

Corrosion of metals and alloys - Corrosion tests in artificial atmosphere - Accelerated outdoor test by intermittent spraying of a salt solution (Scab test) (ISO 11474:1998)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 11474:2014 sisaldab Euroopa standardi EN ISO 11474:2014 inglisekeelset teksti.	This Estonian standard EVS-EN ISO 11474:2014 consists of the English text of the European standard EN ISO 11474:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.03.2014.	Date of Availability of the European standard is 12.03.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 77.060

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English Version

Corrosion of metals and alloys - Corrosion tests in artificial
atmosphere - Accelerated outdoor test by intermittent spraying of
a salt solution (Scab test) (ISO 11474:1998)

Corrosion des métaux et alliages - Essais de corrosion en
atmosphère artificielle - Essai de corrosion accéléré en
extérieur par vaporisation intermittente d'un brouillard salin
(Scab test) (ISO 11474:1998)

Korrosion von Metallen und Legierungen -
Korrosionsprüfung in künstlicher Atmosphäre -
Beschleunigte Außenbewitterung (Freibewitterung) mit
intermittierendem Sprühen einer Salzlösung (Scab-Test)
(ISO 11474:1998)

This European Standard was approved by CEN on 9 February 2014.

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

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Foreword

The text of ISO 11474:1998 has been prepared by Technical Committee ISO/TC 156 "Corrosion of metals and alloys" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11474:2014 by Technical Committee CEN/TC 262 "Metallic and other inorganic coatings" the secretariat of which is held by BSI.

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 September 2014, and conflicting national standards shall be withdrawn at the latest by September 2014.

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Endorsement notice

The text of ISO 11474:1998 has been approved by CEN as EN ISO 11474:2014 without any modification.

Introduction

Corrosion testing under atmospheric exposure conditions is most commonly executed as field tests. As the corrosion rate depends on the environment of the test site, the latter should ideally be selected to best represent the environments in which the material is likely to be used. The results of field tests cannot therefore be used to predict service performance exactly but they do provide the best guidance to service performance. Field tests, however, may require exposure periods corresponding to the expected service life of a material.

To promote corrosion and accelerate the degradation process, test sites with a high atmospheric corrosivity can be used. Such test sites may be located in marine environments or in highly polluted industrial areas. To increase the corrosion rate at other test sites, artificial measures need to be adopted. In the method described, the corrosion process during outdoor exposure is accelerated by intermittently spraying a solution of sodium chloride (mass fraction 3 %) on to the test surface thus simulating and enhancing the environmental stress prevailing at marine test sites. The method is mainly intended for comparative testing and one or more reference materials are therefore always necessary. The results obtained do not permit any more far-reaching conclusions on the corrosion resistance of the tested metal in all environments in which it may be used. The method described can nevertheless give valuable information on the relative performance of materials in service.

NOTE — The title of this International Standard presents (within parentheses) a common name for this kind of test. Hitherto, “scab test” has been used mainly in a narrower sense to denote similar test methods developed within the car industry for the study of underfilm corrosion, particularly where painted steel surfaces have been locally damaged by stone shots. The word “scab” is no acronym. It simply refers to a well-known but not very pleasant disease and its symptom, i.e. a kind of crusty spots on the skin. In this International Standard, the same name is used in a wider sense to denote a test method which is applicable to all kinds of metallic substrate with or without coating. Some of these substrates will show a scab-like appearance after being tested. Others will not.

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1 Scope

The purpose of this International Standard is to define a method of assessing the corrosion resistance of metals by an accelerated outdoor corrosion test.

In this International Standard, the term “metal” includes metallic materials with or without corrosion protection.

The accelerated outdoor corrosion test applies to

- organic coatings on metals;
- metallic coatings (anodic and cathodic);
- chemical conversion coatings;
- metals and their alloys.

The method is especially suitable for comparative testing in the optimization of surface treatment systems.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2810:—¹⁾, *Paints and varnishes — Notes for guidance on the conduct of natural weathering tests.*

ISO 8407:1991, *Corrosion of metals and alloys — Removal of corrosion products from corrosion test specimens.*

ISO 8565:1992, *Metals and alloys — Atmospheric corrosion testing — General requirements for field tests.*

ISO 9226:1992, *Corrosion of metals and alloys — Corrosivity of atmospheres — Determination of corrosion rate of standard specimens for the evaluation of corrosivity.*

¹⁾ To be published. (Revision of ISO 2810:1974)