
British Standard Methods of test for

Aluminium oxide

Part 0. General introduction

Méthodes d'essai de l'oxyde d'aluminium
Partie 0. Introduction générale

Verfahren zur Prüfung von Aluminiumoxid
Teil 0. Allgemeine Einführung

Foreword

This Part of BS 4140 has been prepared under the direction of the Chemicals Standards Committee. It explains the revision of the 1967 edition of BS 4140, and supersedes BS 4140 : Part 0 : 1980, which is withdrawn.

For many years the UK has participated in the work of Subcommittee 7, Aluminium and related compounds, of Technical Committee 47, Chemistry, of the International Organization for Standardization (ISO). The test methods, applicable to aluminium oxide primarily used for the production of aluminium, that were approved by the UK were published in BS 4140 : 1967 and in three subsequent addenda.

The original ISO recommendations for methods of test have since been largely confirmed as full international standards

and, in accordance with BSI policy, these have been published as separate dual-numbered Parts of BS 4140. Table 1 details these Parts and indicates, where applicable, their relationships with the clauses of BS 4140 : 1967 and its three addenda, which have been withdrawn. It should be noted that the ISO method for determination of calcium content has been considered to be unsuitable for use in the UK, and it is intended to produce an appropriate British Standard method (Part 14). Part 15 'Determination of zinc content (PAN photometric method)' will not be issued, as the UK approved a proposal for the withdrawal of the international standard.

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

Table 1. Summary of revision of BS 4140			
Current revision of BS 4140 (in Parts)	Titles	Corresponding international standards	BS 4140 : 1967 edition (with addenda)
Part 0	General introduction	—	
Part 1	Preparation and storage of test samples	ISO 802-1976	Clause 2
Part 2	Determination of loss of mass at 300 °C	ISO 803-1976	Clause 3
Part 3	Determination of loss of mass at 1000 °C and 1200 °C	ISO 806-1976	Clause 3
Part 4	Preparation of sample solution by alkaline fusion	ISO 804-1976	Clause 4
Part 5	Determination of silica content	ISO 1232-1976	Clause 5
Part 6	Determination of titanium content	ISO 900-1977	Clause 6
Part 7	Determination of iron content	ISO 805-1976	Clause 7
			Addendum No. 1 (1970)
Part 8	Determination of absolute density using a pycnometer	ISO 901-1976	Clause 8
Part 9	Measurement of the angle of repose	ISO 902-1976	Clause 9
Part 10	Measurement of untamped density	ISO 903-1976	Clause 10
			Addendum No. 2 (1974)
Part 11	Determination of sodium content	ISO 1617-1976	Clause 11
Part 12	Determination of vanadium content	ISO 1618-1976	Clause 12
Part 13	Preparation of sample solution by treatment with hydrochloric acid under pressure	ISO 2073-1976	Clause 13
Part 14 (not issued) *	Determination of calcium content	ISO 2070-1981	Clause 14
Part 15 (not issued) *	Determination of zinc content (PAN photometric method)	ISO 2072-1981	Clause 15
Part 16	Determination of zinc content by flame atomic absorption	ISO 2071-1976	Clause 16
			Addendum No. 3 (1974)
Part 17	Determination of fluorine content	ISO 2828-1973	Clause 17
Part 18	Determination of phosphorus content	ISO 2829-1973	Clause 18
Part 19	Determination of boron content	ISO 2865-1973	Clause 19
Part 20	Sampling	ISO 2927-1973	—
Part 21	Particle size analysis	ISO 2926-1974	—
Part 22	Determination of manganese content	ISO 3390-1976	—
Part 23†	Determination of specific surface area by nitrogen adsorption (single point method)	ISO 8008- †	—
Part 24†	Determination of fine particle size distribution (method using electroformed sieves)	ISO 8220- †	—

* See foreword.

† In preparation.