JIS

JAPANESE INDUSTRIAL STANDARD

Translated and Published by
Japanese Standards Association

JIS K 5600-7-1 : 1999

(ISO 7253 : 1984)

Testing methods for paints— Part 7 : Long-period performance of film— Section 1 : Resistance to neutral spray

ICS 87.040

Descriptors : paints, painting, membranes, chemical analysis and testing, durability, endurance testing, chemical-resistance tests, salt-spray tests

Reference number : **JIS K 5600-7-1 : 1999 (E)**

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JIS K 5400 corresponding to this Standard will be withdrawn and replaced with this Standard in April 2002, at the time of three years passed after establishment of this Standard.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	*General rule*
JIS K 5600 Part 2 Section 1 to Section 7	*Characteristics and stability of paints*
JIS K 5600 Part 3 Section 1 to Section 6	*Film formability*
JIS K 5600 Part 4 Section 1 to Section 7	*Visual characteristics of film*
JIS K 5600 Part 5 Section 1 to Section 11	*Mechanical property of film*
JIS K 5600 Part 6 Section 1 to Section 3	*Chemical property of film*
JIS K 5600 Part 7 Section 1 to Section 8	*Long-period performance of film*
JIS K 5600 Part 8 Section 1 to Section 6	*Evaluation of degradation of paint coatings*

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

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JAPANESE INDUSTRIAL STANDARD

JIS K 5600-7-1 : 1999
(ISO 7253 : 1984)

Testing methods for paints— Part 7 : Long-period performance of film— Section 1 : Resistance to neutral spray

Introduction This Japanese Industrial Standard has been prepared based on **ISO 7253** *Paints and varnishes—Determination of resistance to neutral salt spray* issued in 1984 as the first edition without changing the technical contents.

There is seldom a direct relationship between the resistance of organic coatings to the action of salt spray and the resistance to corrosion in other environments. This is because the effect of each of the several factors influencing the progress of corrosion, such as the formation of protective films, varies greatly with the conditions encountered. Therefore, the results obtained in the test should not be regarded as a direct guide to the corrosion resistance of the tested coatings in all environments where these coatings may be used. Also, performance of different coatings in the test should not be taken as a direct guide to the relative corrosion resistance of these coatings in service even under the severe conditions of marine exposure. Nevertheless, the method described gives a means of checking that the quality of a paint or paint system is being maintained.

This Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products. For any particular application, the method of test described in this Standard requires to be completed by the following supplementary information. This information shall be derived, partly or totally, from the (inter)national standard or other document for the product under test or, where appropriate, shall be the subject of agreement between the interested parties.

a) Material and surface preparation of the substrate.

b) Method of application of the test coating to the substrate.

c) Duration and conditions of drying the coat (or conditions of stoving and ageing, if applicable) before testing.

d) Thickness, in micrometres, of the dry coating and method of measurement in accordance with **JIS K 5600-1-7**, and whether it is a single coating or a multicoat system.

e) Whether a scratch is to be made before exposure and, if so, its nature and position.

f) Duration of the test.

g) How inspection of the test coating is to be made and what characteristics are to be considered in evaluating its resistance properties.

Note : The apparatus and operating conditions described in this Standard comply, but do not necessarily equate, with **ISO 3768**. The minimum size of cabinet permissible for testing paints, varnishes and related products is greater (see **4.1**).

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

1 Scope This Standard describes a method for determining the resistance of coatings to the neutral salt spray test performed in accordance with the requirements of coating or product specifications.

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 5600-1-6 *Testing methods for paints—Part 1 : General rule—Section 6 : Temperatures and humidities for conditioning and testing*

Remarks : **ISO 3270** : 1984, *Paints and varnishes and their raw materials—Temperatures and humidities for conditioning and 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**, *Paints and varnishes—Determination of film thickness* is equivalent to the said standard.

JIS K 5600-5-6 *Testing methods for paints—Part 5 : Mechanical property of film—Section 6 : Adhesion test (Cross-cut test)*

Remarks : **ISO 2409** : 1992, *Paints and varnishes—Cross-cut test* is identical with the said standard.

ISO 3768 *Metallic coatings—Neutral salt spray test (NSS test)*

3 Test solution

3.1 The test solution shall be prepared by dissolving sodium chloride in distilled or demineralized water to produce a concentration of 50 ± 5 *g/l*. The sodium chloride shall be white, of minimum assay 99.6 % (*m/m*), and substantially free from