

**SLOVENSKI STANDARD  
SIST EN ISO 6988:1999****01-oktober-1999**

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**Kovinske in druge anorganske prevleke - Korozijski preskus s SO<sub>2</sub> v prisotnosti vodne pare (ISO 6988:1985)**

Metallic and other non-organic coatings - Sulfur dioxide test with general condensation of moisture (ISO 6988:1985)

Metallische und andere anorganische Überzüge - Prüfung mit Schwefeldioxid unter allgemeiner Feuchtigkeitskondensation (ISO 6988:1985)

Revetements métalliques et autres revêtements non organiques - Essai de soufre avec condensation générale de l'humidité (ISO 6988:1985)

<https://standards.iteh.ai/catalog/standards/sist/00e88e3f-72bc-467a-993a-8833f2288008/sist-en-iso-6988-1999>

**Ta slovenski standard je istoveten z: EN ISO 6988:1994****ICS:**

25.220.20	Površinska obdelava	Surface treatment
25.220.40	Kovinske prevleke	Metallic coatings

**SIST EN ISO 6988:1999****en**

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EUROPEAN STANDARD

EN ISO 6988

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1994

ICS 25.220.30; 25.220.40

Descriptors: coatings, metal coatings, non organic coatings, tests, corrosion tests, test equipment, sulphur dioxide

English version

**Metallic and other non organic coatings - Sulfur  
dioxide test with general condensation of moisture  
(ISO 6988:1985)**

Revêtements métalliques et autres revêtements  
non organiques - Essai au dioxyde de soufre  
avec condensation générale de l'humidité  
(ISO 6988:1985)

Metallische und andere anorganische Überzüge -  
Prüfung mit Schwefeldioxid unter allgemeiner  
Feuchtigkeitskondensation (ISO 6988:1985)

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This European Standard was approved by CEN on 1994-10-26. 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.

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.

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

**CEN**

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

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

## Foreword

This European Standard was 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 Standards Organization (ISO).

CEN/TC 262 had decided to submit the final draft for Formal Vote. The result was positive.

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 1995, and conflicting national standards shall be withdrawn at the latest by April 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, United Kingdom.

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## Endorsement notice

The text of the International Standard ISO 6988:1985 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).



**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/HD</u>	<u>Year</u>
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		

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# International Standard



# 6988

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

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## Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture

*Revêtements métalliques et autres revêtements non organiques — Essai au dioxyde de soufre avec condensation générale de l'humidité*

First edition — 1985-02-01

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Ref. No. ISO 6988-1985 (E)

Descriptors : coatings, metal coatings, non organic coatings, tests, corrosion tests, test equipment, sulphur dioxide.

## 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 6988 was prepared by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*.

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# Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture

## 0 Introduction

**0.1** Moist air containing sulfur dioxide quickly produces easily visible corrosion of many metals in a form resembling that occurring in industrial environments. It is therefore a test medium well suited to detect pores or other sources of weakness in protective coatings and deficiencies in corrosion resistance associated with unsuitable alloy composition or treatments.

The results obtained in the test should not be regarded as a direct guide to the corrosion resistance of the tested materials in all environments where these materials may be used. Similarly, performances of different materials in the test should not be taken as a direct guide to the relative corrosion resistance of these materials in service.

**0.2** The exposure conditions may be varied by either proceeding continuously or in cycles of alternate exposure to the sulfur dioxide-containing atmosphere and to the ambient atmosphere.

**0.3** The variant of the test to be used, the test duration, the type of test specimen and the criteria of failure are not specified in this International Standard. Such details are provided in appropriate material and product specifications.

## 1 Scope and field of application

This International Standard specifies a method for assessing the resistance of materials or products to condensed moisture containing sulfur dioxide.

The method has been found to be suitable for testing metallic and non-organic coatings.

NOTE — For testing paints and varnishes, see ISO 3231, *Paints and varnishes — Determination of resistance to humid atmospheres containing sulphur dioxide*.

## 2 References

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 Apparatus and material

**3.1 Test cabinet**, of preferred capacity  $300 \pm 10$  dm<sup>3</sup>, with a door capable of being closed hermetically, and fitted with the components specified in 3.2, 3.3 and 3.4. Typical test cabinets are shown in figures 1 and 2.

NOTE — Test cabinets of capacities other than  $300 \pm 10$  dm<sup>3</sup> may be used, provided that the other test conditions to which the test specimens are submitted are the same. The details and instructions given in this International Standard are, however, appropriate to test cabinets of the preferred capacity and will require corresponding modifications for other capacities.

### 3.1.1 Materials of construction

All the materials used in the construction of the test cabinet shall be resistant to the action of moist sulfur dioxide and shall themselves not emit any gas or vapour likely to influence corrosion of the test specimens.

The floor and lower parts of the walls shall be capable of being heated and shall be able to retain without leakage at least 2,5 dm<sup>3</sup> of water containing dissolved sulfur dioxide, this volume being required to flush the apparatus. Lead-clad construction material is suitable for these parts and for the framework and fittings of the cabinet, but the greater part of the walls and door should be made of transparent sheet, such as glass or suitable plastics material.

A new cabinet shall be operated at least once, without introduction of test specimens, following the procedure applicable to an atmosphere containing 2 dm<sup>3</sup> of sulfur dioxide, before it is brought into use for testing. This should reduce risks of contamination of the atmosphere by vapours from the materials of construction.

### 3.1.2 Shape

Some variation in the shape of the test cabinet can be tolerated, but the roof should be shaped so that moisture condensing on it does not fall on test specimens in the test cabinet. An inclination of the roof of about 12° to the horizontal provides a suitable safeguard.

### 3.1.3 Ambient conditions

The test cabinet shall be installed in a room in which there is a clean atmosphere and shall be protected from large or rapid temperature fluctuations, strong direct sunlight and draughts. (See also 6.5.2.)