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

Part 5: Nickel refinery slag

The European Standard EN ISO 11126-5:1998 has the status of a British Standard
Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Surface Treatments and Coatings Standards Policy Committee (STC/-) to Technical Committee STC/21, 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 Railways Board
British Steel Industry
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

Amendments issued since publication

<table>
<thead>
<tr>
<th>Amd.No.</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10089</td>
<td>August 1998</td>
<td>Indicated by a side line in the margin</td>
</tr>
</tbody>
</table>

This British Standard, having been prepared under the direction of the Surface Treatments and Coatings Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 March 1994

© BSI 04-1999

The following BSI references relate to the work on this standard:
Committee reference STC/21
Draft for comment 92/50244 DC

ISBN 0 580 23051 1
## Contents

<table>
<thead>
<tr>
<th>Committees responsible</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>National foreword</td>
<td>ii</td>
</tr>
<tr>
<td>Foreword</td>
<td>2</td>
</tr>
<tr>
<td>1 Scope</td>
<td>3</td>
</tr>
<tr>
<td>2 Normative references</td>
<td>3</td>
</tr>
<tr>
<td>3 Definition</td>
<td>3</td>
</tr>
<tr>
<td>4 Designation of abrasives</td>
<td>3</td>
</tr>
<tr>
<td>5 Sampling</td>
<td>4</td>
</tr>
<tr>
<td>6 Requirements</td>
<td>4</td>
</tr>
<tr>
<td>7 Identification and marking</td>
<td>4</td>
</tr>
<tr>
<td>8 Information to be supplied by the manufacturer or supplier</td>
<td>4</td>
</tr>
</tbody>
</table>

| Annex A (informative) Bibliography | 5 |
| Annex ZA (normative) Normative references to international publications with their relevant European publications | 6 |
| Table 1 — Particle size distribution | 4 |
| Table 2 — Particular requirements for nickel refinery slag abrasives | 4 |
National foreword


International Standard ISO 11126-5 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.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN ISO title page, pages 2 to 6 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.
Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives — Part 5: Nickel refinery slag

(ISO 11126-5:1993)
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 a 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 September 1998, and conflicting national standards shall be withdrawn at the latest by September 1998.

According to CEN/CENELEC Internal Regulations, 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 references to International standards are listed in Annex ZA (normative).
1 Scope
This part of ISO 11126 specifies requirements for nickel refinery slag 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 standards for non-metallic abrasives 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.


NOTE 3 Slags manufactured by air cooling instead of granulation in water are generally of a different mineral structure and are therefore not covered by this part of ISO 11126.

4 Designation of abrasives
Nickel refinery slag abrasives shall be identified by “Abrasive ISO 11126” and the abbreviation N/NI indicating non-metallic, nickel refinery slag abrasive. This shall be followed, without spaces, by an oblique stroke and then by 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/NI/G 0,2-1
denotes an abrasive of the non-metallic nickel
refinery slag type, complying with the
requirements of this part of ISO 11126, of
initial particle shape grit and particle size
range 0,2 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
Nickel refinery slag abrasives shall be vitreous
amorphous materials that absorb no water but may
be wetted on the surface only.
Silica in nickel refinery slag abrasives shall be
present as bonded silicate. The content of free
crystalline silica (such as quartz, tridimite or
crystobalite) shall not exceed 1 % (m/m), as
determined by X-ray diffraction.

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

NOTE 4 Nickel refinery slag abrasives as supplied have a
predominantly angular shape. More spherical particle shapes are
not excluded as their effect on the surface profile obtained
corresponds generally to that produced by angular abrasive
particles.

6.2 Particular requirements
Particular requirements for nickel refinery slag
abrasives shall be as specified in Table 2.

7 Identification and marking
All supplies 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>
<thead>
<tr>
<th>Table 1 — Particle size distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size range&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Oversize</td>
</tr>
<tr>
<td>Sieve size</td>
</tr>
<tr>
<td>Residue % (m/m)</td>
</tr>
<tr>
<td>Nominal size</td>
</tr>
<tr>
<td>Sieve size</td>
</tr>
<tr>
<td>Residue % (m/m)</td>
</tr>
<tr>
<td>Undersize</td>
</tr>
<tr>
<td>Sieve size</td>
</tr>
<tr>
<td>Through-flow % (m/m)</td>
</tr>
</tbody>
</table>

<sup>a</sup> 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 3,15 mm and the
proportion of particles less than 0,2 mm shall not exceed 5 % (m/m).

<table>
<thead>
<tr>
<th>Table 2 — Particular requirements for nickel refinery slag abrasives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Particle size range and distribution</td>
</tr>
<tr>
<td>Apparent density kg/m&lt;sup&gt;3&lt;/sup&gt; [kg/dm&lt;sup&gt;3&lt;/sup&gt;]</td>
</tr>
<tr>
<td>Mohs hardness&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Moisture % (m/m)</td>
</tr>
<tr>
<td>Conductivity of aqueous extract mS/m</td>
</tr>
<tr>
<td>Water-soluble chlorides % (m/m)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Another method for assessing hardness may be used, together with an appropriate minimum requirement, by agreement between
the interested parties.
Annex A (informative)

Bibliography

Commonly referenced national standards for non-metallic abrasives are as follows:


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 references 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.

<table>
<thead>
<tr>
<th>Publication</th>
<th>Year</th>
<th>Title</th>
<th>EN</th>
<th>Date</th>
</tr>
</thead>
</table>
BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.
Tel: 020 8996 9000. Fax: 020 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: 020 8996 9001. Fax: 020 8996 7001.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.
Tel: 020 8996 7111. Fax: 020 8996 7048.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.
Tel: 020 8996 7002. Fax: 020 8996 7001.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

If permission is granted, the terms may include royalty payments or a licensing agreement. Details and advice can be obtained from the Copyright Manager.
Tel: 020 8996 7070.