

SLOVENSKI STANDARD SIST EN ISO 12944-5:2020

01-januar-2020

Nadomešča:

SIST EN ISO 12944-5:2018

Barve in laki - Protikorozijska zaščita jeklenih konstrukcij z zaščitnimi premaznimi sistemi - 5. del: Zaščitni premazni sistemi (ISO 12944-5:2019)

Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 5: Protective paint systems (ISO 12944-5:2019)

Beschichtungsstoffe - Korrosionsschutz von Stahlbauten durch Beschichtungssysteme - Teil 5: Beschichtungssysteme (ISO 12944-5:2019) (standards.iteh.ai)

Peintures et vernis - Anticorrosion des structures en acier par systèmes de peinture - Partie 5: Systèmes de peinture (ISO 12944-5:2019) (2e3189-861c-45da-b480-

75711006d3d7/sist-en-iso-12944-5-2020

Ta slovenski standard je istoveten z: EN ISO 12944-5:2019

ICS:

25.220.20 Površinska obdelava Surface treatment

87.020 Postopki za nanašanje Paint coating processes

barvnih premazov

91.080.13 Jeklene konstrukcije Steel structures

SIST EN ISO 12944-5:2020 en,fr,de

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 12944-5:2020 https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020 EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM EN ISO 12944-5

October 2019

ICS 87.020

Supersedes EN ISO 12944-5:2018

English Version

Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 5: Protective paint systems (ISO 12944-5:2019)

Peintures et vernis - Anticorrosion des structures en acier par systèmes de peinture - Partie 5: Systèmes de peinture (ISO 12944-5:2019)

Beschichtungsstoffe - Korrosionsschutz von Stahlbauten durch Beschichtungssysteme - Teil 5: Beschichtungssysteme (ISO 12944-5:2019)

This European Standard was approved by CEN on 3 September 2019.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Tceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 12944-5:2019 (E)

Contents	Page
European foreword	3

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 12944-5:2020</u> https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020

EN ISO 12944-5:2019 (E)

European foreword

This document (EN ISO 12944-5:2019) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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

This document supersedes EN ISO 12944-5:2018.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

iTeh STANDARD PREVIEW Endorsement notice (standards.iteh.ai)

The text of ISO 12944-5:2019 has been approved by CEN as EN ISO 12944-5:2019 without any modification.

https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 12944-5:2020 https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020

INTERNATIONAL STANDARD

ISO 12944-5

Fourth edition 2019-09

Paints and varnishes — Corrosion protection of steel structures by protective paint systems —

Part 5: **Protective paint systems**

iTeh STPeintures et vernis PAnticorrosion des structures en acier par systèmes de peinture —

Stand Systèmes de peinture anticorrosion

<u>SIST EN ISO 12944-5:2020</u> https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020



Reference number ISO 12944-5:2019(E)

ISO 12944-5:2019(E)

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 12944-5:2020</u> https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents		Page
Fore	eword	iv
Intro	oduction	v
1	Scope	
2	Normative references	
3	Terms and definitions	
4	Classification of environments	
5	New work and refurbishment 5.1 New work and total refurbishment 5.2 Partial refurbishment	3
6	Types of paint	4
	6.1 General	
	6.2 Examples of generic type of paints 6.2.1 Alkyd paints (AK)	
	6.2.2 Acrylic paints (AY)	
	6.2.3 Ethyl silicate paints (ESI)	5
	6.2.4 Paints for epoxy coatings (EP)	
	6.2.5 Paints for polyurethane coatings (PUR)	5
	6.2.6 Paints for polyaspartic coatings (PAS)	6
7		
	Paint systems 7.1 Priming coats and type of primers	6
	7.1.1 General	6
	7.1.2 Types of prime 1 EN 180 12944-3:2020	6
	7.1.1 General 7.1.2 Types of primers ISO 12944-5:2020 7.2 Subsequent coats itch ai/catalog/standards/sist/8f2e3189-861c-45da-b480-7.2.1 General 75711006d3d7/sist-en-iso-12944-5-2020	/ 7
	7.2.2 Intermediate coats	7
	7.2.3 Topcoats	
	7.3 Dry film thickness	
	7.4 Durability	
	7.5 Shop and site application	
8	Tables for protective paint systems for C2 to C5, Im1, Im2 and Im3	
	8.1 Reading the tables 8.2 Parameters influencing durability	
	8.3 Designation of the paint systems listed	
	8.4 Guidelines for selecting the appropriate paint system	
Ann	ex A (normative) Abbreviated terms and descriptions	10
Ann	ex B (normative) Minimum requirements for corrosion protection systems	11
	ex C (informative) Paint systems for carbon steel	
	ex D (informative) Paint systems on hot dip galvanized steel	
	ex E (informative) Paint systems on thermal-sprayed metallic coatings	
	ex F (informative) Pre-fabrication primers	
	iography	23

ISO 12944-5:2019(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 14, *Protective paint systems for steel structures*. ISO 12944-5:2020 https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-

This fourth edition cancels and replaces the third redition (ISO 1294425:2018), of which it constitutes a minor revision.

The changes compared to the previous edition are as follows:

- correction of the former doubled category "G5.02" in Tables D.1 to read "G5.02a" and "G5.02b";
- correction of the table headlines of <u>Tables B.3</u> and <u>B.4</u>;
- some editorial changes.

A list of all parts in the ISO 12944 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

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

There are different ways of protecting steel structures from corrosion. ISO 12944 (all parts) 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, owners of such structures, planners, consultants, companies carrying out corrosion protection work, inspectors of protective coatings and manufacturers of coating materials need to have at their disposal state-of-the-art information in concise form on corrosion protection by paint systems. It is vital that such information is as complete as possible, unambiguous and easily understandable to avoid difficulties and misunderstandings between the parties concerned with the practical implementation of protection work.

ISO 12944 (all parts) 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 (all parts) is familiar with other relevant International Standards, in particular those dealing with surface preparation.

Although ISO 12944 (all parts) 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 ISO 12944 (all parts) can result in serious financial consequences. (standards.iteh.ai)

ISO 12944-1 defines the overall scope 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 (all parts) for a given project.

This document gives some terms and definitions related to paint systems in combination with guidance for the selection of different types of protective paint system.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 12944-5:2020 https://standards.iteh.ai/catalog/standards/sist/8f2e3189-861c-45da-b480-75711006d3d7/sist-en-iso-12944-5-2020