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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**The evaluation of sealant aging cracking and crazing - Picture
method**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" drafted.

This document is modified using ISO 11528.2016 "Building and civil engineering sealants exposed to fine cracks after artificial or natural weathering and Determination of Cracking".

Compared with ISO 11528.2016, this document has more structural adjustments. Comparison list of structure number changes between two files

See Appendix A.

The technical differences between this document and ISO 11528.2016 and their reasons are as follows.

--- Changed the normative reference documents, and replaced the ISO 6927 referenced by ISO 11528.2016 with the Chinese standardization document GB/T 2943

(see Chapter 3), to facilitate standard users to use Chinese terms;

--- Deleted ISO 291 and ISO 3668 cited in ISO 11528.2016 to suit my country's national conditions;

--- Changed the standard lighting equipment to a camera box, with clear requirements for practical operation (see 5.1);

- An optical measuring instrument is added to facilitate the effective measurement of crack width and crack depth (see 5.3);
- Changed the visual requirements of the observer and the observation requirements of the observation team (see Chapter 6);
- Modify the distance between the camera and the specimen when the picture is taken from 30cm~50cm to 20cm~50cm (see 8.5);
- Changed the expression form of crack grade and some grade requirements, in order to be more convenient in the evaluation, the result description is more concise. (See Chapter 9).

The following editorial changes have been made to this document.

- In order to harmonize with the existing standards, the name of the standard is changed to "Evaluation Picture Method for Sealant Aging Cracks";
 - Changed the specimen holder and photo lighting box mentioned in the informative appendix, and replaced it with the mobile phone bracket and standard available on the market
- Colorimetric box (see Appendix B);
- A list of changes in the structure number of the informative Appendix A has been added.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The sealant is aged in the laboratory to simulate the natural aging process. Generally speaking, due to many influencing factors, artificial aging and

There is no valid correlation between natural aging. Only when important parameters (such as the spectral

Certain relationships can only be predicted when the effects of cloth, sample temperature, wetting type, wetting cycle (relative humidity) on the sealant are known. However, with nature

Unlike aging, testing in the laboratory takes into account a controllable and limited number of variables, so the results are more reproducible.

Evaluation picture method of sealant aging crack

1 Scope

This document describes the evaluation methods for surface cracks of sealants after

artificial or natural aging, including principles, equipment, observers, test samples

Requirements, test procedures, test results, sample picture printing and test report, etc.

This document applies to the grading evaluation of aged surface defects (crack number, crack width and crack depth) of sealants.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 2943 Adhesive Terminology

3 Terms and Definitions

Terms and definitions defined in GB/T 2943 apply to this document.

4 Principles

By observing or measuring the change in surface appearance of the sealant after aging, and comparing it with the table and picture text provided in the document, evaluate its appearance.

The degree of surface defects (number of cracks, crack width and crack depth) and the corresponding grade.

5.1 Camera Box

The photo box should meet the following conditions.

- a) with visible light or artificial light source combined with light diffuser;
- b) High contrast and color realism.

See Appendix B for recommended camera boxes.

Note. One of the most important factors in shooting is the interaction of light, and controlling the stability of light is very important for the clarity of surface cracks.

5.2 Digital camera equipment

More than 9 million pixels.

5.3 Dimensions measuring instrument

5.3.1 Optical measuring instrument (optical image measuring instrument, measuring microscope, optical micrometer). the accuracy is better than 0.01mm.

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