INTERNATIONAL STANDARD 802

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Aluminium oxide primarily used for the production of aluminium — Preparation and storage of test samples

Oxyde d'aluminium principalement utilisé pour la production de l'aluminium — Préparation et conservation des échantillons pour essai

First edition -- 1976-09-15

UDC 661.862.22 : 620.11 **Ref. No. ISO 802-1976 (E)**

Descriptors : aluminium oxide, samples, preparation, test specimens, storage, tests.

Price based on 2 pages

ISO 802-1976 (E)

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47 has reviewed ISO Recommendation R 802 and found it technically suitable for transformation. International Standard ISO 802 therefore replaces ISO Recommendation R 802-1968 to which it is technically identical.

ISO Recommendation R 802 was approved by the Member Bodies of the following countries :

Argentina	Hungary	South Africa, Rep. of
Austria	India	Spain
Belgium	Ireland	Sweden
Brazil	Israel	Switzerland
Bulgaria	Italy	Turkey
Canada	Japan	United Kingdom
Chile	Korea, Rep. of	U.S.A.
Czechoslovakia	Netherlands	U.S.S.R.
Egypt, Arab Rep. of	Norway	Yugoslavia
France	Poland	
Germany	Romania	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 802 into an International Standard.

Printed in Switzerland

Aluminium oxide primarily used for the production of aluminium — Preparation and storage of test samples

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies methods for the preparation and storage of test samples, i.e. crude sample and dried sample, of aluminium oxide primarily used for the production of aluminium.

2 REFERENCE

ISO 2927, *Aluminium oxide primarily used for the production of aluminium — Sampling.*

3 PREPARATION OF TEST SAMPLES

3.1 Laboratory sample

For the preparation of the laboratory sample, use the method specified in ISO 2927.

3.2 Crude sample, for the determination of certain geometrical characteristics, for certain physical and physico-chemical tests and for moisture determination.

Take approximately 300 g of the laboratory sample and place it in an air-tight container of such a capacity that it is nearly filled by the sample.

3.3 Dried sample, for chemical tests and the determination of certain geometrical characteristics and for certain physical and physico-chemical tests.

3.3.1 *Principle*

Grinding followed by sieving of the sample until the whole passes through a 0,2 mm sieve.

Thorough mixing and drying at approximately 300 °C.

3.3.2 *Apparatus*

Ordinary laboratory apparatus and

3.3.2.1 Sieve, of mesh aperture 0,2 mm, made of material that cannot cause introduction of the impurities to be determined.

The sieve shall be selected in relation to the nature of the aluminium oxide and of the impurity to be determined.

3.3.2.2 Corundum mortar.

3.3.2.3 Electric oven, capable of being controlled at 300 ± 10 °C.

3.3.2.4 Desiccator, preferably containing freshly activated alumina or phosphorus(V) oxide (the use of calcium chloride shall be avoided).

3.3.3 *Procedure*

Sieve 100 to 200 g of aluminium oxide using the sieve (3.3.2.1). Grind the material remaining in the sieve in the corundum mortar (3.3.2.2) and sieve again. Add these sievings to the material which has previously passed through the sieve and mix carefully.

Repeat the grinding, sieving and mixing operations until all the material passes through the sieve.

Place the sample thus prepared in a dish (preferably of platinum) and dry for 2 h in the oven (3.3.2.3), controlled at 300 ± 10 °C.

Then allow to cool in the desiccator (3.3.2.4).

Keep the dried sample in an air-tight container of such a capacity that it is nearly filled by the sample.

4 MARKING OF CONTAINERS

The containers shall bear a label stating :

a) the name of the product;

b) the origin of the product;

c) the nature of the sample (crude or dried);

d) the type of sieve used;

e) the date of preparation.

ANNEX

ISO PUBLICATIONS RELATING TO ALUMINIUM OXIDE PRIMARILY USED FOR THE PRODUCTION OF ALUMINIUM

ISO 802 – Preparation and storage of test samples.

ISO 803 – Determination of loss of mass at 300 °C (conventional moisture).

ISO 804 – Preparation of solution for analysis – Method by alkaline fusion.

ISO 805 – Determination of iron content – 1,10-Phenanthroline photometric method.

ISO 806 – Determination of loss of mass at 1 000 and 1 200 °C.

ISO 900 – Determination of titanium content – Diantipyrylmethane photometric method.

ISO 901 – Determination of absolute density – Pyknometer method.

ISO 902 – Measurement of the angle of repose.

ISO 903 – Determination of untamped density.

ISO 1232 – Determination of silica content – Reduced molybdosilicate spectrophotometric method.

ISO 1617 – Determination of sodium content – Flame emission spectrophotometric method.

ISO 1618 – Determination of vanadium content – *N*-Benzoyl-*N*-phenylhydroxylamine photometric method.

ISO 2069 – Determination of calcium content – Flame atomic absorption method.

ISO/R 2070 – Determination of calcium content – Spectrophotometric method using naphthalhydroxamic acid.

ISO 2071 – Determination of zinc content – Flame atomic absorption method.

ISO/R 2072 – Determination of zinc content – PAN photometric method.

ISO 2073 – Preparation of solution for analysis – Method by hydrochloric acid attack under pressure.

ISO 2828 – Determination of fluorine content – Alizarin complexone and lanthanum chloride spectrophotometric method.

ISO 2829 – Determination of phosphorus content – Reduced phosphomolybdate spectrophotometric method.

ISO 2865 – Determination of boron content – Curcumin spectrophotometric method.

ISO 2926 – Particle size analysis – Sieving method.

ISO 2927 – Sampling.

ISO 2961 – Determination of an adsorption index.

ISO 3390 – Determination of manganese content – Flame atomic absorption method.