

INTERNATIONAL STANDARD

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

Part 1: Sampling

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

Partie 1: Échantillonnage



Reference number
ISO 11125-1:1993(E)

Foreword

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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 11125-1 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 11125 consists of the following parts, under the general title *Preparation of steel substrates before application of paints and related products* — *Test methods for metallic blast-cleaning abrasives*:

- Part 1: *Sampling*
- Part 2: *Determination of particle size distribution*
- Part 3: *Determination of hardness*
- Part 4: *Determination of apparent density*
- Part 5: *Determination of percentage defective particles and of microstructure*
- Part 6: *Determination of foreign matter*
- Part 7: *Determination of moisture*
- Part 8: *Determination of abrasive mechanical properties*

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At the time of publication of this part of ISO 11125, part 8 was in course of preparation.

Annex A of this part of ISO 11125 is for information only.

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

Part 1: Sampling

1 Scope

This is one of a number of parts of ISO 11125 dealing with the sampling and testing of metallic abrasives for blast-cleaning.

The types of metallic abrasive and requirements on each are contained in the various parts of ISO 11124.

The ISO 11124 and ISO 11125 series have been drafted as a coherent set of International Standards on metallic blast-cleaning abrasives. Information on all parts of both series is given in annex A.

This part of ISO 11125 specifies a method for the sampling of metallic blast-cleaning abrasives from consignments and for the subdivision of the sample into quantities suitable for undertaking the appropriate test methods specified in other parts of ISO 11125.

2 Definitions

For the purposes of this part of ISO 11125, the following definitions apply.

2.1 total quantity: The overall quantity of the abrasive to be tested (for example the quantity of a consignment) for which the sampling procedure is to be considered as representative.

2.2 sample unit: The packaged unit of sale, e.g. pallet, drum, bulk sack, from which single samples (see 2.3) are taken.

2.3 single sample: A sample obtained from the total quantity by a single sampling operation. This sample is not immediately used for testing.

2.4 mixed sample: A sample obtained by mixing a number of single samples.

2.5 reduced sample: A sample obtained by reduction of a mixed sample.

NOTE 1 In order to obtain a sample quantity which is suitable for testing, all reduced samples but one are discarded after each reduction; the reduction procedure is then repeated if necessary on the sample retained.

2.6 test sample: A sample that comprises a mass or volume sufficient for testing, portions of which are immediately used for testing.

3 Apparatus

3.1 Sample thief, made from seamless steel tubing of inside diameter approximately 25 mm and length approximately 800 mm. The tube shall be pointed at one end and have a "T" handle at the other end. Holes shall be bored in a straight line, lengthways along the tube, and spaced at 50 mm intervals. The diameter of the holes shall be determined by the size of the particles to be sampled and shall be approximately three times the size of the largest particle.

NOTE 2 It is usually sufficient to use holes 10 mm in diameter for metallic abrasives.

3.2 Sample divider, riffler or other equipment suitable for splitting a sample into parts.

4 Procedure

4.1 General

The sampling procedure is designed to obtain samples which can be considered representative of the consignment or total quantity under examination. The sampling procedures specified in table 1 assume that little or no variation in properties takes place within a single sample unit.

Metallic abrasives are susceptible to segregation of particle size during handling and transit from manufacturer to point of final use. Such segregation is minimal however and, where the packaging is in the form of bags on a palletized unit, single samples may be considered representative of sample units. Where the sample unit is in the form of drums, bulk sacks, etc., segregation may become significant. For these sample units more than one single sample shall be taken.

NOTE 3 Schematic diagrams for sampling and subdivision of samples are given in figures 1 and 2.

4.2 Number of sample units

The number of sample units (pallets, drums, bulk sacks, etc.) to be sampled in a consignment shall be as specified in table 1. Samples from different sample units shall not be mixed together.

Table 1 — Number of units to be sampled

Total quantity of the consignment tonnes	Number of units to be sampled
1	1
2 to 5	2
6 to 10	3
11 to 25	5
> 25	5 per 25 units

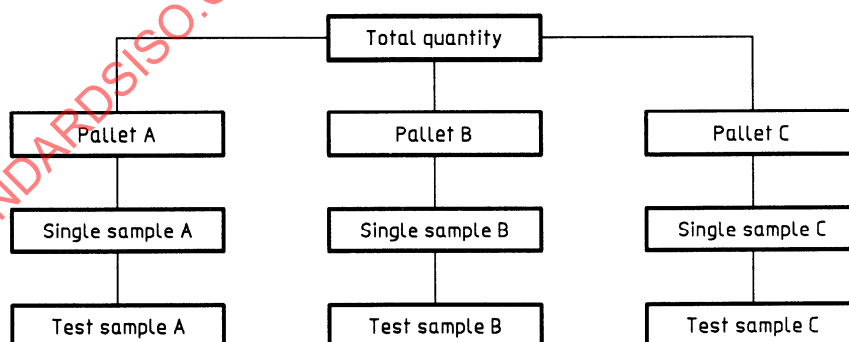
4.3 Sampling of sample units

4.3.1 Pallets made up of bags, boxes, etc.

Take a single sample of approximately 500 g from one bag, box, etc., on the pallet. This forms the test sample for that pallet (see figure 1).

4.3.2 Drums, bulk sacks or similar

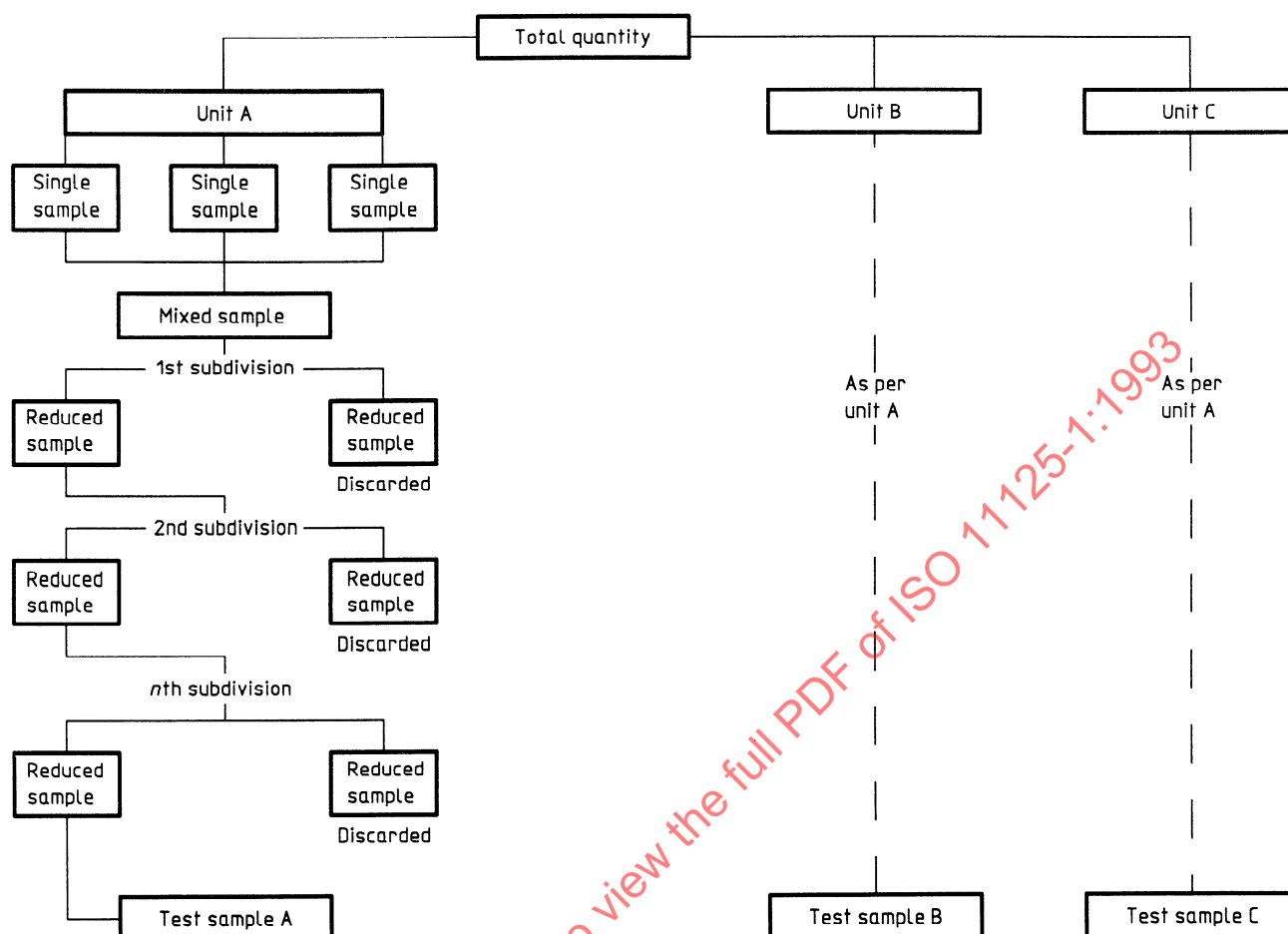
Use the sample thief (3.1) to obtain three single samples from different areas of the sample unit. Mix the single samples together in a suitable container until a uniform distribution of all particle sizes can be expected. This forms the mixed sample (see figure 2).



NOTES

- 1 The scheme shown is based on a total quantity of 10 tonnes.
- 2 Single samples are taken from one bag, box, etc., selected at random from each pallet.

Figure 1 — Sampling scheme for pallets made up of bags, boxes, etc.



NOTE — The scheme shown is based on a total quantity of 10 tonnes.

Figure 2 — Sampling scheme for drums, bulk sacks and similar units of sale

4.4 Reduction of sample size

No reduction is necessary on single samples from palletized sample units.

Subdivide mixed samples from other sample units mechanically, using a sample divider (3.2). Discard all but one of the reduced samples. Continue the operation until a test sample of approximately 500 g is obtained.

4.5 Test sample

A test sample of approximately 500 g will provide sufficient test material to carry out all the test procedures in ISO 11125, parts 2 to 7 (see annex A).

Be sure to store the sample in a sealed container until required. Remix the test sample before taking portions for testing to ensure uniformity is maintained.

Do not remix used portions with remaining test sample.

5 Sample identification

Each sample shall be clearly identified as to its origin. Test samples shall carry at least the following information:

- all details necessary to identify the product in accordance with the appropriate part of ISO 11124 (see annex A), if applicable;
- the consignment identification details, e.g. supplier's name, order number, date of despatch/receipt, etc.;
- any product traceability reference which relates to the unit sampled.

Annex A

(informative)

International Standards for metallic blast-cleaning abrasives

Requirements and test methods for metallic blast-cleaning abrasives are contained in ISO 11124 and ISO 11125, respectively.

ISO 11124 will consist of the following parts, under the general title:

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

- Part 1: General introduction and classification
- Part 2: Chilled-iron grit
- Part 3: High-carbon cast-steel shot and grit
- Part 4: Low-carbon cast-steel shot
- Part 5: Cut steel wire

ISO 11125 will consist of the following parts, under the general title:

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

- Part 1: Sampling
- Part 2: Determination of particle size distribution
- Part 3: Determination of hardness
- Part 4: Determination of apparent density
- Part 5: Determination of percentage defective particles and of microstructure
- Part 6: Determination of foreign matter
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- Part 8: Determination of abrasive mechanical properties

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