BRITISH STANDARD

BS EN ISO 11126-7:2001
BS 7079-F7: 1996
Incorporating Technical Corrigendum No. 1 and Amendment No. 1 to BS 7079-F7:1996 (renumbers the BS as BS EN ISO 11126-7:2001)

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

Part 7: Fused aluminium oxide

The European Standard EN ISO 11126-7:1999 has the status of a British Standard

ICS 25.220.10

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee STI/21, Surface preparation of steel, upon which the following bodies were represented:

Association of Consulting Engineers
British Chemical Engineering Contractors' Association
British Coatings Federation Ltd.
British Constructional Steelwork Association Ltd.
British Grit Association
British Iron and Steel Producers' Association
British Railways Board
Department of Transport
Electricity Association
Institute of Corrosion
National Federation of Painting and Decorating Contractors
Oil and Colour Chemists' Association
Paint Research Association
Royal Society of Chemistry
Water Services Association of England and Wales

This British Standard, having been prepared under the direction of the Sector Board for Materials and Chemicals, was published under the authority of the Standards Board and comes into effect on 15 May 1996

The following BSI references relate to the work on this standard:
Committee reference STI/21
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Amendments issued since publication

Amd. No.	Date	Comments
10555 Technical Corrigendum	March 2000	Corrections to clause 1, first paragraph and to last line of subclause 3.1
10699	February 2001	Implementation of the European Standard

Contents

National foreword

This British Standard is the official English language version of EN ISO 11126-7:1999. It is identical with ISO 11126-7:1995, including Technical Corrigendum 1:1999.

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN ISO title page and EN ISO foreword, pages 1 to 5 and a back cover.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11126-7

May 1999

ICS 87.020

English version

Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives — Part 7: Fused aluminium oxide

(ISO 11126-7:1995, including Technical Corrigendum 1:1999)

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés — Spécifications pour abrasifs non métalliques destinés á la préparation par projection — Partie7: Oxyde d'aluminium fondu (ISO 11126-7:1995, Rectificat Technique 1:1999)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen — Anforderungen an nichtmetallische — Strahlmittel — Teil 7: Elektrokorund (ISO 11126-7:1995, einschließlich Technische Korrecktur:1999)

This European Standard was approved by CEN on 18 April 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Ref. No. EN ISO 11126-7:1999 E

Foreword

The text of the International Standard from Technical Committee ISO/TC 35, Paints and varnishes, of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 139, Paints and varnishes, the Secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE Normative reference to International Standards are listed in Annex ZA (normative).

WARNING — Equipment, materials and abrasives used for surface preparation can be hazardous if used carelessly. Many national regulations exist for those materials and abrasives that are considered to be hazardous during or after use (waste management), such as free silica or carcinogenic or toxic substances. These regulations are therefore to be observed. It is important to ensure that adequate instructions are given and that all required precautions are exercised

1 Scope

This part of ISO 11126 specifies requirements for fused aluminium oxide abrasives, as supplied for blast-cleaning processes. It specifies ranges of particle sizes and values for apparent density, Mohs hardness, moisture content, conductivity of aqueous extract and water-soluble chlorides.

The requirements specified in this part of ISO 11126 apply to abrasives supplied in the "new" condition only. They do not apply to abrasives either during or after use.

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

NOTE 1 Information on commonly referenced national and international standards is given in Annex A.

NOTE 2 Although this part of ISO 11126 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 8504-2:1992, *Preparation of steel substrates before application of paints and related products — Surface preparation methods — Part 2: Abrasive blast-cleaning.*

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 11126. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11126 are encouraged to investigate the possibility of applying the most recent editions of the standards 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.*
ISO 11127-2:1993, *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 11127-3:1993, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 3: Determination of apparent density.*
ISO 11127-4:1993, *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.*
ISO 11127-5:1993, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 5: Determination of moisture.*
ISO 11127-6:1993, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 6: Determination of water-soluble contaminants by conductivity measurement.*
ISO 11127-7:1993, *Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 7: Determination of water-soluble chlorides.*

3 Definition

For the purposes of this part of ISO 11126, the following definition applies.

3.1
fused aluminium oxide
a synthetic mineral blast-cleaning abrasive, which is classified as two types, A and WA

Type A: This type is mainly composed of crystalline corundum which is brown in colour and consists of a solid solution containing a minimum of 94 % aluminium oxide and a maximum of 4 % titanium dioxide. Type A is produced by fusing bauxite with the appropriate quantity of titanium dioxide and reducing agent in an electric furnace, cooling the form lumps and then crushing and sieving to size

Type WA: This type consists of crystalline corundum which is whitish in colour and contains at least 99 % aluminium oxide. It is produced by fusing, in an electric furnace, pure alumina and is refined

4 Designation of abrasives

Fused aluminium oxide abrasives shall be identified by "Abrasive ISO 11126" and the abbreviation N/FA-A or N/FA-WA indicating non-metallic, fused aluminium oxide abrasive, Type A or WA. This shall be followed, without spaces, by an oblique stroke and then the symbol G to indicate the required particle shape of the abrasive, when purchased, as grit.

The designation shall be completed by numbers denoting the particle size range, in millimetres, required (see Table 1).

EXAMPLE 1

Abrasive ISO 11126 N/FA-A/G 0,5-1

denotes a non-metallic abrasive of fused aluminium oxide, type A, complying with the requirements of this part of ISO 11126, of initial particle shape grit and particle size range 0,5 mm to 1 mm.

It is essential that this full product designation is quoted on all orders.

5 Sampling

Sampling procedures shall be as specified in ISO 11127-1.

6 Requirements

6.1 General requirements

Fused aluminium oxide abrasives shall absorb no water but may be wetted on the surface only.

Fused aluminium oxide used as an abrasive shall contain no free silica. All silica shall be chemically bound or present in glass form within the corundum crystal matrix.

The material shall be free from corrosive and adhesion-impairing contaminants.

6.2 Particular requirements

Particular requirements for fused aluminium oxide abrasive shall be as specified in Table 2.

7 Identification and marking

All materials shall be clearly marked or identified using the appropriate designation as specified in clause **4**, either directly or by the accompanying delivery note.

8 Information to be supplied by the manufacturer or supplier

The manufacturer or supplier shall supply, if requested, a test report detailing results for any relevant property as determined by the appropriate method specified in Table 2.

Table 1 — Particle size distribution

Particle size range[a] mm			**0,2 to 0,5**	**0,2 to 1**	**0,2 to 1,4**	**0,2 to 2**	**0,2 to 2,8**	**0,5 to 1**	**0,5 to 1,4**	**1,0 to 2**	**1,4 to 2,8**
Oversize	Sieve size	mm	0,5	1	1,4	2	2,8	1	1,4	2	2,8
	Residue % (*m*/*m*)	max.	10	10	10	10	10	10	10	10	10
Nominal size	Sieve size	mm	0,2	0,2	0,2	0,2	0,2	0,5	0,5	1	1,4
	Residue % (*m*/*m*)	min.	85	85	85	85	85	80	80	80	80
Undersize	Sieve size	mm	0,2	0,2	0,2	0,2	0,2	0,5	0,5	1	1,4
	Through-flow % (*m*/*m*)	max.	5	5	5	5	5	10	10	10	10

[a] By agreement between the interested parties, abrasives of different particle size ranges may be mixed together. Details of proportions of nominal size, oversize and undersize shall be specified. The maximum particle size shall not exceed 3,35 mm and the proportion of particles less than 0,2 mm shall not exceed 5 % (*m*/*m*).

Table 2 — Particular requirements for fused aluminium oxide abrasives

Property		Requirement	Test method
Particle size range and distribution		See Table 1	ISO 11127-2
Apparent density	kg/m^3 $[kg/dm^3]$	$[3,9 \text{ to } 4,0] \times 10^3$ [3,9 to 4,0]	ISO 11127-3
Mohs hardness		min. 6	ISO 11127-4
Moisture	% (*m*/*m*)	max. 0,2	ISO 11127-5
Conductivity of aqueous extract	mS/m	max. 25	ISO 11127-6
Water-soluble chlorides	% (*m*/*m*)	max. 0,002 5	ISO 11127-7

Annex A (informative)
Bibliography

Commonly referenced ISO standards and national standards (JIS) for fused aluminium oxides of non-metallic abrasives are as follows:

[1] ISO 3310-1:1990, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

[2] ISO 8486-1:—, *Bonded abrasives — Grain size analysis — Designation and determination of grain size distribution — Part 1: Macrogrits F 4 to F 220*[1)]

[3] ISO 8486-2:—, *Bonded abrasives — Grain size analysis — Designation and determination of grain size distribution — Part 2: Microgrits F 230 to F 1 200*[1)].

[4] ISO 9284:1992, *Abrasive grains — Test sieving machines*.

[5] JIS R 6001:1987, *Abrasive grain sizes*.

[6] JIS R 6002:1987, *Testing methods for abrasive grain size*.

[7] JIS R 6003:1973, *Methods of sampling of abrasive grains*.

[8] JIS R 6111:1987, *Artificial abrasives*.

[9] JIS R 6123:1987, *Method for chemical analysis of aluminous abrasives*.

[10] JIS R 6125:1976, *Testing method for specific gravity of artificial abrasives*.

[1)] To be published.

Annex ZA (normative)
Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative reference are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. for undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year
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*	EN ISO 11127-1	1997
ISO 11127-2	1993	*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*	EN ISO 11127-2	1997
ISO 11127-3	1993	*Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 3: Determination of apparent density*	EN ISO 11127-3	1997
ISO 11127-4	1993	*Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 4: Assessment of hard ness by a glass slide test*	EN ISO 11127-4	1997
ISO 11127-5	1993	*Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 5: Determination of moisture*	EN ISO 11127-5	1997
ISO 11127-6	1993	*Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 6: Determination of water-soluble contaminants by conductivity measurements*	EN ISO 11127-6	1997
ISO 11127-7	1993	*Preparation of steel substrates before application of paints and related products — Test methods for non-metallic blast-cleaning abrasives — Part 7: Determination of water soluble chlorides*	EN ISO 11127-7	1997

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