

Irish Standard I.S. EN ISO 3908:2009

Hardmetals - Determination of insoluble (free) carbon - Gravimetric method (ISO 3908:2009)

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### EUROPEAN STANDARD NORME EUROPÉENNE

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#### **English Version**

## Hardmetals - Determination of insoluble (free) carbon - Gravimetric method (ISO 3908:2009)

Métaux-durs - Dosage du carbone insoluble (libre) - Méthode gravimétrique (ISO 3908:2009)

Hartmetalle - Bestimmung des unlöslichen (freien) Kohlenstoffgehaltes - Gravimetrisches Verfahren (ISO 3908:2009)

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**EN ISO 3908:2009 (E)** 

#### **Foreword**

This document (EN ISO 3908:2009) has been prepared by Technical Committee ISO/TC 119 "Powder metallurgy".

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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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INTERNATIONAL
STANDARD

**ISO** 3908

Third edition 2009-10-01

# Hardmetals — Determination of insoluble (free) carbon — Gravimetric method

Métaux-durs — Dosage du carbone insoluble (libre) — Méthode gravimétrique



ISO 3908:2009(E)

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#### **Foreword**

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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ISO 3908 was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*, Subcommittee SC 4, *Sampling and testing methods for hardmetals*.

This third edition cancels and replaces the second edition (ISO 3908:1985), which has been technically revised.

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I.S. EN ISO 3908:2009

## Hardmetals — Determination of insoluble (free) carbon — Gravimetric method

#### 1 Scope

This International Standard specifies a gravimetric method for the determination of the mass fraction of insoluble (free) carbon in carbides and hardmetals.

This method is applicable to

- carbides of hafnium, molybdenum, niobium, tantalum, titanium, vanadium, tungsten and zirconium,
- mixtures of these carbides and binder metals, free of lubricant, and
- all grades of presintered or sintered hardmetals, produced from these carbides,

having a mass fraction of insoluble carbon between 0,02 % and 0,5 %.

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3907:2009, Hardmetals — Determination of total carbon — Gravimetric method

#### 3 Principle

Decomposition of the carbides and determination of the insoluble carbon by a gravimetric method.

#### 4 Reagents

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

**4.1** Nitric acid,  $\rho = 1,20 \text{ g/ml}.$ 

Add 2 000 ml of nitric acid,  $\rho = 1,42$  g/ml, to 3 000 ml of water.

#### **4.2** Hydrofluoric acid, $\rho = 1.12$ g/ml.



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