



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

GB/T 37356-2019

**Paints and varnishes - Lighting and procedure for visual
assessments of coatings**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 13076.2012 "Lighting conditions and methods for visual evaluation of paint and varnish coatings".

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

This standard is under the jurisdiction of the National Coatings and Pigments Standardization Technical Committee (SAC/TC5).

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1 Scope

This standard specifies the lighting conditions for visual assessment of the aging area, spots or other defects on the surface of the coating or inside the coating and method.

This standard does not apply to visual colorimetric, visual colorimetric can be carried out in accordance with ISO 3668.

2 Principle

The aging area, spots or other defects of the sample were visually evaluated under specified lighting conditions.

3 instruments

Fluorescent lamp. A wide-angle light source (see Figure 1) with an aluminized reflective film that reflects light downwards. The color temperature is 6500K and the color rendering is 9 (corresponding to

At the color development level 1A, the color rendering index Ra is 90 to 100).

Note. The color temperature corresponding to the color temperature and color rendering is 965.

4.1 General

Natural daylight or artificial daylight can be used for routine assessment. Because natural daylight is not stable, it will be surrounded by natural sunlight.

The environmental impact, therefore, the arbitration assessment should use precisely controlled artificial daylight, and Appendix A gives an example of a visual assessment.

4.2 Assessment under natural daylight

When rating a sample, it is best to use scattered sunlight under partially cloudy weather conditions and the sample is placed northward (in the southern hemisphere, the template faces south)

Place). Uniform illumination of the assessment area and its surrounding area is performed with an illumination of not less than 2000 lx. Avoid direct sunlight.

4.3 Assessment under artificial daylight

The coating is evaluated under artificial sunlight as specified in Chapter 3. When testing, hold the template at a certain distance from the light source to make the illuminance of the

surface of the template

Not less than 750lx (see Figure 1).

The illuminance should be measured after the fluorescent lamp is installed.

The template can be tilted in any direction when evaluated. Check the pattern at the light-dark junction of the light to identify the aging zone and spots of the sample.

The arbitration assessment shall be conducted under artificial sunlight.

5 test report

When using the methods specified in this standard, the test report should add the following information.

a) indicate the standard number (GB/T 37356);

b) Indicate the type of light source (natural daylight or artificial daylight) used to evaluate the test panel; if an artificial light source is used, the type of light source should be given

The details of.

Description.

1---lights.

Figure 1 Location of lights, test panels, and observers

Appendix A

(informative appendix)

Application example

Table A.1 lists examples of visual assessments that can be performed using the methods specified in this standard.

Table A.1 Application examples of this standard

Test method standard

Cross-cut test ISO 2409

Impact test ISO 6272-1, ISO 6272-2

Stone resistance ISO 20567-1, ISO 20567-2

Chemical resistance

ISO 2812-1, ISO 2812-2, ISO 2812-3,

ISO 2812-4, ISO 2812-5, ISO 15710

Film defect

ISO 4628-2, ISO 4628-3, ISO 4628-4,

ISO 4628-5, ISO 4628-6, ISO 4628-7,

ISO 4628-8, ISO 4628-10

Scratch resistance ISO 1518-1, ISO 1518-2, ISO 12137

Car washing test ISO 20566

Bending test ISO 1519, ISO 6860, ISO 17132

Drying test

ISO 9117-1, ISO 9117-2, ISO 9117-3,

ISO 9117-4, ISO 9117-5, ISO 9117-6

Grinding fineness ISO 1524

Pull-off adhesion test ISO 4624

Anti-sagging ISO 16862

Performance evaluation of coating systems related to the coating process ISO 28199-3

Moisture-resistant scrub ISO 11998

references

[1] ISO 1518-1 Paintsandvarnishes-Determinationofscratchresistance-Part 1. Constant-Loadingmethod

[2] ISO 1518-2 Paintsandvarnishes-Determinationofscratchresistance-Part 2.Variable-Loadingmethod

[3] ISO 1519 Paintsandvarnishes-Bendtest(cylindricalmandrel)

[4] ISO 1524 Paints, varnishesandprintinginks-Determinationoffinenessofgrind

[5] ISO 2409 Paintsandvarnishes-Cross-cuttest

[6] ISO 2812-1 Paintsandvarnishes-Determinationofresistancetoliquids-Part 1. Immer-Siininliquidsototherthanwater

[7] ISO 2812-2 Paintsandvarnishes-Determinationofresistancetoliquids-Part 2.Water Immersionmethod

[8] ISO 2812-3 Paintsandvarnishes-Determinationofresistancetoliquids-Part 3.Method