



BSI Standards Publication

Coating powders

Part 6: Determination of gel time of thermosetting coating powders at a given temperature

National foreword

This British Standard is the UK implementation of EN ISO 8130-6:2021. It is identical to ISO 8130-6:2021. It supersedes BS EN ISO 8130-6:2010, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee STI/10, Test methods for paints.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Coating powders - Part 6: Determination of gel time of thermosetting coating powders at a given temperature (ISO 8130-6:2021)

Poudres pour revêtement - Partie 6: Détermination
du temps de gélification à une température donnée
de poudres thermodurcissables (ISO 8130-6:2021)

Pulverlacke - Teil 6: Bestimmung der Gelzeit
von wärmehärtenden Pulverlacken bei einer
gegebenen Temperatur (ISO 8130-6:2021)

This European Standard was approved by CEN on 28 April 2021.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 8130-6:2021) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8130-6:2010.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN websites.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8130-6:2021 has been approved by CEN as EN ISO 8130-6:2021 without any modification.

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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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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 varnishes*, 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 8130-6:1992), which has been technically revised. It also incorporates the Amendment ISO 8130-6:1992/Amd.1:1998. The main changes compared to the previous edition are as follows:

- the use of a release agent has been deleted;
- a flat heating block without a spherical depression has been added as a second option;
- the duplicate determination has been changed to single determination;
- a comment on measurement of coating powders with ultra-short gel times (less than 15 s) has been added to [Clause 1](#);
- the previous repeatability data have been deleted because they need to be validated;
- 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 6:

Determination of gel time of thermosetting coating powders at a given temperature

1 Scope

This document specifies a method for determining the time for a thermosetting coating powder to gel at a specified temperature. A method is described for checking batch to batch variation and for the quality control of a given coating powder.

The method is not applicable to coating powders with ultra-short gel times (less than 15 s).

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 and the following 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/>

3.1

gel time

time taken for a specified volume of coating powder to become non-deformable, under specified conditions, after melting

4 Principle

A test portion of a coating powder is heated to a specified temperature in a depression of a heating block. The time at which threads can no longer be pulled from the molten product is determined.

5 Materials

5.1 Test substances, of known melting point for checking the temperature of the heating block (6.1).

For a test temperature of 180 °C, a suitable material should be chosen which shall not interfere with the subsequent analysis.