
**Priprava jeklenih podlag pred nanašanjem barvnih in sorodnih premazov -
Površinske hrapave značilnosti peskanih jeklenih podlag - 1. del: Specifikacije in
definicije za primerjalne standarde površinske hrapavosti ISO za oceno površin,
peskanih z abrazivom (ISO 8503-1:1988)**

Preparation of steel substrates before application of paints and related products -
Surface roughness characteristics of blast-cleaned steel substrates - Part 1:
Specifications and definitions for ISO surface profile comparators for the assessment of
abrasive blast-cleaned surfaces (ISO 8503-1:1988)

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Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen -
Rauheitskenngrößen von gestrahlten Stahloberflächen - Teil 1: Anforderungen und
Begriffe für ISO-Rauheitsvergleichsmuster zur Beurteilung gestrahlter Oberflächen (ISO
8503-1:1988)

Préparation des subjectiles d'acier avant application de peintures et de produits
assimilés - Caractéristiques de rugosité des subjectiles d'acier décapés - Partie 1:
Spécifications et définitions relatives aux échantillons de comparaison viso-tactile ISO
pour caractériser les surfaces préparées par projection d'abrasif (ISO 8503-1:1988)

Ta slovenski standard je istoveten z: EN ISO 8503-1:1995

ICS:

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87.020	Postopki za nanašanje barvnih premazov	Paint coating processes

SIST EN ISO 8503-1:1997

en

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EUROPEAN STANDARD

EN ISO 8503-1

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Descriptors: paints, varnishes, substrates, steel products, tests, determination, surface condition

English version

**Preparation of steel substrates before application
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characteristics of blast-cleaned steel substrates -
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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

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Foreword

The text of the International Standard from ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Committee CEN/TC 139 "Paints and varnishes".

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 November 1995, and conflicting national standards shall be withdrawn at the latest by November 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, 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 8503-1:1988 has been approved by CEN as a European Standard without any modification.

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NOTE: Normative references to international publications are listed in annex ZA (normative).
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Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 8503-2	1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 2: Method for the grading of surface profile of abrasive blast-cleaned steel - Comparator procedure	EN ISO 8503-2	1995
ISO 8503-3	1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 3: Method for the calibration of ISO surface profile comparators and for the determination of surface profile - Focusing microscope procedure	EN ISO 8503-3	1995
ISO 8503-4	1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 4: Method for the calibration of ISO surface profile comparators and for the determination of surface profile - Stylus instrument procedure	EN ISO 8503-4	1995

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INTERNATIONAL STANDARD

ISO
8503-1First edition
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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

**Preparation of steel substrates before application of
paints and related products — Surface roughness
characteristics of blast-cleaned steel substrates —**

Part 1 :

Specifications and definitions for ISO surface profile
comparators for the assessment of abrasive blast-cleaned
surfaces

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*Préparation des subjectiles d'acier avant application de peintures et de produits assimilés —
Caractéristiques de rugosité des subjectiles d'acier décapés —*

*Partie 1 : Spécifications et définitions relatives aux échantillons de comparaison viso-tactile
ISO pour caractériser les surfaces préparées par projection d'abrasif*

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8503-1 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates —

Part 1 : Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces

0 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 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;
- 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.

Irrespective of the procedures and the type of abrasive that are used for the preparation of steel substrates, the surface after blast-cleaning consists of random irregularities with peaks and valleys that are not easily characterized. Consequently, it was concluded that, because of this random nature, no method is capable of giving a precise value for the profile. Thus, it is recommended that the profile should be identified as either dimpled (where shot abrasives have been used) or angular (where grit abrasives have been used) and that it should be graded as "fine", "medium" or "coarse", each grade being defined by the limits specified in this part of ISO 8503. These surface characteristics are considered to give sufficient distinguishing features for most painting requirements.

Particular attention, however, is drawn to the fact that the grades "fine", "medium" and "coarse" represent different ranges in terms of roughness parameters, dependent upon whether these grades are applied to shot abrasive or grit abrasive blast-cleaned surfaces. In consequence, the effect produced on a given coating by a given grade "fine", "medium" or "coarse" is determined not only by the specific surface character but also by the specific roughness value ($R_{\sqrt{5}}$ or h_v) belonging to that grade. Where surface profile is particularly important, both the grade of the surface profile ("fine", "medium" or "coarse") and the type of abrasive which is to be used should be specified.

This part of ISO 8503 specifies the limits for the "fine", "medium" and "coarse" surface for both dimpled and angular profiles, and specifies the design of comparators for reference purposes.