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

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Sealants - Determination of surface cure time

密封胶 表面固化时间的测定

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO 4784:2022 "Determination of surface curing time of sealants for building and civil engineering".

Compared with ISO 4784:2022, this document has some structural adjustments. A comparison table of the structural numbering changes between the two documents can be found here.

Appendix A.

This document differs significantly from ISO 4784:2022. The relevant clauses are indicated

in vertical single-line margins.

The lines (I) are marked, and Appendix B provides a summary of the corresponding technical differences and their reasons.

The following editorial changes have been made to this document.

---The standard title has been changed to "Determination of Curing Time of Sealant Surface";

---The standard principle has been revised to be more complete and easier to understand (see Chapter 4);

---Some instances where the endpoint of sealant tests was difficult to determine have been corrected and are now explained in footnotes to make the logic of the statements more reasonable (see 8.2.3);

---The sections "c) Name, type and color of sealant" and "d) Sealant batch" from Chapter 10 of ISO 4784:2022 Test Reports have been merged into...

The description in section "c) Sealant Name, Type, Color and Production Batch" of this document has been revised to be more reasonable (see Chapter 10);

---Added an informative Appendix A, a table comparing changes in structural numbering, and Appendix B, a table outlining technical differences and their causes.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Adhesives (SAC/TC185).

1 Scope

This document describes a test method for determining the surface curing time of a sealant.

This document applies to the determination of the surface curing time of sealants.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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

This document.

GB/T 2943 Adhesive Terminology

3 Terms and Definitions

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

4 Principles

A polyethylene film (hereinafter referred to as "film") is placed over the sealant surface. After a period of time, the film is peeled off, and the sealant surface finish is measured.

The minimum time required for the non-adhesive film state is the surface curing time.

5 Test equipment and materials

5.1

Mold Frame. A rectangular frame made of metal, high-density polyethylene (HDPE) or polypropylene (PP), with an inner frame length of (150 ± 5) mm and a width of... (38 ± 2) mm, depth (6.0 ± 0.5) mm.

5.2

Base Plate. A rectangular base plate made of metal, high-density polyethylene (HDPE), or polypropylene (PP), with dimensions not smaller than the outer dimensions of the mold frame.

size.

5.3

Polyethylene film. Transparent low-density polyethylene (LDPE) film, length (150 ± 5) mm, width (20 ± 2) mm, thickness (100 ± 10) μ m.

5.4

Loading block. metal plate, length (40 ± 1) mm, width (30 ± 1) mm, mass (30.0 ± 0.5) g.

5.5

Timer. Stopwatch or other suitable timer with a reading accuracy of at least 1 second.

5.6

Scraper.

6.1 Standard Test Conditions

Temperature $(23\pm2)^{\circ}\text{C}$, relative humidity $(50\pm10)\%$. Sample preparation and testing should be carried out under standard test conditions.

6.2 State Adjustment

Unopened sealant in its original packaging should be left to stand for at least 16 hours under standard test conditions.