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Paints and varnishes — Determination of hiding power —

Part 3: Determination of hiding power of paints for masonry, concrete and interior use

Peintures et vernis — Détermination du pouvoir masquant —

Partie 3: Détermination du pouvoir masquant pour des peintures bâtiments, béton et utilisation en intérieur

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes.*

This third edition cancels and replaces the second edition (ISO 6504-3:2006), which has been technically revised. The main changes compared to the previous edition are as follows:

— the title and Scope have been restricted to paints for masonry and concrete;

— a definition for light-coloured paint has been added;

— a new method (method C), which is suitable for waterborne coating materials only, has been introduced;

— the determination of the mass per unit area of the dry coating and the determination of the practical spreading rate have been deleted (ISO 3233-3 can be used instead);

— the reference to a fixed spreading rate has been deleted from the foreword, scope and test report (it had already been deleted from the procedure in the previous edition);

— the historic precision values for methods A and B have been deleted from the normative part and information on a new interlaboratory comparison on method C has been added in an informative annex, i.e. Annex A;

— the normative references have been updated.

A list of all parts in the ISO 6504 series can be found on the ISO website.

Introduction

Two techniques are available for substrate preparation and measurement when determining the hiding power of paints for masonry and concrete:

a) application to colourless, transparent foil, the coated foil being subsequently placed in turn over black and white panels;

b) direct application to black and white charts.

The spreading rate is important for the determination of the hiding power ratio. The spreading rate can be either determined according to ISO 3233-3 or according to another simplified method described in the standards applicable to coating materials for interior walls and ceilings as specified in EN 13300.

Because different operators using the same draw-down device will obtain coatings differing significantly in thickness, an absolute method for the determination of opacity is described in this document. Collaborative trials between groups of experts from a number of countries have shown that reproducible results can be obtained by determination of the hiding power corresponding to a precisely specified spreading rate by interpolation between measurements at two or more measured coating thicknesses nearby and enclosing the specified spreading rate. The interested parties might agree on the specified spreading rate.

The methods are based on the observation that hiding power is an approximately linear function of reciprocal spreading rate, over a restricted coating thickness range which also corresponds to that used for normal application of white or light-coloured paints. It is thus possible to interpolate graphically or by computation, with satisfactory accuracy, between results obtained with coatings of different thicknesses.