
Sintered metal materials, excluding hardmetals - Determination of apparent hardness - Part 1: Materials of essentially uniform section hardness (ISO 4498-1:1990)

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Metallische Sinterwerkstoffe, mit Ausnahme von Hartmetallen - Bestimmung der scheinbaren Härte - Teil 1: Werkstoffe mit im wesentlichen gleichmäßigem Härteverlauf (ISO 4498-1:1990)

Matériaux métalliques frittés à l'exclusion des métaux-durs - Détermination de la dureté apparente - Partie 1: Matériaux ayant essentiellement une dureté uniforme dans la section (ISO 4498-1:1990)

Ta slovenski standard je istoveten z: EN 24498-1:1993

ICS:

77.040.10	Mehansko preskušanje kovin	Mechanical testing of metals
77.160	Metalurgija prahov	Powder metallurgy

SIST EN 24498-1:2000**en**

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EUROPEAN STANDARD

EN 24498-1:1993

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1993

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Descriptors: Powder metallurgy, metallic powder, sintered products, hardness tests, Brinell hardness, Rockwell hardness, Vickers hardness

English version

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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 4498-1:1990 "Sintered metal materials, excluding hardmetals - Determination of apparent hardness - Part 1: Materials of essentially uniform section hardness" was submitted to the CEN Primary Questionnaire procedure.

Following the positive result of the CEN/CS Proposal ISO 4498-1:1990 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 4498-1:1990 was approved by CEN as a European Standard without any modification.

NOTE: The European references to international publications are given in annex ZA (normative).

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Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 6506		Metallic materials - Hardness test - Brinell test	----	----
ISO 6507-1		Metallic materials - Hardness test - Vickers test	----	----
ISO 6508		Metallic materials - Hardness test - Rockwell test (scale A-B-C-D-E-F-G-H-K)	----	----

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INTERNATIONAL STANDARD

ISO
4498-1

Second edition
1990-08-01

Sintered metal materials, excluding hardmetals — Determination of apparent hardness —

Part 1: Materials of essentially uniform section hardness

SIST EN 24498-1:2000
Matériaux métalliques frittés à l'exclusion des métaux-durs —
Détermination de la dureté apparente —
Partie 1: Matériaux ayant essentiellement une dureté uniforme dans la
section



Reference number
ISO 4498-1:1990(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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4498-1 was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*.

This second edition cancels and replaces the first edition (ISO 4498-1:1978), of which it constitutes a minor technical revision.

ISO 4498 consists of the following parts, under the general title *Sintered metal materials, excluding hardmetals — Determination of apparent hardness*:

- *Part 1: Materials of essentially uniform section hardness*
- *Part 2: Case-hardened ferrous materials, surface enriched by carbon or carbon and nitrogen*
- *Part 3: Materials with hardened surfaces obtained by treatments other than those of ISO 4498-2*

Annex A forms an integral part of this part of ISO 4498.

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Introduction

The hardness value obtained by testing a sintered metal material with Brinell, Rockwell and Vickers test equipment is called the apparent hardness. Since the sample is a composite of solid material and pores, the hardness value is usually lower than that of solid material of the same composition and metallurgical condition. However, this does not imply that the functional characteristics (for example wear resistance) are necessarily inferior to those of an equivalent full-density material.

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