

**Värvid ja lakid. Teraskonstruksioonide
korrosioonitõrje värvkattesüsteemidega.
Osa 2: Keskkondade liigitus**

Paints and varnishes - Corrosion protection of steel
structures by protective paint systems - Part 2:
Classification of environments

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 12944-2:2000 sisaldab Euroopa standardi EN ISO 12944-2:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 12944-2:2000 consists of the English text of the European standard EN ISO 12944-2:1998.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>Standardi see osa käsitleb peamiste teraskonstruktsioonide mõjutavate keskkondade liigitust ja nende keskkondade korrodeerivat toimet. Standardi osa määrab ümbritseva õhu korrodeerivuse kategooriad, mis põhinevad standardkatsekehade massikaol (või paksuse kaol), ja kirjeldab tüüpilisi keskkondi, milles konstruktsioonid paiknevad, andes näpunäiteid korrodeerivuse hindamiseks.</p>	<p>Scope:</p>
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Võtmesõnad: kaitsekatted, keskkonnad, korrodeerivad keskkonnad, korrosioon, korrosioonitõrje, lakid, liigitus, teraskonstruktsioon, värvid

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Descriptors: Paint coatings, corrosion protection, structural steelwork, classification, environments.

English version

Paints and varnishes

**Corrosion protection of steel structures by
protective paint systems**

Part 2: Classification of environments
(ISO 12944-2 : 1998)

Peintures et vernis – Anticorrosion
des structures en acier par systèmes
de peinture – Partie 2: Classification
des environnements
(ISO 12944-2 : 1998)

Beschichtungsstoffe – Korrosions-
schutz von Stahlbauten durch
Beschichtungssysteme – Teil 2:
Einteilung der Umgebungs-
bedingungen (ISO 12944-2 : 1998)

This European Standard was approved by CEN on 1997-06-16.

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

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

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

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard
ISO 12944-2 : 1998 Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 2: Classification of environments,
which was prepared by ISO/TC 35 ‘Paints and varnishes’ of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 139 ‘Paints and varnishes’, the Secretariat of which is held by DIN, as a European Standard.
This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by November 1998 at the latest.
In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 12944-2 : 1998 was approved by CEN as a European Standard without any modification.
NOTE: Normative references to international publications are listed in Annex ZA (normative).

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Introduction

Unprotected steel in the atmosphere, in water and in soil is subject to corrosion that may lead to damage. Therefore, to avoid corrosion damage, steel structures are normally protected to withstand the corrosion stresses during the service life required of the structure.

There are different ways of protecting steel structures from corrosion. ISO 12944 deals with protection by paint systems and covers, in the various parts, all features that are important in achieving adequate corrosion protection. Additional or other measures are possible but require particular agreement between the interested parties.

In order to ensure effective corrosion protection of steel structures, it is necessary for owners of such structures, planners, consultants, companies carrying out corrosion protection work, inspectors of protective coatings and manufacturers of coating materials to have at their disposal state-of-the-art information in concise form on corrosion protection by paint systems. Such information has to be as complete as possible, unambiguous and easily understandable to avoid difficulties and misunderstandings between the parties concerned with the practical implementation of protection work.

This International Standard — ISO 12944 — is intended to give this information in the form of a series of instructions. It is written for those who have some technical knowledge. It is also assumed that the user of ISO 12944 is familiar with other relevant International Standards, in particular those dealing with surface preparation, as well as relevant national regulations.

Although ISO 12944 does not deal with financial and contractual questions, attention is drawn to the fact that, because of the considerable implications of inadequate corrosion protection, non-compliance with requirements and recommendations given in this standard may result in serious financial consequences.

ISO 12944-1 defines the overall scope of all parts of ISO 12944. It gives some basic terms and definitions and a general introduction to the other parts of ISO 12944. Furthermore, it includes a general statement on health, safety and environmental protection, and guidelines for using ISO 12944 for a given project.

This part of ISO 12944 describes the environmental impact on steel structures. It covers structures exposed to the atmosphere as well as those immersed in water or buried in soil. For different atmospheric environments, a classification system based on corrosivity categories is presented. Different environments for immersed and buried structures are also described. All these environments are relevant to the choice of protective paint systems.

1 Scope

1.1 This part of ISO 12944 deals with the classification of the principal environments to which steel structures are exposed, and the corrosivity of these environments. It

- defines atmospheric-corrosivity categories, based on mass loss (or thickness loss) by standard specimens, and describes typical natural atmospheric environments to which steel structures are exposed, giving advice on the estimation of the corrosivity;
- describes different categories of environment for structures immersed in water or buried in soil;
- gives information on some special corrosion stresses that may cause a significant increase in corrosion rate or place higher demands on the performance of the protective paint system.

The corrosion stresses associated with a particular environment or corrosivity category represent one essential parameter governing the selection of protective paint systems.

1.2 This part of ISO 12944 does not deal with the classification of those environments that consist of special atmospheres (for example those in and around chemical and metallurgical plants).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 12944. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 12944 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9223:1992, *Corrosion of metals and alloys — Corrosivity of atmospheres — Classification*.

ISO 9226:1992, *Corrosion of metals and alloys — Corrosivity of atmospheres — Determination of corrosion rate of standard specimens for the evaluation of corrosivity*.

ISO 12944-1:1998, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 1: General introduction*.

EN 12501-1:—¹⁾, *Protection of metallic materials against corrosion — Corrosion likelihood in soil — Part 1: General*.

1) To be published.