



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 5600-7-8 : 1999

(ISO/FDIS 11507 : 1997)

**Testing methods for paints—
Part 7 : Long-period performance
of film—
Section 8 : Accelerated weathering
(Exposure to fluorescent UV lamps)**

ICS 87.040

Descriptors : paints, painting, membranes, durability, weather resistance, fluorescent lamps, ultraviolet lamps

Reference number : JIS K 5600-7-8 : 1999 (E)

K 5600-7-8 : 1999 (ISO/FDIS 11507 : 1997)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

JIS K 5400 : 1990 corresponding to this Standard will be withdrawn and replaced with this Standard in April 2002, at the time of three years passed after establishment of this Standard.

Consequently it is recommended to comply with this Standard.

JIS K 5600 consists of the following parts.

JIS K 5600 Part 1 Section 1 to Section 8	<i>General rule</i>
JIS K 5600 Part 2 Section 1 to Section 7	<i>Characteristics and stability of paints</i>
JIS K 5600 Part 3 Section 1 to Section 6	<i>Film formability</i>
JIS K 5600 Part 4 Section 1 to Section 7	<i>Visual characteristics of film</i>
JIS K 5600 Part 5 Section 1 to Section 11	<i>Mechanical property of film</i>
JIS K 5600 Part 6 Section 1 to Section 3	<i>Chemical property of film</i>
JIS K 5600 Part 7 Section 1 to Section 8	<i>Long-period performance of film</i>
JIS K 5600 Part 8 Section 1 to Section 6	<i>Evaluation of degradation of paint coatings</i>

JIS K 5600-7 consists of the following sections under the title of "Testing methods for paints—Part 7 : Long-period performance of film".

JIS K 5600 Part 7 Section 1	<i>Resistance to neutral spray</i>
JIS K 5600 Part 7 Section 2	<i>Resistance to humidity (Continuous condensation)</i>
JIS K 5600 Part 7 Section 3	<i>Resistance to humidity (Intermittent condensation)</i>
JIS K 5600 Part 7 Section 4	<i>Humidity and cool-heat cycling test</i>
JIS K 5600 Part 7 Section 5	<i>Light fastness of film</i>
JIS K 5600 Part 7 Section 6	<i>Natural weathering test</i>
JIS K 5600 Part 7 Section 7	<i>Accelerated weathering (Exposure to filtered xenon-arc radiation)</i>
JIS K 5600 Part 7 Section 8	<i>Accelerated weathering (Exposure to fluorescent UV lamps)</i>

Date of Establishment: 1999-04-20

Date of Public Notice in Official Gazette: 1999-04-20

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Chemical

JIS K 5600-7-8:1999, First English edition published in 2000-11

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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Printed in Japan

**Testing methods for paints—
Part 7 : Long-period performance of film—
Section 8 : Accelerated weathering
(Exposure to fluorescent UV lamps)**

Introduction This Japanese Industrial Standard has been prepared based on **ISO/FDIS 11507** *Paints and varnishes—Exposure of coatings to artificial weathering—Exposure to fluorescent UV and water* issued in 1997 without changing the technical contents.

Coatings from paints, varnishes and similar materials 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 coating 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.

The portions underlined with dots in this Standard are not stated in the original International Standard.

1 Scope This Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products. It specifies a test method for determining the resistance of paint coatings to artificial weathering in apparatus including fluorescent UV lamps and condensation or water spray.

Note 1 The ultraviolet light produced by the fluorescent tubes simulates only part of the UV region of the natural sunlight and consequently the test pieces are subjected to a small but destructive portion of the spectrum.

Due to the lack of energy of visible and infra-red radiation compared to sunlight the test piece is not heated above the temperature of the surrounding air which takes place in practical use.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of coming into effect is given to these referred standards, only the edition of indicated year constitutes the provision of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of coming into effect apply limiting only to the most recent edition (including the amendment).

JIS K 5600-1-2 Testing methods for paints—Part 1 : General rule—Section 2 : Sampling of products

Remarks : ISO 1512 : 1991, Paints and varnishes—Sampling of products in liquid or paste form is identical with the said standard.

JIS K 5600-1-3 Testing methods for paints—Part 1 : General rule—Section 3 : Examination and preparation of samples for testing

Remarks : ISO 1513 : 1992, *Paints and varnishes—Examination and preparation of samples for testing* is identical with the said standard.

JIS K 5600-1-4 Testing methods for paints—Part 1 : General rule—Section 4 : Standard panels for testing

Remarks : ISO 1514 : 1993, *Paints and varnishes—Standard panels for testing* is identical with the said standard.

JIS K 5600-1-7 Testing methods for paints—Part 1 : General rule—Section 7 : Determination of film thickness

Remarks : ISO/DIS 2808 : 1997, *Paints and varnishes—Determination of film thickness* is equivalent to the said standard.

JIS K 5600-4-3 Testing methods for paints—Part 4 : Visual characteristics of film—Section 3 : Visual comparison of the colour of paints

Remarks : ISO 3668 : 1976, *Paints and varnishes—Visual comparison of the colour of paints* is identical with the said standard.

JIS K 5600-4-4 Testing methods for paints—Part 4 : Visual characteristics of film—Section 4 : Colorimetry (Principles)

Remarks : ISO 7724-1 : 1984, *Paints and varnishes—Colorimetry—Part 1 : Principles* is identical with the said standard.

JIS K 5600-4-5 Testing methods for paints—Part 4 : Visual characteristics of film—Section 5 : Colorimetry (Measurement)

Remarks : ISO 7724-2 : 1984, *Paints and varnishes—Colorimetry—Part 2 : Colour measurement* is identical with the said standard.

JIS K 5600-4-6 Testing methods for paints—Part 4 : Visual characteristics of film—Section 6 : Colorimetry (Calculation of colour differences)

Remarks : ISO 7724-3 : 1984, *Paints and varnishes—Colorimetry—Part 3 : Calculation of colour differences* is identical with the said standard.

JIS K 5600-4-7 Testing methods for paints—Part 4 : Visual characteristics of film—Section 7 : Specular gloss

Remarks : ISO 2813 : 1994, *Paints and varnishes—Determination of specular gloss of non-metallic paint film at 20°, 60° and 85°* is identical with the said standard.

JIS K 5600-7-7 Testing methods for paints—Part 7 : Long-period performance of film—Section 7 : Accelerated weathering (Exposure to filtered xenon-arc radiation)

Remarks : ISO 11341 : 1994, *Paints and varnishes—Artificial weathering and exposure to artificial radiation—Exposure to filtered xenon-arc radiation* is identical with the said standard.