

## SLOVENSKI STANDARD oSIST prEN ISO 11127-2:2019

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Priprava jeklenih podlag pred nanašanjem barv in sorodnih premazov - Preskusne metode za nekovinske granulate za peskanje - 2. del: Ugotavljanje porazdelitve velikosti delcev (ISO/DIS 11127-2:2019)

Preparation of steel substrates before application of paints and related products - Test methods for non-metallic blast-cleaning abrasives - Part 2: Determination of particle size distribution (ISO/DIS 11127-2:2019)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Prüfverfahren für nichtmetallische Strahlmittel - Teil 2: Bestimmung der Korngrößenverteilungen (ISO/DIS 11127-2:2019)

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 2: Analyse granulométrique (ISO/DIS 11127-2:2019)

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25.220.10 Priprava površine Surface preparation

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## DRAFT INTERNATIONAL STANDARD ISO/DIS 11127-2

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

#### Part 2:

ICS: 25.220.10

### **Determination of particle size distribution**

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 2: Analyse granulométrique

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### ISO/CEN PARALLEL PROCESSING



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#### **Foreword**

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ISO 11127-2 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*.

This third edition cancels and replaces the second edition (ISO 11127-2:2011), which has been technically revised.

The main changes compared to the previous edition are as follows: 680ac9-a044-423d-b288-

- The use of a sample divider or riffler has been introduced in <u>Clause 5</u>
- 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 <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

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

#### Part 2:

### **Determination of particle size distribution**

#### 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 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 <u>Annex A</u>.

This part of ISO 11127 specifies a method for the determination of the particle size distribution of non-metallic blast-cleaning abrasives by sieving.

### 2 Normative references tandards.iteh.ai)

The following referenced documents are indispensable for the application 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 565:1990, Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings

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 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

**3.1 Test sieves**, circular, with a height of between 25 mm and 50 mm and a sieving area approximately 200 mm in diameter, made of woven metal wire cloth. The frame of the test sieves shall be made of metal. The range of nominal mesh apertures depends on the specification for the product to be tested and shall comply with the requirements of Table 2 in ISO 565:1990, as indicated in <u>Table 1</u>. The sieves shall have square openings. A lid and a residue pan shall also be provided.

NOTE Smaller-diameter sieves might not produce accurate separation of the sample.

Sieves shall be regularly checked for calibration and freedom from retained abrasive.

Table 1 — List of sieve mesh apertures to be used (from ISO 565:1990; R20/3 and R20 sizes)

mm	mm	mm	mm
0,036	0,112	0,355	1,18

**Table 1** (continued)

mm	mm	mm	mm
0,040	0,125	0,400	1,25
0,045	0,140	0,450	1,40
0,050	0,160	0,500	1,60
0,056	0,180	0,560	1,80
0,063	0,200	0,630	2,00
0,071	0,224	0,710	2,24
0,080	0,250	0,850	2.50
0,090	0,280	0,900	2,80
0,100	0,300	1,00	3,15

Rotating sieve machine, for agitating the sieves with the sample at a frequency of rotation of approximately 300 min<sup>-1</sup> and provided with a timer for time periods of up to 30 min in 1 min intervals.

Other sieve machines may be used provided the same results are obtained.

- **Balance**, capable of weighing to an accuracy of 0,1 g. 3.3
- **Sample divider, riffler or other equipment** suitable for splitting a sample into parts. 3.4

#### Sampling

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

#### 5

- Procedure https://standards.iteh.ai/catalog/standards/sist/e6680ac9-a044-423d-b288-
- Carry out the determination in duplicate. 5.1
- 5.2 Using the sample divider (3.4), obtain a test portion of 100-200 g.

Note Increased test portion mass may lead to inaccurate separation.

- Using balance (3.3), weigh test portion to the nearest 0,1 g ( $m_0$ ). 5.3
- Use all the test sieves listed against the grade under test as given in the grade and screening specification table in the appropriate part of ISO 11126 (see Annex A) or, in the case of materials not covered by ISO 11126, as otherwise agreed between the interested parties.
- Arrange the test sieves (3.1) with the largest-aperture sieve on the top and progress to the smallest 5.5 aperture at the bottom, with a pan to catch any abrasive that falls through the finest sieve.
- 5.6 Place the test portion in the top sieve.
- 5.7 Place a cover over the top sieve.
- Place the stack of sieves with the test portion in the rotating sieve machine (3.2) and operate the 5.8 sieve machine for 15 min.

**5.9** Carefully remove the top sieve from the stack and transfer any retained abrasive on to the balance pan. Brush the sieve clean of any trapped abrasive and add this to the balance pan. Weigh to the nearest 0,1 g and record this result  $(m_1)$ . Repeat for all the sieves in the stack, including the retaining pan.

#### 6 Expression of results

For each test sieve used, and for the residue in the pan, calculate the percentage of material retained *R*, expressed as a percentage by mass, using the equation

$$R = \frac{m_1}{m_0} \times 100$$

where

 $m_0$  is the mass, in grams, of the test portion;

 $m_1$  is the mass, in grams, of the residue on the sieve (or in the pan).

If the duplicate determinations differ by more than 10 % (relative to the higher result), repeat the procedure described in <u>Clause 5</u>.

Calculate the mean of two valid determinations and report the result to the nearest 1 %.

### 7 Test report Teh STANDARD PREVIEW

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; ISO 11127-2-20021
- 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 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 lards.iteh.ai/catalog/standards/sist/e6680ac9-a044-423d-b288-

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: Field determination of water-soluble chlorides<sup>1)</sup>

<sup>1)</sup> Under preparation