
Barve in laki - Ovrednotenje površinskih sprememb, ki jih na premazih povzročajo glive in alge

Paints and varnishes - Evaluation of the surface disfigurement caused by fungi and algae on coatings

Beschichtungsstoffe - Beurteilung von Oberflächenveränderungen auf Beschichtungen verursacht durch Pilze und Algen

Peintures et vernis - Évaluation de la dégradation des surfaces due aux champignons et aux algues sur les revêtements

[SIST EN 16492:2014](https://standards.iteh.ai/catalog/standards/sist/c3d247d4-ba1a-4091-8b9f-b1ed603ad010/sist-en-16492-2014)

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Barve in laki

Paints and varnishes

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EUROPEAN STANDARD
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English Version

**Paints and varnishes - Evaluation of the surface disfigurement
caused by fungi and algae on coatings**

Peintures et vernis - Évaluation de l'altération d'aspect de la
surface des revêtements provoquée par les champignons et
les algues

Beschichtungsstoffe - Bewertung von optischen
Oberflächenveränderungen verursacht durch Pilze und
Algen auf Beschichtungen

This European Standard was approved by CEN on 30 April 2014.

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Foreword

This document (EN 16492:2014) 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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EN 16492:2014 (E)**1 Scope**

This European Standard specifies a procedure for the evaluation of the degree of surface disfigurement caused by fungi and algae on coatings.

This European Standard is not applicable for evaluating disfigurements caused by blue stain in service on and in wood surfaces. A scale for the assessment of blue stain of coated and uncoated wood is specified in EN 152:2011, 8.5.2.

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 ISO 4628-1:2003, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 1: General introduction and designation system (ISO 4628-1:2003)*

3 Principle

The degree of fungal or algal growth on coatings is given a numeric rating.

4 Apparatus

4.1 Microscope with a typical magnification of up to $\times 100$ (if necessary)

5 Preparation

The test specimen shall be the flat surface of any exposed test panel or cut from a construction panel. In the case of assessment of building facades one or more defined parts of the surface shall be chosen and described in the test report.

The test specimen shall be examined without wiping, washing or removing any loose surface material.

For better discrimination between fungi and algae the test surface shall be examined under wet conditions. Dry surfaces shall be wetted by gently spraying with clean water.

Care shall be taken not to add any contamination to the specimen surface.

6 Procedure

Carry out the assessment visually using normal or corrected vision on a defined test surface. Carry out the assessment under good illumination and from a distance less than 1 m.

If contamination of dirt soil is suspected, this shall be confirmed by the use of a microscope (4.1) and taken into consideration when evaluating the entire surface.

Distinguishing dirt from biological disfigurement might be difficult even with the aid of a microscope. To improve precision, the evaluation should be carried out by an experienced operator.

Any fungal or algal growth observed only on dirt or soil particles that have accumulated on the test specimen shall be reported separately in the test report.

7 Expression of results

The numerical ratings for the intensity (in accordance with Table A.1), the quantity (in accordance with Table A.2) and the percentage area (in accordance with Table A.3) of disfigurements caused by fungal or algal growth shall be expressed as indicated in the following examples:

fungal growth: intensity 1, quantity 3, percentage area 2

algal growth: intensity 2, quantity 1, percentage area 1

8 Test report

The test report shall contain at least the following information:

- a) all details necessary to identify the product tested;
- b) reference to this European Standard (EN 16492:2014);
- c) type and origin of the test specimen and its exposure conditions, including whether the inspection is carried out in a laboratory or on-site;
- d) statement whether the growth observed is either fungal or algal;
- e) numerical contamination rating in accordance with Clause 7;
- f) any presence of dirt/soiling;
- g) if any growth is observed on dirt or soil only, including an information whether any magnification to inspect the surface was carried out; [SIST EN 16492:2014](https://standards.iteh.ai/catalog/standards/sist/c3d247d4-ba1a-4091-8b9f-6fcd05ad010/sist-en-16492-2014)
- h) any deviation from the test procedure described; <https://standards.iteh.ai/catalog/standards/sist/c3d247d4-ba1a-4091-8b9f-6fcd05ad010/sist-en-16492-2014>
- i) any unusual features (anomalies) observed during the evaluation;
- j) date(s) of the test.

Annex A (normative)

Assessment according to EN ISO 4628-1

A.1 Designation of intensity of disfigurements according to EN ISO 4628-1:2003, 3.4

The intensity of changes in the appearance of the coating (e.g. colour changes) caused by fungal or algal growth shall be expressed using Table A.1:

Table A.1 — Rating scheme for designating the intensity of visible growth

Rating	Intensity of visible growth
0	unchanged, i.e. no visible growth
1	very slight, i.e. just visible growth
2	slight, i.e. clearly visible growth
3	moderate, i.e. very clearly visible growth
4	considerable, i.e. pronounced visible growth
5	very marked visible growth

A.2 Designation of the quantity of disfigurements according to EN ISO 4628-1:2003, 3.2

The quantity (number) of disfigurements caused by fungal or algal growth shall be expressed using Table A.2:

Table A.2 — Rating scheme for designating the quantity of disfigurements

Rating	Quantity of disfigurements
0	none, i.e. no detectable disfigurements
1	very few, i.e. small, barely significant number of disfigurements
2	few, i.e. small but significant number of disfigurements
3	moderate number of disfigurements
4	considerable number of disfigurements
5	dense pattern of disfigurements / homogeneous disfigurement

A.3 Designation of the percentage area of disfigurements

The percentage area of disfigurements caused by fungal or algal growth shall be expressed using Table A.3:

Table A.3 — Rating scheme for designating the percentage area of disfigurements

Rating	Percentage area of disfigurements
0	no growth on the surface of the specimen
1	up to 10 % growth on the surface of the specimen
2	more than 10 % up to 30 % growth on the surface of the specimen
3	more than 30 % up to 50 % growth on the surface of the specimen
4	more than 50 % up to 100 % growth on the surface of the specimen