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Coating powders —

Part 5: Determination of flow properties of a powder/air mixture

Poudres pour revêtement —

Partie 5: Détermination de l'aptitude à la fluidisation d'un mélange poudre/air

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 vanishes,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 8130-5:1992), which has been technically revised. The main changes compared to the previous edition are as follows:

— the scope has been revised editorially;

— Annex A has been deleted;

— Clause 3 on terms and definitions has been added;

— requirements for test temperature and humidity have been introduced;

— the text has been editorially revised and the normative references have been updated.

A list of all parts in the ISO 8130 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html

Coating powders —

Part 5:
Determination of flow properties of a powder/air mixture

1 Scope

This document specifies a method for estimating the flow properties of a mixture of coating powder and air.

The results obtained are influenced by the composition of the coating powder, its density, particle size distribution and particle shape, together with the tendency of the particles to agglomerate and to accept a charge.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8130-14, *Coating powders — Part 14: Vocabulary*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8130-14 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

A specified quantity of coating powder is placed in a vessel and is fluidized with clean dry air under known conditions of temperature, humidity and atmospheric pressure. The height of the powder during and after fluidization is measured and the mass at which the fluidized powder flows through a specified orifice during a specified interval of time is then determined.

The measurements are used to calculate the fluidization factor, ϕ, and the powder flow rate, R, which together define the transport and spraying characteristics of the powder.

5 Apparatus

Ordinary laboratory apparatus, together with the following.