

Methods of test for

Sodium fluoride for industrial use —

**Part 2: Determination of moisture
content**

UDC 661.833.361:546.33'131:543.712

Confirmed
December 2011

Co-operating organizations

The Chemicals Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

British Steel Industry
 Chemical Industries Association*
 Department of Health and Social Security
 Department of Trade and Industry*
 Department of Trade and Industry — Laboratory of the Government Chemist*
 Fertiliser Manufacturers' Association Limited
 Ministry of Agriculture, Fisheries and Food
 National Sulphuric Acid Association
 Royal Institute of Public Health and Hygiene
 Soap and Detergent Industry Association

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Aluminium Federation
 British Ceramic Research Association
 Royal Institute of Chemistry
 Society for Analytical Chemistry
 Society of Chemical Industry

This British Standard, having been approved by the Chemicals Industry Standards Committee, was published under the authority of the Executive Board on 31 July 1974

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The following BSI references relate to the work on this standard:
 Committee reference CIC/24
 Draft for comment 72/52985 DC

Amendments issued since publication

Amd. No.	Date of issue	Comments
5347	March 1987	Indicated by a sideline in the margin

ISBN 0 580 08432 9

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Foreword

This British Standard has been prepared under the authority of the Chemicals Industry Standards Committee in order to provide methods for the analysis of sodium fluoride.

In the drafting of this standard, account has been taken of the method adopted by the International Organization for Standardization (ISO), in the preparation of which the United Kingdom has been an active participant. It is intended to provide further methods, in the form of parts of this standard, as the work of ISO/TC 47 and, in particular, ISO/TC 47/SC 7 — Alumina and related compounds, advances.

This Part is based on International Standard ISO 2832, “*Sodium fluoride for industrial use. Determination of moisture content*”, modified to take into account the comments made by the United Kingdom during its development.

This standard prescribes methods of test only, and should not be used or quoted as a specification defining limits of purity. Reference to the standard should be in a form of words indicating that the methods of test used conform to BS 5072-2.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 2, an inside back cover 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.

1 Scope

This Part of this British Standard specifies a gravimetric method for the determination of the moisture content of sodium fluoride for industrial use.

NOTE The title of the British Standard referred to in this standard is given on the inside back cover.

2 Principle

A test portion is dried for 2 h at 110 °C and the loss of mass is determined.

3 Apparatus

Ordinary laboratory apparatus and the following items are required.

3.1 Weighing bottle. This shall be shallow and approximately 45 mm in diameter.

3.2 Electric oven. Ventilated by convection and capable of being controlled at 110 ± 2 °C (see BS 2648).

4 Procedure

4.1 Test portion. Dry the weighing bottle (see 3.1) to constant mass in the oven (see 3.2), controlled at 110 ± 2 °C transfer it to a desiccator and after cooling to ambient temperature, weigh to the nearest 0.001 g. Then weigh, to the nearest 0.001 g, into the tared weighing bottle, approximately 20 g of the crude test sample¹⁾.

4.2 Determination. Place the uncovered weighing bottle, together with its lid, in the oven (see 3.2), controlled at 110 ± 2 °C, and maintain at this temperature for 2 h. Remove the weighing bottle and its lid from the oven and place them in a desiccator, without closing the weighing bottle completely. After cooling to ambient temperature close the weighing bottle with its lid and weigh to the nearest 0.001 g.

Repeat the operations of heating, cooling and weighing until the difference between two successive weighings does not exceed 2 mg.

5 Expression of results

The moisture content is given, as a percentage by mass, by the formula:

$$\frac{(m_1 - m_2)}{m_1 - m_0} \times 100$$

where

m_0 is the mass of the weighing bottle, and its lid (g);

m_1 is the mass of the weighing bottle, its lid and the test portion before drying (g);

m_2 is the mass of the weighing bottle, its lid and the test portion after drying (g).

¹⁾ See BS 5072-4.

Publications referred to

This standard makes reference to the following British Standards:

BS 2648, *Performance requirements for electrically-heated laboratory drying ovens.*

BS 5072, *Methods of test for sodium fluoride for industrial use.*

BS 5072-4, *Preparation and storage of samples.*

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