

**Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against algae**

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English Version

## Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against algae

Peintures et vernis - Méthode d'essai en laboratoire permettant de déterminer l'efficacité des préservateurs du feuil d'un revêtement contre les algues

Beschichtungsstoffe - Laborverfahren für die Prüfung der Wirksamkeit von Filmkonservierungsmitteln in einer Beschichtung gegen Algen

This European Standard was approved by CEN on 10 July 2014.

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## Foreword

This document (EN 15458:2014) has been prepared by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by February 2015 and conflicting national standards shall be withdrawn at the latest by February 2015.

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## Introduction

This document identifies criteria to assess the efficacy of film preservatives in a coating against algae. The results of the method allow evaluation of an active substance with regard to its inclusion in Annex I of the Biocidal Products Directive 98/8/EC (Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market – BPD) or in the list of the Biocidal Product Regulation (BPR, Regulation (EU) 528/2012).

The characteristics of the biocide treated coating material should conform to national regulations with regard to health, safety and the environment.

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## 1 Scope

This European Standard specifies a laboratory test method for determining the biocidal/biostatic efficacy of single active substances or combinations thereof used in film preservatives in a coating against algal growth. The standard does not apply to coatings not susceptible to algal growth. The test method comprises only active substances for film preservation, not the protection of the substrate itself, e.g. wood, which is dealt with in another standard. The test method is applicable for active substances used for wood and masonry coatings. It is not applicable to marine coatings.

Safety, health and environmental aspects are not in the scope of this standard.

Determination of the performance of film preservatives in coatings by applying ageing procedures is not within the scope of this standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12469, *Biotechnology - Performance criteria for microbiological safety cabinets*

EN 23270, *Paints and varnishes and their raw materials - Temperatures and humidities for conditioning and testing (ISO 3270)*

EN ISO 1513, *Paints and varnishes - Examination and preparation of test samples (ISO 1513)*

## 3 Terms and definitions

For the purposes of this document, the following term and definition applies.

### 3.1

#### **active substance**

substance or micro-organism that has an action on or against harmful organisms

[SOURCE: Biocidal Product Regulation (BPR, Regulation (EU) 528/2012), Article 3.1 (c), modified – the article "a" between "or" and "micro-organism" was deleted]

## 4 Principle

For the determination of the algicidal efficacy of film preservatives in a coating, the coating material is applied to a substrate, conditioned according to EN 23270, placed onto an agar surface, inoculated with a standard algal suspension and incubated over a certain period of time under conditions appropriate for algal growth. Conclusions can be drawn with regard to the algicidal efficacy of the film preservatives in a coating from the intensity of the algal growth on the coated surface of the specimen after incubation. The method described in this standard is a semiquantitative, comparative method between coatings with and without film preservatives.

## 5 Apparatus and materials

**5.1 Cutting device** for preparing the specimens (coated filter paper, with a diameter of 55 mm).

**5.2 Autoclave** for sterilization.

**5.3 Incubator**, capable of maintaining  $(23 \pm 2) ^\circ\text{C}$ .

**5.4 Pipette**, in the range between 100  $\mu\text{l}$  to 1 000  $\mu\text{l}$ , with sterile tips or combi-tips of 12,5 ml.

**5.5 Filter paper without biocidal effect** (e.g. cellulose with a pore size of 0,45  $\mu\text{m}$  and a thickness of 650  $\mu\text{m}$ ).