ICS 25.220.10 SLOVENSKÁ TECHNICKÁ NORMA Júl 2017

STN	**Príprava oceľových podkladov pred aplikáciou náterových látok a podobných výrobkov Skúšky na posudzovanie čistoty povrchu Časť 2: Laboratórne stanovenie chloridov na čistenom povrchu (ISO 8502-2: 2017)**	**STN EN ISO 8502-2** 03 8224

Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 2: Laboratory determination of chloride on cleaned surfaces (ISO 8502-2:2017)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

Obsahuje: EN ISO 8502-2:2017, ISO 8502-2:2017

Oznámením tejto normy sa ruší
STN EN ISO 8502-2 (03 8224) z apríla 2006

125006

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8502-2

February 2017

ICS 25.220.10

Supersedes EN ISO 8502-2:2005

English Version

Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 2: Laboratory determination of chloride on cleaned surfaces (ISO 8502-2:2017)

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés - Essais pour apprécier la propreté d'une surface - Partie 2: Recherche en laboratoire des chlorures sur les surfaces nettoyées (ISO 8502-2:2017)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Prüfungen zum Beurteilen der Oberflächenreinheit - Teil 2: Laborbestimmung von Chlorid auf gereinigten Oberflächen (ISO 8502-2:2017)

This European Standard was approved by CEN on 19 September 2016.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword

This document (EN ISO 8502-2:2017) 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 August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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

This document supersedes EN ISO 8502-2:2005.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8502-2:2017 has been approved by CEN as EN ISO 8502-2:2017 without any modification.

INTERNATIONAL STANDARD

ISO 8502-2

Third edition
2017-01

Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness —

Part 2: Laboratory determination of chloride on cleaned surfaces

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés — Essais pour apprécier la propreté d'une surface —

Partie 2: Recherche en laboratoire des chlorures sur les surfaces nettoyées

Reference number
ISO 8502-2:2017(E)

COPYRIGHT PROTECTED DOCUMENT

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

Contents

Page

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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 12, *Preparation of steel substrates before application of paints and related products*.

This third edition cancels and replaces the second edition (ISO 8502-2:2005), which has been technically revised with the following changes:

a) the analysis method has been deleted;

b) a selection of analysis methods from other standards have been added;

c) the coulometric method has been added and briefly described in an informative annex;

d) the formula in Clause 7 has been replaced by Formula (1) transforming chloride concentration in a solution to amount of chloride on the surface;

e) the document has been editorially revised.

ISO 8502 consists of the following parts, under the general title *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness:*

— *Part 2: Laboratory determination of chloride on cleaned surfaces*

— *Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)*

— *Part 4: Guidance on the estimation of the probability of condensation prior to paint application*

— *Part 5: Measurement of chloride on steel surfaces prepared for painting (ion detection tube method)*

— *Part 6: Extraction of soluble contaminants for analysis — The Bresle method*

— *Part 9: Field method for the conductometric determination of water-soluble salts*

— *Part 11: Field method for the turbidimetric determination of water-soluble sulfate*

— *Part 12: Field method for the titrimetric determination of water-soluble ferrous ions*

Introduction

The performance of protective coatings of paint and related products applied to steel is significantly affected by the state of the steel surface immediately prior to painting. The principal factors that are known to influence this performance are as follows:

a) presence of rust and mill scale;

b) presence of surface contaminants, including salts, dust, oils and greases;

c) surface profile.

The ISO 8501, ISO 8502 and ISO 8503 series of International Standards have been prepared to provide methods of assessing these factors, while the ISO 8504 series provides guidance on the preparation methods that are available for cleaning steel substrates, indicating the capabilities of each in attaining specified levels of cleanliness.

These series of International Standards do not contain recommendations for the protective coating systems to be applied to the steel surface. Neither do they contain recommendations for the surface quality requirements for specific situations even though surface quality can have a direct influence on the choice of protective coating to be applied and on its performance. Such recommendations are found in other documents such as national standards and codes of practice. It will be necessary for the users of these International Standards to ensure that the qualities specified are

— compatible and appropriate both for the environmental conditions to which the steel will be exposed and for the protective coating system to be used, and

— within the capability of the cleaning procedure specified.

The four series of International Standards referred to above deal with the following aspects of preparation of steel substrates before application of paints and related products:

— ISO 8501 on visual assessment of surface cleanliness;

— ISO 8502 on tests for the assessment of surface cleanliness;

— ISO 8503 on surface roughness characteristics of blast-cleaned steel substrates;

— ISO 8504 on surface preparation methods.

Each of these International Standards is in turn divided into separate parts. This part of ISO 8502 describes a method for the assessment of chloride-containing salts that are readily soluble in water and are present on a steel surface. Rusted steel substrates, particularly of rust grades C or D (see ISO 8501-1), even when blast cleaned to preparation grade Sa 3 (see ISO 8501-1) can still be contaminated by soluble salts and corrosion products. These compounds are almost colourless and are localized at the lowest point of the rust pits. If they are not removed prior to painting, chemical reactions can result in large accumulations of rust that destroy the adhesion between the substrate and the applied protective coating. Even if the salt is readily soluble in water, it is often impossible to remove it completely from the surface by a simple washing such as that described in this procedure. The method does not therefore determine the total amount of chloride on the surface but gives an indication of the cleanliness level of the surface. Prolonging the washing time should remove a larger proportion of the salt.

INTERNATIONAL STANDARD ISO 8502-2:2017(E)

Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness —

Part 2:
Laboratory determination of chloride on cleaned surfaces

1 Scope

This part of ISO 8502 describes a method for the determination of chloride-containing salts that are readily soluble in water and are present on a steel surface. The method is also applicable to previously coated surfaces. This part of ISO 8502 includes a method, applicable in the field or in the laboratory, for washing off the surface while several methods are referred to for chloride analyses.

NOTE 1 ISO 8502-5 describes a field test for the determination of chloride on a surface.

NOTE 2 The precision of the method is limited by both the accuracy of the selected method of analyses and by uncertainties in the sampling procedure. The extraction method might not take all the water soluble material off the surface due to

— soluble material hiding in crevices, under folds of metal or at the bottom of pits, and

— soluble material hiding under corrosion layers, passivation layers, inhibitors, oil, grease, or other non-visible thin films as these boundary layers can prevent contact with the underlying salt for its removal.

NOTE 3 The performance of a paint system is affected by the amount of soluble chloride remaining on the surface. The acceptable level of this contamination is related to the service conditions. For further information regarding levels of water-soluble salt contamination, see ISO/TR 15235.

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.

ISO 3696, *Water for analytical laboratory use — Specification and test methods*