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(JPMA/JSA)

**Testing methods for paints—
Part 5: Mechanical property of film—
Section 11: Washability**

ICS 87.040

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Paint Manufacturers Association (JPMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS K 5600-5-11**:1999 is replaced with this Standard.

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JIS K 5600-5 series consists of the following 11 parts under the general title “*Testing methods for paints—Part 5: Mechanical property of film*”:

Section 1: Bend test (cylindrical mandrel)

Section 2: Cupping test

Section 3: Falling-weight test

Section 4: Scratch hardness (Pencil method)

Section 5: Scratch hardness (Stylus method)

Section 6: Adhesion test (Cross-cut test)

Section 7: Adhesion test (Pull-off method)

Section 8: Abrasion resistance (Rotating abrasive-paper-covered wheel method)

Section 9: Abrasion resistance (Rotating abrasive rubber wheel method)

Section 10: Abrasion resistance (Reciprocating test panel method)

Section 11: Washability

Testing methods for paints— Part 5: Mechanical property of film— Section 11: Washability

Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 11998** published in 2006 with some additions of specifications as well as modifications of the technical contents.

The portions given dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard describes an accelerated method for the determination of wet-scrub resistance and cleanability of coatings.

With regard to the cleanability of coatings, only the method itself and not the soiling agents are specified.

NOTE 1 The ability of coatings to withstand wear caused by repeated cleaning operations and to withstand penetration by soiling agents is an important consideration both from a practical point of view and when comparing and rating such coatings. Since these properties depend not only on the quality of a coating but also on the substrate, the method of application, the drying conditions and other factors, the results obtained are not directly transferable to actual practice. In this Standard the evaluation of the coating is based on a defined substrate, a fixed application method, specified drying conditions and a defined method of wet scrubbing.

NOTE 2 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 11998:2006 *Paints and varnishes—Determination of wet-scrub resistance and cleanability of coatings* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS K 0557 *Water used for industrial water and wastewater analysis*

JIS K 5500 *Glossary of terms for coating materials*

JIS K 5600-1-2 *Testing methods for paints—Part 1: General rules—Section 2: Sampling*

NOTE : Corresponding International standard: ISO 15528 *Paints, varnishes and raw materials for paints and varnishes—Sampling* (IDT)

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

NOTE : Corresponding International standard: ISO 1513 *Paints and varnishes—Examination and preparation of samples for testing* (IDT)

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

NOTE : Corresponding International standard: ISO 3270 *Paints and varnishes and their raw materials—Temperatures and humidities for conditioning and testing* (IDT)

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS K 5500**, and the following apply.

3.1 cleanability

ability of a dry coating film to withstand penetration by soiling agents and to be freed from them through the cleaning process without removing more than a defined film thickness

3.2 scrub cycle

one reciprocal movement of the scrub pad over the scrub length in both directions

3.3 scrub length

stroke length plus the length of the pad

3.4 stroke length

distance traversed by one stroke of the apparatus

3.5 wet-scrub resistance

ability of a dry coating film to sustain less than a specified loss in film thickness, averaged over a defined area, when exposed to 200 wet-scrub cycles

4 Principle

4.1 Wet-scrub resistance

Wet-scrub resistance shall be as follows.

- a) The test coating is applied to a test panel specified in **6.1** using a film applicator at the appropriate gap clearance.
- b) Take what has been dried and conditioned as given in **8.1 a)** to **c)** as a test piece.