

INTERNATIONAL STANDARD

ISO 11127-5

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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



Reference number
ISO 11127-5:1993(E)

ISO 11127-5:1993(E)**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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11127-5 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*.

ISO 11127 consists of the following parts, under the general title *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives*:

- *Part 1: Sampling*
- *Part 2: Determination of particle size distribution*
- *Part 3: Determination of apparent density*
- *Part 4: Assessment of hardness by a glass slide test*
- *Part 5: Determination of moisture*
- *Part 6: Determination of water-soluble contaminants by conductivity measurement*
- *Part 7: Determination of water-soluble chlorides*
- *Part 8: Determination of abrasive mechanical properties*

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ISO 11127-5:1993(E)

At the time of publication of this part of ISO 11127, part 8 was in course of preparation.

Annex A of this part of ISO 11127 is for information only.

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 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 various parts of ISO 11126.

The ISO 11126 and 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.

This part of ISO 11127 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.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 11127. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11127 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 11127-1:1993, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 1: Sampling.*

3 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

3.1 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.

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

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

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

4 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.

5 Procedure

Carry out the determination in duplicate.

5.1 Test portion

Dry the container (3.1) in the oven (3.2) at $(110 \pm 5)^\circ\text{C}$ for 15 min and allow it to cool to room temperature in the desiccator (3.4). 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).

5.2 Determination

Place the container with the test portion in the oven (3.2), previously adjusted to $(110 \pm 5)^\circ\text{C}$, 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).

6 Expression of results

Calculate the moisture content M , expressed as a percentage by mass, using the equation:

$$M = \frac{m_0 - m_1}{m_0} \times 100$$

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 %.

7 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 part of ISO 11127 (ISO 11127-5);
- c) the result of the test;
- d) any deviation from the test method specified;
- e) the date of the test;
- f) the name of the person who carried out the test.

Annex A (informative)

International Standards for non-metallic blast-cleaning abrasives

Requirements and test methods for non-metallic blast-cleaning abrasives are contained in ISO 11126 and ISO 11127 respectively.

ISO 11126 will consist of the following parts under the general title:

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

- *Part 1: General introduction and classification*
- *Part 2: Silica sand*
- *Part 3: Copper refinery slag*
- *Part 4: Coal furnace slag*
- *Part 5: Nickel refinery slag*
- *Part 6: Iron furnace slag*
- *Part 7: Fused aluminium oxide*
- *Part 8: Olivine sand*
- *Part 9: Staurolite*
- *Part 10: Garnet*

ISO 11127 will consist of the following parts, under the general title:

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

- *Part 1: Sampling*
- *Part 2: Determination of particle size distribution*
- *Part 3: Determination of apparent density*
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Descriptors: paints, varnishes, substrates, steel products, blast-cleaning, abrasives, non-metallic abrasives, tests, determination of content, humidity, gravimetric analysis.

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