
Kovinske in anorganske prevleke na kovinskih podlagah - Korozijski preskus s slanimi kapljicami (ISO 4536:1985)

Metallic and non-organic coatings on metallic substrates - Saline droplets corrosion test (SD test) (ISO 4536:1985)

Metallische und anorganische Überzüge auf metallischen Grundwerkstoffen - Salztröpfchen-Korrosionsprüfung (SD-Versuch) (ISO 4536:1985)

Revetements métalliques et non organiques sur bases métalliques - Essai de corrosion aux gouttelettes salines (Essai SD) (ISO 4536:1985)

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Ta slovenski standard je istoveten z: EN ISO 4536:1995

ICS:

25.220.20	Površinska obdelava	Surface treatment
25.220.40	Kovinske prevleke	Metallic coatings

SIST EN ISO 4536:1999**en**

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EUROPEAN STANDARD

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January 1995

ICS 25.220.30; 25.220.40

Descriptors: Coatings, metal coatings, substrates, metals, tests, corrosion tests

English version

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substrates - Saline droplets corrosion test (SD
test) (ISO 4536:1985)**

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

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Ref. No. EN ISO 4536:1995 E

Foreword

This European Standard has been taken over by the Technical Committee CEN/TC 262 "Protection of metallic materials against corrosion" from the work of ISO/TC 107 "Metallic and other inorganic coatings" of the International Organization for Standardization (ISO).

This document was submitted to the formal vote and was adopted by CEN as a European Standard.

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of an identical text or by endorsement, at the latest by July 1995, and conflicting national standards shall be withdrawn at the latest by July 1995.

In accordance with the CEN/CENELEC Internal Regulations, 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 United Kingdom.

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The text of the International Standard ISO 4536:1985 has been approved by CEN as a European Standard without any modification.



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 (including amendments).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 483	1988	Plastics - Small enclosures for conditioning and testing at relative humidities maintained by aqueous solutions		
ISO 1462	1973	Metallic coatings - Coatings other than those anodic to the to the basis metal - Accelerated corrosion tests - Method for the evaluation of the results	EN ISO 1462	1995
ISO 4540	1980	Metallic coatings - Coatings cathodic to the substrate - Rating of electroplated test specimens subjected to corrosion tests		

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International Standard



4536

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Metallic and non-organic coatings on metallic substrates — Saline droplets corrosion test (SD test)

Revêtements métalliques et non organiques sur bases métalliques — Essai de corrosion aux gouttelettes salines (Essai SD)

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UDC 621.793 : 620.193.27

Ref. No. ISO 4536-1985 (E)

Descriptors : coatings, metal coatings, substrates, metals, tests, corrosion tests.

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 4536 was prepared by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*.

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.

Metallic and non-organic coatings on metallic substrates — Saline droplets corrosion test (SD test)

0 Introduction

0.1 This test differs significantly from that specified in ISO 3768, *Metallic coatings — Neutral salt spray test (NSS test)*, although the fields of application of the two tests are similar and their results are often comparable. In the saline droplets corrosion test, a pattern of discrete droplets is produced by spraying the specified test solution on to the surfaces being tested.

0.2 The droplets test may therefore have advantages for testing some conversion coatings which may, in continuous leaching, undergo changes which do not occur in their usual conditions of service. For some applications, the droplets test may be more severe than the continuous spray test since the corrosion processes in static drops may cause more intense local action than that produced by a continuous moving moisture film.

The method has advantages in needing only simple, easily controlled apparatus and in being applicable to articles of complex shape.

0.3 The method of corrosion by a pattern of discrete droplets has been used with several solutions for tests intended to assess the resistance of a coating to particular environments.

Only one test solution is specified in this International Standard. It contains the major mineral constituents of sea-water and has advantages in that droplets of the solution do not easily dry out and that, for some purposes, simulation of the effects of sea-spray may be useful. However, other solutions may be given in specifications for materials and products.

0.4 In many instances, there is no direct relation between the results of an accelerated corrosion test and the resistance to corrosion in other media, because several factors which influence the progress of corrosion, such as the formation of protective films, vary greatly with the conditions encountered. The results obtained in the test should not, therefore, be regarded as a direct guide to the corrosion resistance of the tested materials in all environments where these materials may be used. Furthermore, performance of different materials in the test cannot always be taken as a direct guide to the relative corrosion resistance of these materials in service.

1 Scope and field of application

1.1 This International Standard specifies the test solution, the apparatus and the procedure for a saline droplets corrosion test for assessment of the quality of metallic and non-organic coatings, made in accordance with the requirements of coating or product specifications on metallic substrates.

1.2 The method of test specified is suitable for detecting defects and discontinuities in metal coatings cathodic to the underlying metal. It is also suitable for chemical or electrochemical conversion coatings such as those obtained by chromate and phosphate treatments. The method is not suitable for testing coatings intended for the more severe types of service.

1.3 The type and number of test specimens, the exposure periods to be used for a particular product and the interpretation of results are not specified in this International Standard. Such details should be given in the appropriate materials or coating specification.

2 References

ISO 483, *Plastics — Small enclosures for conditioning and testing at relative humidities maintained by aqueous solutions.*¹⁾

ISO 1462, *Metallic coatings — Coatings other than those anodic to the basis metal — Accelerated corrosion tests — Method for the evaluation of the results.*

ISO 4540, *Metallic coatings — Coatings cathodic to the substrate — Rating of electroplated test specimens subjected to corrosion tests.*

3 Principle

Spraying of the test specimens with a neutral salt solution, storing in conditions of high humidity, respraying only when it is needed to maintain the pattern of droplets.

NOTE — The regular flow of new solution over the surfaces under test, such as occurs in the continuous salt spray test, does not take place.

1) At present at the stage of draft. (Revision of ISO/R 483-1966.)