy.....	10
5.2.2 Supplier information	10
5.2.3 Analytical testing	11
5.2.4 Manufacturing and assembling process information	12
5.3 Product evaluation	13
6 Documentation of evaluation results	13
Annex A (informative) RSC content vs. existing industry ISO management system references	15
Annex B (informative) Elements to be evaluated in test reports.....	18
Bibliography.....	19
Figure 1 – Framework for evaluation of product	8

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GUIDANCE FOR EVALUATION OF PRODUCTS
WITH RESPECT TO SUBSTANCE-USE RESTRICTIONS
IN ELECTRICAL AND ELECTRONIC PRODUCTS**

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.

The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC/TR 62476, which is a technical report, has been prepared by subcommittee IEC technical committee 111: Environmental standardization for electrical and electronic products and systems.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
111/158/DTR	111/172/RVC

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

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

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

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

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

The restriction of substances in electrical and electronic products is a growing focus of regulation and customer specifications. Producers, therefore, have a greater need to establish processes to meet the substance restrictions requirements in such electrical and electronic products. Due to the complexity of the electrical and electronic industry supply chain, a flexible framework is necessary for the many different types of electrical and electronic product parts and equipment producers.

Criteria for the restriction of substances may differ from one piece of legislation to another and from one customer's requirement to another.

Generally, "presumption of conformity" is assumed. However, in the event of additional evidence being required, producers make relevant documentation available to interested parties. This documentation can be based on physical testing using analytical techniques. However, it is difficult to perform comprehensive analytical testing on complex products and therefore several different evaluation methods, such as information from the supply chain, may be needed.

The aim of this technical report is to provide guidance on the application and limitation of evaluation methods, and associated technical documentation, based on International Standards and industry practices.

The application of appropriate evaluation methods is defined by a producer for a specific product. This technical report provides the basis for a restricted substance control framework.

GUIDANCE FOR EVALUATION OF PRODUCTS WITH RESPECT TO SUBSTANCE-USE RESTRICTIONS IN ELECTRICAL AND ELECTRONIC PRODUCTS

1 Scope

IEC/TR, which is a technical report, provides a framework for the use of internationally accepted standards, tools and practices to evaluate electrical and electronic products with respect to restricted substances. This technical report can also be applied to declarable substances which are not restricted in electrical and electronic products.

This technical report provides guidance on how technical documentation and relevant evaluation and control methods should be selected and applied for restricted or declarable substances of any producer's product.

It is not intended for setting a new management scheme or for certification purposes. Evaluation and control methods for substances in products can be integrated into an existing management system, where available.

2 Normative references

There are no normative references. Informative references are noted in the bibliography.

NOTE This clause is included so as to respect IEC clause numbering.