



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 787-13:2019

General methods of test for pigments and extenders - Part 13: Determination of water-soluble sulfates, chlorides and nitrates (ISO 787-13:2019)

**I.S. EN ISO 787-13:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN ISO 787-13:2019

*Published:*

2019-09-25

*This document was published under the authority of the NSAI and comes into effect on:*

2019-10-14

ICS number:

87.060.10

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN ISO 787-13:2019 is the adopted Irish version of the European Document EN ISO 787-13:2019, General methods of test for pigments and extenders - Part 13: Determination of water-soluble sulfates, chlorides and nitrates (ISO 787-13:2019)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

EUROPEAN STANDARD

**EN ISO 787-13**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 87.060.10

Supersedes EN ISO 787-13:2002

English Version

## General methods of test for pigments and extenders - Part 13: Determination of water-soluble sulfates, chlorides and nitrates (ISO 787-13:2019)

Méthodes générales d'essai des pigments et matières  
de charge - Partie 13: Détermination des sulfates,  
chlorures et nitrates solubles dans l'eau (ISO 787-  
13:2019)

Allgemeine Prüfverfahren für Pigmente und Füllstoffe -  
Teil 13: Bestimmung der wasserlöslichen Sulfate,  
Chloride und Nitrate (ISO 787-13:2019)

This European Standard was approved by CEN on 9 August 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

## **European foreword**

This document (EN ISO 787-13:2019) has been prepared by Technical Committee ISO/TC 256 "Pigments, dyestuffs and extenders" in collaboration with Technical Committee CEN/TC 298 "Pigments and extenders" 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 787-13:2002.

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

## **Endorsement notice**

The text of ISO 787-13:2019 has been approved by CEN as EN ISO 787-13:2019 without any modification.

This page is intentionally left blank



# INTERNATIONAL STANDARD

**ISO**  
**787-13**

Third edition  
2019-08

---

---

## **General methods of test for pigments and extenders —**

### **Part 13: Determination of water-soluble sulphates, chlorides and nitrates**

*Méthodes générales d'essai des pigments et matières de charge —*

*Partie 13: Détermination des sulfates, chlorures et nitrates solubles  
dans l'eau*



Reference number  
ISO 787-13:2019(E)

© ISO 2019

**ISO 787-13:2019(E)**



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Reagents</b> .....	<b>1</b>
<b>5 Apparatus</b> .....	<b>2</b>
<b>6 Sampling</b> .....	<b>2</b>
<b>7 Determination of sulphates</b> .....	<b>2</b>
7.1 Procedure.....	2
7.2 Expression of results.....	2
<b>8 Determination of chlorides</b> .....	<b>3</b>
8.1 Procedure.....	3
8.2 Expression of results.....	3
<b>9 Determination of nitrates</b> .....	<b>3</b>
9.1 Procedure.....	3
9.2 Expression of results.....	4
<b>10 Test report</b> .....	<b>4</b>
<b>Bibliography</b> .....	<b>5</b>

## ISO 787-13:2019(E)

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 256, *Pigments, dyestuffs and extenders*.

This third edition cancels and replaces the second edition (ISO 787-13:2002), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- [Clause 3](#) on “Terms and definitions”, with a general reference to ISO 18451-1, has been added;
- CAS numbers have been added to the reagents;
- the bibliography has been added;
- the text has been editorially revised.

A list of all parts in the ISO 787 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](http://www.iso.org/members.html).

# General methods of test for pigments and extenders —

## Part 13:

# Determination of water-soluble sulphates, chlorides and nitrates

## 1 Scope

This document specifies a general method of test for determining the water-soluble sulphates, chlorides and nitrates of pigments.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 18451-1, *Pigments, dyestuffs and extenders — Terminology — Part 1: General terms*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18451-1 apply.

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

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

## 4 Reagents

All reagents used shall be of recognized analytical reagent quality. Distilled water, or water of equivalent purity, shall be used.

**4.1 Hydrochloric acid**,  $\rho = 1,18 \text{ g/cm}^3$  (CAS-No 7647-01-0).

**4.2 Silver nitrate**, 0,01 mol/l standard volumetric solution (CAS-No 7761-88-8).

**4.3 Ammonium chloride solution**, 17,2 mg/l (CAS-No 12125-02-9).

**4.4 Sodium hydroxide solution**, 200 g/l (CAS-No 1310-73-2).

**4.5 Barium chloride solution**, 50 g/l (CAS-No 10361-37-2).

**4.6 Potassium chromate solution**, 50 g/l (CAS-No 7789-00-6).

**4.7 Devarda's alloy**, powdered.

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](#)
-