EESTI STANDARD EVS-EN 24496:2000

Metallpulbrid. Happes lahustumatu aineosa sisalduse määramine raua-, vase-, tina- ja pronksipulbrites

Metallic powders - Determination of acid-insoluble content in iron, copper, tin and bronze powders

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 24496:2000 sisaldab Euroopa standardi EN 24496:1993 ingliskeelset teksti.	This Estonian standard EVS-EN 24496:2000 consists of the English text of the European standard EN 24496:1993.
Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 77.160

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 24496:1993

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UDC 621.762:669-492.2:620.1:543.726

Descriptors: Powder metallurgy, metallic powder, iron, copper, tin, bronzes, chemical analysis, determination of content, acids, insoluble matter

English version

Metallic powders - Determination of acid insoluble content in iron, copper, tin and bronze powders (ISO 4496:1978)

Poudres métalliques - Détermination de la teneur en insolubles dans les acides pour les poudres de fer, de cuivre, d'étain et de bronze (ISO 4496:1978)

Metallpulver - Bestimmung der säureunlöslichen Bestandteile in Eisen-, Kupfer-, Zinn- und Bronzepulvern (ISO 4496:1978)

This European Standard was approved by CEN on 1993-04-02. 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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

In 1992 ISO 4496:1978 "Metallic powders - Determination of acid insoluble content in iron, copper, tin and bronze powders" was submitted to the CEN Primary Questionnaire procedure.

Following the positive result of the CEN/CS Proposal ISO 4496:1978 was submitted to the CEN Formal Vote. The result of the Formal Vote was positive.

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 October 1993, and conflicting national standards shall be withdrawn at the latest by October 1993.

According to the Internal Regulations of CEN/CENELEC, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the International Standard ISO 4496:1978 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD 4496

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

Metallic powders — Determination of acid-insoluble content in iron, copper, tin and bronze powders

Poudres métalliques — Détermination de la teneur en insolubles dans les acides pour les poudres de fer, de cuivre, d'étain et de bronze

First edition — 1978-08-01

UDC 621.762 : 669-492.2 : 543.726 Ref. No. ISO 4496-1978 (E)

Descriptors : metallic powder, iron, copper, tin, bronzes, chemical analysis, determination of content, insoluble matter, acids.

Price based on 3 pages

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.

International Standard ISO 4496 was developed by Technical Committee ISO/TC 119, *Powder metallurgical materials and products*, and was circulated to the member bodies in June 1977.

It has been approved by the member bodies of the following countries :

Australia	Germany	Sweden
Austria	Italy	Turkey
Bulgaria	Mexico	United Kingdom
Canada	Poland	U.S.A.
Chile	Portugal	U.S.S.R.
Czechoslovakia	Romania	Yugoslavia
Egypt, Arab Rep. of	South Africa, Rep. of	
France	Spain	

No member body expressed disapproval of the document.

Printed in Switzerland

Metallic powders — Determination of acid-insoluble content in iron, copper, tin and bronze powders

1 SCOPE

This International Standard specifies methods for determining, in iron, copper, tin and bronze powders, the approximate content of non-metallic materials which are insoluble in the ordinary mineral acids.

The insoluble matter referred to is generally considered to be acid-insoluble silica and silicates, carbides, alumina, clays or other refractory oxides which are either present in the raw material from which the powders are manufactured or introduced during the manufacturing process.

2 FIELD OF APPLICATION

The methods are applicable to lubricant-free metallic powders of iron, copper, tin, alloy bronze and elemental mixtures of copper and tin.

3 REAGENTS

During the analysis, use only reagents of recognized analytical grade, and only distilled water or water of equivalent purity.

See the table for the reagents required.

4 APPARATUS

Ordinary laboratory apparatus and

4.1 Laboratory balance of sufficient capacity and capable of weighing to an accuracy of ± 0,000 1 g.

4.2 Glass filter funnel, diameter approximately 70 mm.

4.3 Filter paper for medium precipitates, diameter approximately 110 mm.

4.4 Furnace, capable of operating between 900 and 1 000 °C.

4.5 Fused silica or **porcelain crucibles,** pretreated to constant mass at 900 to 1 000 °C and stored in a desiccator.

5 SAMPLING

5.1 Determine the content of insoluble matter on two test portions.

5.2 The mass of the test portion shall be approximately 5 g.

Type of powder	Reagent	Density, ρ g/ml	Concentration of solution
Iron	Hydrochloric acid (3.1)	1,19	1 + 1
	Hydrochloric acid (3.2)	1,19	1 + 25
	Potassium thiocyanate (3.3)		5 %
	Nitric acid (3.4)	1,42	concentrated
Copper Tin Bronze	Hydrochloric acid (3.5)	1,19	concentrated
	Nitric acid (3.6)	1,42	1 + 1
	Hydrogen peroxide (3.7)		30 %
	Ammonium acetate (3.8)		200 g/l
Copper Bronze	Sodium diethyldithiocarbamate (3.9)		4 %
Tin	Sodium sulphide (3.10)		
	Hydrogen sulphide (3.11)		