



# SLOVENSKI STANDARD SIST EN ISO 4538:1999

01-oktober-1999

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**Kovinske prevleke - Korozijski preskus s tioacetamidom (preskus TAA) (ISO 4538:1978)**

Metallic coatings - Thioacetamide corrosion test (TAA test) (ISO 4538:1978)

Metallische Überzüge - Thioacetamid-Korrosionsprüfung (TAA-Versuch) (ISO 4538:1978)

Revetements métalliques - Essai de corrosion à la thioacetamide (Essai TAA) (ISO 4538:1978)

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Ta slovenski standard je istoveten z: **EN ISO 4538:1995**

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**ICS:**

25.220.40      Kovinske prevleke      Metallic coatings

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EUROPEAN STANDARD

EN ISO 4538

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1995

ICS 25.220.40

Descriptors: Metal coatings, corrosion tests

English version

**Metallic coatings - Thioacetamide corrosion test  
(TAA test) (ISO 4538:1978)**Revêtements métalliques - Essai de corrosion à  
la thioacétamide (Essai TAA) (ISO 4538:1978)Metalliche Überzüge -  
thioacetamid-Korrosionsprüfung (TAA-Versuch)  
(ISO 4538:1978)**(standards.iteh.ai)**SIST EN ISO 4538:1999<https://standards.iteh.ai/catalog/standards/sist/a1185849-ce70-424f-8987-4393fab1d341/sist-en-iso-4538-1999>

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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.

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

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Ref. No. EN ISO 4538:1995 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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### Endorsement notice

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The text of the International Standard ISO 4538:1978 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 1462	1973	Metallic coatings - Coatings other than those anodic to the basis metal - Accelerated corrosion tests - Method for the evaluation of the results	EN ISO 1462	1995

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**INTERNATIONAL STANDARD**



**4538**

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

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## **Metallic coatings — Thioacetamide corrosion test (TAA test)**

*Revêtements métalliques — Essai de corrosion à la thioacétamide (Essai TAA)*

First edition — 1978-06-15

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UDC 620.193.47

Ref. No. ISO 4538-1978 (E)

**Descriptors** : metal coatings, corrosion tests.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

International Standard ISO 4538 was developed by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*, and was circulated to the member bodies in November 1976.

It has been approved by the member bodies of the following countries:

Australia	Italy	South Africa, Rep. of
Bulgaria	Japan	Spain
Czechoslovakia	Mexico	Switzerland
France	Netherlands	Turkey
Germany	Philippines	United Kingdom
Hungary	Poland	U.S.A.
India	Portugal	U.S.S.R.
Israel	Romania	

No member body expressed disapproval of the document.



# Metallic coatings – Thioacetamide corrosion test (TAA test)

## 0 INTRODUCTION

The type and number of test specimens, the exposure period required and the criteria of failure are not specified in this International Standard. Such details should be given in the appropriate coating or product specification.

## 1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies the apparatus and the procedure for assessment of the resistance of metal surfaces to corrosion and tarnish in atmospheres containing volatile sulphides, carried out in accordance with coating or product specifications.

1.2 The method is applicable to the assessment of the efficacy of tarnish-preventing treatments applied to silver or copper and to the detection of discontinuities in precious metal coatings on these metals.

## 2 REFERENCE

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

## 3 PRINCIPLE

Exposure of test specimens to vapours emitted by thioacetamide in an atmosphere having a relative humidity of 75 %, maintained by the presence of a saturated solution of sodium acetate.

## 4 REAGENTS

Use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

4.1 **Thioacetamide**, powdered crystals.

**WARNING:** Thioacetamide is a carcinogen. All contact with human skin should be avoided.

4.2 **Sodium acetate**, saturated solution.

Dissolve 3 parts of sodium acetate trihydrate ( $\text{CH}_3\text{COONa}\cdot 3\text{H}_2\text{O}$ ) in 1 part of water.

## 5 APPARATUS

5.1 **Test chamber**, comprising a container made of glass or suitable transparent plastics material, capable of being closed by a gas-tight cover. The actual dimensions of the test chamber are not specified but the requirements stated in this and subsequent clauses shall be met. Unless otherwise specified, the capacity of the test chamber shall be not less than 2 litres and not more than 20 litres.

All materials used in the construction of the test chamber shall be capable of resisting the action of volatile sulphides and shall not emit any gas or vapour likely to influence the corrosion of the materials under test.

5.2 **Plate**, made of inert non-metallic material, supported inside the test chamber to provide a level surface occupying 70 to 90 % of the cross-section of the chamber at least 10 mm and not more than 75 mm above the base of the chamber.

5.3 **Simple framework**, made of inert non-metallic material, placed inside the chamber to serve as a support for the moist paper (see 7.2) and as a means of suspension for test specimens (see 7.1).

5.4 **Constant temperature enclosure** or (if the test chamber cannot be accommodated in such an enclosure) **suitable cover or screen** capable of preventing any sudden temperature fluctuation or local temperature difference.

## 6 TEST SPECIMENS

6.1 Select the type and number of test specimens to be used according to the specification for the coating or products being tested. See also 7.4.