SLOVENSKI STANDARD
SIST EN ISO 8502-9:2001

01-februar-2001

Priprava jeklenih podlag pred nanašanjem barvnih in sorodnih premazov - Preskusi ocenjevanja čistoče podlage - 9. del: Terenska metoda za določevanje vodotopnih soli z merjenjem prevodnosti (ISO 8502-9:1998)

Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 9: Field method for the conductometric determination of water-soluble salts (ISO 8502-9:1998)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Prüfungen zum Beurteilen der Oberflächenreinheit - Teil 9: Feldverfahren zum Bestimmen von wasserlöslichen Salzen durch Leitfähigkeitsmessung (ISO 8509-9:1998)

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés - Essais pour apprécier la propreté d'une surface - Partie 9: Méthode in situ pour la
détermination des sels solubles dans l'eau par conductimétrie (ISO 8502-9:1998)

Ta slovenski standard je istoveten z: EN ISO 8502-9:2000

ICS:

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

SIST EN ISO 8502-9:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8502-9

August 2000

ICS 87.020

English version

Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 9: Field method for the conductometric determination of water-soluble salts (ISO 8502-9:1998)

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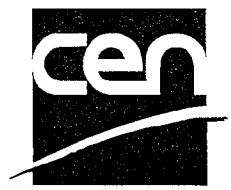
This European Standard was approved by CEN on 6 August 2000.

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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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

Foreword

The text of the International Standard from Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) has been taken over as an European Standard by 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 February 2001, and conflicting national standards shall be withdrawn at the latest by February 2001.

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

Endorsement notice

The text of the International Standard ISO 8502-9:1998 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO 8502-9

First edition
1998-05-01

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1999-12-15

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

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

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

Partie 9: Méthode in situ pour la détermination des sels solubles dans l'eau par conductimétrie

Reference number
ISO 8502-9:1998(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.

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.

International Standard ISO 8502-9 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*.

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* [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*

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— *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 7: Field method for determination of oil and grease*

— *Part 8: Field method for 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 chloride*

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;

c) the surface profile.

International Standards 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 system 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;

— 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:

ISO 8501 *Visual assessment of surface cleanliness;*

ISO 8502 *Tests for the assessment of surface cleanliness;*

ISO 8503 *Surface roughness characteristics of blast-cleaned steel substrates;*

ISO 8504 *Surface preparation methods.*

Each of these International Standards is in turn divided into separate parts.

This part of ISO 8502 describes a field method for the assessment of the total amount of water-soluble salts, the salts being regarded as forming one single contaminant. The more aggressive contaminants causing corrosion and blistering (the ionic species) can easily be dissolved off and determined rapidly by this method. Consequently, the less aggressive and not so easily dissolved minor part of contaminant will remain un-assessed. For additional information on the test method, its potential and its limitations, see BRESLE, Å., Conductometric determination of salts on steel surfaces, *MP (Materials Performance)*, June 1995, Vol. 34, No. 6, pp. 35-37, NACE International, Houston TX, USA.

Rusty steel substrates, particularly those of rust grades C or D (see ISO 8501-1), even when blast-cleaned to preparation grade Sa 3 (see ISO 8501-1 and ISO 8501-2), may still be contaminated by water-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 blister formation and accumulations of rust that destroy the adhesion between the substrate and the applied protective coating.