

SLOVENSKI STANDARD

SIST EN ISO 8502-2:2006

01-april-2006

Nadomešča:

SIST EN ISO 8502-2:1999

Priprava jeklenih podlag pred nanašanjem barv in sorodnih izdelkov – Preskusi ugotavljanja čistosti podlage – 2. del: Laboratorijsko določevanje kloridov na očiščenih površinah (ISO 8502-2:2005)

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 8502-2:2005)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Prüfungen zum Beurteilen der Oberflächenreinheit - Teil 2: Laborbestimmung von Chlorid auf gereinigten Oberflächen (ISO 8502-2:2005)

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 8502-2:2005)

Ta slovenski standard je istoveten z: EN ISO 8502-2:2005

ICS:

25.220.10	Priprava površine	Surface preparation
87.020	Postopki za nanašanje barvnih premazov	Paint coating processes

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 8502-2

October 2005

ICS 25.220.10

Supersedes EN ISO 8502-2:1999

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 8502-2:2005)

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This European Standard was approved by CEN on 8 August 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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EN ISO 8502-2:2005 (E)**Foreword**

This document (EN ISO 8502-2:2005) 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 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

This document supersedes EN ISO 8502-2:1999.

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

Endorsement notice

The text of ISO 8502-2:2005 has been approved by CEN as EN ISO 8502-2:2005 without any modifications.

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INTERNATIONAL STANDARD

ISO 8502-2

Second edition
2005-10-15

Corrected version
2006-01-15

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*

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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Principle.....	2
4 Reagents and materials	2
5 Apparatus	3
6 Procedure	3
6.1 Blank titration	3
6.2 Washing of the surface	3
6.3 Wash-water titration	4
7 Expression of results	4
8 Test report	5
Bibliography	6

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ISO 8502-2:2005(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 8502-2 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 second edition cancels and replaces the first edition (ISO 8502-2:1992), which has been technically 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 1: Field test for soluble iron corrosion products (withdrawn) [Technical Report]*
- *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 8: Field method for the refractometric determination of moisture*
- *Part 9: Field method for the conductometric determination of water-soluble salts*
- *Part 10: Field method for the titrimetric determination of water-soluble chloride (withdrawn)*
- *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*

This corrected version of ISO 8502-2:2005 incorporates the following corrections:

- in 4.5 “0,012 5 mg/l” has been changed to “0,012 5 mol/l”;
- in 4.5.2 the numerator in the equation has been changed from “ $2,8 \times 10^{-5}$ ” to “ $2,8 \times 10^{-2}$ ” and the volume unit has been added in the where clause, giving “*V* is the volume, in millilitres, of the mercury(II) nitrate solution consumed.”

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

- a) the presence of rust and mill scale,
- b) the presence of surface contaminants, including salts, dust, oils and greases, and
- c) the surface profile.

ISO 8501, ISO 8502 and ISO 8503 have been prepared to provide methods of assessing these factors, while ISO 8504 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 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 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.