



International Standard

ISO 11126-1

**Third edition
2025-07**

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

Part 1: General introduction and classification

*Préparation des subjectiles d'acier avant application de peintures
et de produits assimilés — Spécifications des abrasifs non
métalliques destinés au décapage par projection —*

Partie 1: Introduction générale et classification



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Foreword

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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 11126-1:2018), which has been technically revised.

The main changes are as follows:

- [Table 1](#), [Table 2](#) have been technically revised to incorporate new abrasives;
- Annex A has been removed.

A list of all parts in the ISO 11126 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.

Introduction

This document is one of a number of parts of the ISO 11126 series specifying requirements for non-metallic abrasives for blast-cleaning.

Test methods for non-metallic blast-cleaning abrasives are given in the various parts of the ISO 11127 series

The requirements for metallic abrasives commonly used for blast-cleaning are specified in the various parts of the ISO 11124 series. Test methods to be used to define these requirements are contained in the various parts of the ISO 11125 series.

Abrasive blast-cleaning techniques are widely used to clean and prepare surfaces (see ISO 8504-2). During the development of a series of International Standards dealing with the preparation of steel substrates before application of paints and related products, it was decided there was a need for a series of International Standards covering those blast-cleaning abrasives commonly used in preparation of steelwork.

The type of blast-cleaning abrasive used and its particle shape can significantly affect the surface appearance and profile form of the treated surface.

ISO 8503-2 describes the assessment of the surface roughness of prepared surfaces using comparators. [Table 1](#) of this document identifies the type of comparator to be used with each of the blast-cleaning abrasives considered.

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

Part 1: General introduction and classification

WARNING — Equipment, materials and abrasives used for surface preparation can be hazardous. It is important to ensure that adequate instructions are given and that all required precautions are exercised.

1 Scope

This document describes a classification of non-metallic blast-cleaning abrasives for the preparation of steel substrates before application of paints and related products.

It specifies the characteristics which are required for the complete designation of such abrasives.

This document applies to abrasives supplied in the new or unused condition only. It does not apply to abrasives either during or after use.

NOTE Although this document has been developed specifically to meet requirements for preparation of steelwork, the properties specified will generally be appropriate for use when preparing other material surfaces, or components, using blast-cleaning techniques. These techniques are described in ISO 8504-2.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 blast-cleaning abrasive

solid material intended to be used for *abrasive blast-cleaning* (3.2)

3.2 abrasive blast-cleaning

impingement of a high-kinetic-energy stream of *blast-cleaning abrasive* (3.1) on to the surface to be prepared

3.3 shot

particle that is predominantly round, that has a length of less than twice the maximum particle width and that does not have edges, broken faces or other sharp surface defects

3.4

grit

particle that is predominantly angular, that has fractured faces and sharp edges and that is less than half-round in shape

4 Classification

4.1 Abrasive type

Blast-cleaning abrasives shall be classified according to their material, origin or manufacture. [Table 1](#) gives the abbreviated coding which shall be used to identify each of the types classified.

Table 1 — Commonly used non-metallic (N) blast-cleaning abrasives for steel substrate preparation

Type			Abbreviation	Initial particle shape (see 4.2)	Comparator ^a
Natural	Olivine		N/OL	G	G
	Almandite garnet		N/GA	G	
	Staurolite		N/ST	S	
	Volcanic lava		N/LA	G	
Synthetic	Iron slag	(Calcium silicate)	N/FE1	G	
	Steel slag	(Calcium silicate)	N/FE2	G/S	
	Copper refinery slag	(Iron silicate)	N/CU	G/S	
	Nickel slag	(Iron silicate)	N/NI1	G	
	Ferronickel slag	(Magnesium silicate)	N/NI2	G/S	
	Coal furnace slag	(Aluminium silicate)	N/CS	G	
	Fused aluminium oxide		N/FA	G	

^a Grit comparator is expected to be used when assessing the resultant surface profile according to ISO 8503-2.

NOTE The non-metallic blast-cleaning abrasives listed in this table are those commonly used for the preparation of steel substrates before application of paints and related products. The list is not intended to be exhaustive.

4.2 Initial particle shape

The particle shape characterizes the geometric form of the abrasive particles. Basic forms of non-metallic blast-cleaning abrasives are specified in [Table 2](#), together with the symbol which shall be used to describe each one.

NOTE As the particle shape of an abrasive can change during use, only the initial particle shape is given in the ISO 11126 series.

Table 2 — Initial particle shape

Designation and initial particle shape	Symbol
Shot — round	S
Grit — angular	G

4.3 Particle size range

Non-metallic blast-cleaning abrasives consist of mixtures of differently sized particles. These shall be classified into size ranges.

5 Designation of abrasives

Non-metallic abrasives shall be identified by using the full product designation which consists of the term “Abrasive” followed by “ISO 11126” and the abbreviation specified in [Table 1](#). This shall be followed, without spaces, by an oblique stroke and then by the symbol specified in [Table 2](#) to indicate the required particle shape of the abrasive as purchased. The designation shall be completed by numbers denoting the particle size range, in millimetres, required.

EXAMPLE

Abrasive ISO 11126 N/CS/G 0,2–0,5

denotes an abrasive of the non-metallic coal furnace slag type, complying with the requirements of the appropriate part of the ISO 11126 series, of initial particle shape grit and particle size range 0,2 mm to 0,5 mm.

This full product designation shall be quoted on all orders.

6 Identification and marking

All supplies shall be clearly marked or identified, using the appropriate designation as specified in [Clause 5](#), either directly on the product packaging or by the accompanying delivery note.

Bibliography

- [1] ISO 8504-2, *Preparation of steel substrates before application of paints and related products — Surface preparation methods — Part 2: Abrasive blast-cleaning*
- [2] ISO 8503-2, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 2: Method for the grading of surface profile of abrasive blast-cleaned steel — Comparator procedure*
- [3] ISO 11124 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for metallic blast-cleaning abrasives*
- [4] ISO 11125 (all parts), *Preparation of steel substrates before application of paints and related products — Test methods for metallic blast-cleaning abrasives*
- [5] ISO 11126 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives*
- [6] ISO 11127 (all parts), *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives*



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