



NSAI
Standards

Irish Standard
I.S. EN ISO 9692-3:2016

Welding and allied processes - Types of joint preparation - Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys (ISO 9692-3:2016)

I.S. EN ISO 9692-3:2016

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National Foreword

I.S. EN ISO 9692-3:2016 is the adopted Irish version of the European Document EN ISO 9692-3:2016, Welding and allied processes - Types of joint preparation - Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys (ISO 9692-3:2016)

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EUROPEAN STANDARD

EN ISO 9692-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2016

ICS 25.160.10

Supersedes EN ISO 9692-3:2001

English Version

**Welding and allied processes - Types of joint preparation -
Part 3: Metal inert gas welding and tungsten inert gas
welding of aluminium and its alloys (ISO 9692-3:2016)**

Soudage et techniques connexes - Types de
préparation de joints - Partie 3: Soudage MIG et TIG de
l'aluminium et de ses alliages (ISO 9692-3:2016)

Schweißen und verwandte Prozesse - Empfehlungen
für Fugenformen - Teil 3: Metall-Inertgasschweißen
und Wolfram-Inertgasschweißen von Aluminium und
Aluminium-Legierungen (ISO 9692-3:2016)

This European Standard was approved by CEN on 10 July 2016.

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This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 9692-3:2016 (E)

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European foreword

This document (EN ISO 9692-3:2016) has been prepared by Technical Committee ISO/TC 44 “Welding and allied processes” in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by January 2017, and conflicting national standards shall be withdrawn at the latest by January 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9692-3:2001.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 9692-3:2016 has been approved by CEN as EN ISO 9692-3:2016 without any modification.

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INTERNATIONAL STANDARD

**ISO
9692-3**

Second edition
2016-06-15

Welding and allied processes — Types of joint preparation —

Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys

*Soudage et techniques connexes — Types de préparation de joints —
Partie 3: Soudage MIG et TIG de l'aluminium et de ses alliages*



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ISO 9692-3:2016(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 7, *Representation and terms*.

This second edition cancels and replaces the first edition (ISO 9692-3:2000), which has been technically revised.

ISO 9692 consists of the following parts, under the general title *Welding and allied processes — Types of joint preparation*:

- *Part 1: Manual metal arc welding, gas-shielded metal arc welding, gas welding, TIG welding and beam welding of steels*
- *Part 2: Submerged arc welding of steels*
- *Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys*
- *Part 4: Clad steels*

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 7 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Introduction

This part of ISO 9692 defines the parameters characterizing the joint preparation and assembly of the most often encountered dimensions and shapes.

The recommendations given in this part of ISO 9692 have been compiled on the basis of experience and contain dimensions for types of joint preparation that are generally found to provide suitable welding conditions. However, the extended field of application makes it necessary to give a range of dimensions. The dimension ranges specified represent design limits and are not tolerances for manufacturing purposes. Manufacturing limits depend, for instance, on welding process, parent metal, welding position, quality level, etc. Due to the common character of this part of ISO 9692, the examples given cannot be regarded as the only solution for the selection of a joint type.

Specific fields of application and manufacturing requirements may be covered by selected ranges of dimensions specified in the relevant application standard.

Welding and allied processes — Types of joint preparation —

Part 3:

Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys

1 Scope

This part of ISO 9692 specifies recommended types of joint preparation for metal inert gas welding, MIG (131), and tungsten inert gas welding, TIG (141), and autogenous TIG welding (142) on aluminium and its alloys.

It applies to fully penetrated welds.

2 Normative references

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

ISO 2553:2013, *Welding and allied processes — Symbolic representation on drawings — Welded joints*

ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers*

3 Materials

Joint preparations recommended in this part of ISO 9692 are suitable for all types of aluminium and its weldable alloys.

4 Welding processes

Joint preparations recommended in this part of ISO 9692 are suitable for welding carried out in accordance with the following processes as specified in [Tables 1](#) to [3](#). Combinations of different processes are possible:

- MIG welding with solid wire electrode (131);
- TIG welding with solid filler material (wire/rod) (TIG) (141);
- autogenous TIG welding (142) — only applicable for butt weld between plates with raised edges (see [Table 1](#), 1.20)

NOTE The numbers in parentheses refer to the reference number of the welding process specified in ISO 4063.

5 Finish

Edges should be prepared by mechanical means (e.g. shearing, sawing or milling). No mineral oil-based cleaning fluids shall be used. If plasma cutting is used, consideration shall be given to the quality of cut surfaces (e.g. cracks).

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