

ICS 87.040

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

GB/T 23987-2009

**Paints and varnishes -- Exposure of coatings to artificial
weathering -- Exposure to fluorescent UV lamps and water
(English Translation)**

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Foreword

This Standard equivalently adopts international standard ISO11507: 2007 Paints and varnishes - Exposure of coatings to artificial weathering - Exposure to fluorescent UV lamps and water (English version).

This Standard equivalently translates ISO11507: 2007.

In order to use easily, the editorial revision of this Standard is as follows:

- REPLACE "this international standard" with "this Standard";
- DELETE the foreword of international standard.

This Standard was proposed by China Petroleum and Chemical Industry Association.

This Standard is administered by National Technical Committee of Paints and Pigments for Standardization.

This Standard was drafted by: the Changzhou Research Institute of Coatings

Chemicals in CNOOC, and Atlas Material testing technology Ltd.

1 Scope

This Standard specifies the test methods of using test equipment, including fluorescent UV lamps and gel or spraying water, to determine the coatings' durability to artificial weathering.

Note: Because the UV of fluorescent UV lamps only simulates partial ultraviolet spectrum of sunlight, so the test panels only endures little amount of the ultraviolet which is more destructive portion in the spectrum.

Comparing with sunlight, this test lacks of visible-light and infrared light's radiant energy, so the temperature of heated test panels shall not be higher than that of surrounding air when using it.

2 Normative reference standards

Clauses in the following documents become part of this Standard through the quotation of this Standard. For dated references, all the subsequent amendments (except the content of errata) or revisions do not apply to this Standard. However, all parties who enter into agreement based on this Standard are encouraged to study if the latest version of these documents can be used. For undated references, the latest version applies.

GB/T 3186-2006 Paints and varnishes and raw materials for paints and varnishes - sampling (GB/T3186-2006, ISO15528: 2000, IDT)

GB/T 6682-2008 Water for analytical laboratory use-Specification and test methods (GB/T6682-2008, ISO3696: 1987, MOD)

GB/T9271-2008 Paints and varnishes - standard panels for testing plate (GB/T9271-2008, ISO1514: 2004, MOD)

GB/T13452.2-2008 Paints and varnishes - Determination of film thickness (GB/T 13452.2-2008, ISO2808: 2007, IDT)

Note: Suitable methods include the methods specified in GB/T 9754, GB/T 11186.1-GB/T 11186.3, GB/T 9761 and ISO 4628-1 ~ ISO 4628-8 and ISO 4628-10.

Unless otherwise agreed, the test panels during the inspection shall not be washed or polished.

11 Precision

The precision data of the standard is not yet available.

12 Supplementary test conditions

As for any specific application of the method specified by this Standard, in addition to above clauses, there are more details to be given, such as the following:

- a) The substrate material, the thickness of the substrate and the surface treatment of the substrate;
- b) The method of applying tested coatings onto substrate;
- c) Before exposure, the time and condition of coating drying (or baking) and placing (if applicable);
- d) Before the start of exposure, the test plates' adjustment time and conditions (if the same test plate has been carried out other test in advance);
- e) Thickness of dry coating, in μm , and whether the measurement method according to GB/T 13452.2 requirement is a single-layer or multi-layer coating system;
- f) All the detail of conditions and time;
- g) Any specific test requirements, for example, agreed on using degree of color-change to assess color fastness.

13 Test report

The test report shall at least include the following:

- a) IDENTIFY all the details of the test product (manufacturer, trademark, batch number, etc.);

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