INTERNATIONAL STANDARD

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Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives —

Part 5: Determination of moisture

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés — Méthodes d'essai pour abrasifs non métalliques destinés à la préparation par projection —

Partie 5: Détermination de l'humidité

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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 12, *Preparation of steel substrates before application of paints and related products*, 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 third edition cancels and replaces the second edition (ISO 11127-5:2011), which has been technically revised. The main changes to the previous edition are as follows:

— Clause 3 has been added;

— the subclause 6.2 has been technically revised; the sample is agitated to increase the surface area and improve the drying process;

— Annex A has been updated.

A list of all parts in the ISO 11127 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.

Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives —

Part 5: Determination of moisture

1 Scope

This document specifies a method for the determination of the level of free moisture present in non-metallic blast-cleaning abrasives. It is determined by measuring the mass lost on heating.

This document is one of a number of parts of ISO 11127 dealing with the sampling and testing of non-metallic abrasives for blast-cleaning.

The types of non-metallic abrasive and requirements on each are contained in the ISO 11126 series.

The ISO 11126 series and the ISO 11127 series have been drafted as a coherent set of International Standards on non-metallic blast-cleaning abrasives. Information on all parts of both series is given in Annex A.

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 11126(all parts), *Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives*

ISO 11127-1, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 1: Sampling*

3 Terms and definitions

No terms and definitions are listed in this document.

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 Apparatus

Ordinary laboratory apparatus and glassware, together with the following.

4.1 **Container** or **tray**, capable of withstanding the heat applied and of sufficient volume to allow the test portion to be spread in a thin layer.

4.2 **Oven**, capable of being maintained at a temperature of (110 ± 5) °C.

4.3 Balance, capable of weighing to an accuracy of 0,01 g.

4.4 Desiccator, containing a desiccant such as dried silica gel impregnated with cobalt chloride.

5 Sampling

Take a representative sample of the product to be tested, as described in ISO 11127-1. Be sure to store the sample in a sealed container until required.

6 Procedure

6.1 General

Carry out the determination in duplicate.

6.2 Test portion

Dry the container (4.1) in the oven (4.2) at (110 ± 5) °C for 15 min and allow it to cool to room temperature in the desiccator (4.4). Weigh the container to the nearest 0,01 g. Weigh into the container, to the nearest 0,01 g, a test portion of approximately 100 g (m_0). Agitate the container to spread the test portion in the container.

6.3 Determination

Place the container with the test portion in the oven (4.2), previously adjusted to (110 ± 5) °C and leave for at least 1 h. Transfer the container to the desiccator and allow to cool to room temperature. Reweigh the container with the dried test portion to the nearest 0,01 g and determine the mass of the dried test portion (m_1).

7 Expression of results

Calculate the moisture content M, expressed as a mass percentage in %, using Formula (1):

$$M = \frac{m_0 - m_1}{m_0} \times 100 \quad (1)$$

where

m_0 is the mass, in grams, of the test portion before heating;

m_1 is the mass, in grams, of the test portion after heating.

If the duplicate determinations differ by more than 0,05 % (absolute), repeat the procedure described in Clause 5.

Calculate the mean of two valid determinations and report the result to the nearest 0,01 %.

8 Test report

The test report shall contain at least the following information:

a) all details necessary to identify the product tested, in accordance with the appropriate part of ISO 11126 (see Annex A), if applicable;

b) a reference to this document (i.e. ISO 11127-5:2020);