



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 12441-11:2006

ICS 77.120.60

**ZINC AND ZINC ALLOYS - CHEMICAL
ANALYSIS - PART 11: DETERMINATION OF
SILICON IN ZINC ALLOYS -
SPECTROPHOTOMETRIC METHOD**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales
<http://www.standards.ie>

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland and comes into
effect on:
4 October 2006*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 2006

Price Code E

Údarás um Chaighdeán Náisiúnta na hÉireann

EUROPEAN STANDARD

EN 12441-11

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2006

ICS 77.120.60

English Version

Zinc and zinc alloys - Chemical analysis - Part 11: Determination of silicon in zinc alloys - Spectrophotometric method

Zinc et alliages de zinc - Analyse chimique - Partie 11 :
Dosage du silicium dans les alliages de zinc - Méthode
spectrophotométrique

Zink und Zinklegierungen - Chemische Analyse - Teil 11:
Bestimmung von Silicium in Zinklegierungen -
Spektrophotometrisches Verfahren

This European Standard was approved by CEN on 7 July 2006.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents		Page
Foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	4
4	Principle	4
5	Reagents	4
6	Apparatus	5
7	Sampling	5
8	Procedure	5
9	Calculation and expression of results	6
10	Test report	7
Annex A (informative) Additional information on international co-operative tests		8
Annex B (informative) Graphical representation of precision data		9
Bibliography		10

Foreword

This document (EN 12441-11:2006) has been prepared by Technical Committee CEN/TC 209 "Zinc and zinc alloys", the secretariat of which is held by AFNOR.

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 February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

Within its programme of work, Technical Committee CEN/TC 209 entrusted CEN/TC 209/WG6 "Methods of analysis and testing" to prepare the following document:

EN 12441-11, *Zinc and zinc alloys – Chemical analysis – Part 11: Determination of silicon in zinc alloys – Spectrophotometric method.*

This standard is a part of a series of eleven standards. The other standards are:

- *Part 1: Determination of aluminium in zinc alloys – Titrimetric method*
- *Part 2: Determination of magnesium in zinc alloys – Flame atomic absorption spectrometric method*
- *Part 3: Determination of lead, cadmium and copper – Flame atomic absorption spectrometric method*
- *Part 4: Determination of iron in zinc alloys – Spectrophotometric method*
- *Part 5: Determination of iron in primary zinc – Spectrophotometric method*
- *Part 6: Determination of aluminium and iron – Flame atomic absorption spectrometric method*
- *Part 7: Determination of tin – Flame atomic absorption spectrometric method after extraction*
- *Part 8: Determination of tin in secondary zinc – Flame atomic absorption spectrometric method*
- *Part 9: Determination of nickel in zinc alloys – Flame atomic absorption spectrometric method*
- *Part 10: Determination of chromium and titanium in zinc alloys – Spectrophotometric method*

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

EN 12441-11:2006 (E)

1 Scope

This European Standard specifies a spectrophotometric method for the determination of silicon in zinc alloys. It is applicable to the products specified in EN 1774 and EN 12844.

It is suitable for the determination of silicon contents (mass fractions) between 0,01 % and 0,1 %.

2 Normative references

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.

EN 1774, *Zinc and zinc alloys – Alloys for foundry purposes – Ingot and liquid*

EN 12060:1997, *Zinc and zinc alloys – Method of sampling – Specifications*

EN 12844, *Zinc and zinc alloys – Castings – Specifications*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 12060:1997 apply.

4 Principle

Direct spectrophotometric determination of silicomolybdenum blue after dissolution of the sample in hydrochloric and hydrofluoric acid.

5 Reagents

5.1 General

During the test, use only reagents of known analytical grade.

5.2 Bidistilled water (for preparation and dilution of all solutions)

5.3 Hydrochloric acid, $\rho = 1,19$ g/ml

5.4 Hydrofluoric acid, $\rho = 1,13$ g/ml

5.5 Boric acid

5.6 Ammonium molybdate $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4\text{H}_2\text{O}$

5.7 Sodium metabisulfite $\text{Na}_2\text{S}_2\text{O}_5$

5.8 Sodium sulfite Na_2SO_3

5.9 1-amino-2-naphtol-4-sulfonic acid

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-