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Buildings and civil engineering works — Sealants — Determination of crazing and cracking following exposure to artificial or natural weathering

Bâtiments et ouvrages de génie civil — Mastics — Détermination du tressaillage et du craquelage suite à une exposition au vieillissement naturel ou artificiel

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 59, *Building and civil engineering works*, Subcommittee SC 8, *Sealants*.

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Buildings and civil engineering works — Sealants — Determination of crazing and cracking following exposure to artificial or natural weathering

1 Scope

This International Standard specifies methods for the assessment of surface defects (crazing and cracking) on sealants after exposure to artificial or natural weathering.

NOTE Sealants are weathered in the laboratory in order to simulate ageing processes occurring during natural weathering. Generally, valid correlations between ageing during artificial and natural weathering cannot be expected because of the large number of influencing factors. Certain relationships can only be expected if the effect of the important parameters (spectral distribution of the irradiance in their photochemically relevant range, temperature of the specimen, type of wetting, wetting cycle relative humidity) on the sealant is known. However, unlike natural weathering, testing in the laboratory is carried out taking into consideration a limited number of variables which can be controlled, and therefore, the results are more reproducible.

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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints*

ISO 6927, *Buildings and civil engineering works — Sealants — Vocabulary*

CIE Publication No.51, *A Method for Assessing the Quality of Daylight Simulators for Colorimetry' (CIE 051.2-1999 (including Supplement 1-1999)*

3 Terms and definitions

For the purposes of this document, the definitions given in ISO 6927 apply.

4 Principle

This International Standard defines an evaluation scheme for designating the quantity and quality of specific surface defects (cohesive cracks and crazes) occurring in sealants as a result of exposure to outdoor or artificial weathering. The sealant test specimens are visually examined and rated for crack density, crack width, and crack depth. The extent of damage in terms of crack width and crack density is determined by visual evaluation and comparison with pictorial references provided in this International Standard. The crack depth is visually assessed with reference to a rating scale.

Visual assessment is carried out under specified illumination and viewing conditions in artificial daylight (D65). Findings are documented by digital photography.

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