INTERNATIONAL STANDARD

ISO 11127-4

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

Part 4:
Assessment of hardness by a glass slide test

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 4: Évaluation de la dureté au moyen d'un essai à la lame de verre

Reference number
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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 11127-4:2011), which has been technically revised. The main changes to the previous edition are as follows:

— Clause 3, Terms and definitions, has been added;

— subclause 4.2, Clause 6 and Appendix A have 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 4: Assessment of hardness by a glass slide test

1 Scope

This document specifies a method of assessing of whether a non-metallic blast-cleaning abrasive has a minimum hardness of 6 on Mohs' scale.

This document is a part of the ISO 11127 series 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 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.

NOTE The test described in this document is a pass/fail test and is not a method for the accurate determination of hardness.

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 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

4.1 Microscope, having a magnification of × 10.

4.2 Glass microscope slides, manufactured from soda glass with no observable scratches.

NOTE Borosilicate glass slides are unsuitable for this test

5 Sampling

Take a representative sample of the product to be tested, as described in ISO 11127-1.

6 Procedure

6.1 Examine 5 g of the material under the microscope (4.1) and, if grains of different colours or diameter are present, select a 5 grains to 10 grains of each.

6.2 Place the selected grains between two glass microscope slides (4.2) and, while applying pressure between thumb and fingers, slowly move one slide over the other with a reciprocating motion for 10 s. Examine the glass surfaces and, if scratched, the material shall be considered as having a minimum hardness of 6 on Mohs' scale.

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 document (i.e. ISO 11127-4:2020);

c) the result of the test;

d) any deviation from the test method specified;

e) any unusual features observed;

f) the date of the test;

g) 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 the ISO 11126 series and the ISO 11127 series, respectively.

The ISO 11126 series consists 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 3: Copper refinery slag*

— *Part 4: Coal furnace slag*

— *Part 5: Nickel slag*

— *Part 6: Iron and steel slags*

— *Part 7: Fused aluminium oxide*

— *Part 8: Olivine*

— *Part 9: Staurolite*

— *Part 10: Almandite garnet*

The ISO 11127 series 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: Field determination of water-soluble chlorides*

Bibliography

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

[2] ISO 11127(all parts), *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives*