
**Welding consumables — Wire electrodes,
wires and rods for welding of aluminium
and aluminium alloys — Classification**

*Produits consommables pour le soudage — Fils-électrodes, fils et
baguettes pour le soudage de l'aluminium et les alliages d'aluminium —
Classification*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

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.

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

ISO 18273 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read “...this European Standard...” to mean “...this International Standard...”.

It should be noted that, with regard to the corresponding EN standard, the designations given in Clause 9 have been adapted to the needs of international standardization.

Contents

Page

Foreword.....	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Classification.....	1
4 Symbols and requirements.....	1
4.1 Symbols for the product form	1
4.2 Symbol for the chemical composition	1
5 Mechanical properties of the weld metal.....	1
6 Chemical analysis.....	2
7 Retest	2
8 Technical delivery conditions.....	2
9 Designation.....	5

Foreword

This document (EN ISO 18273:2004) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

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 September 2004, and conflicting national standards shall be withdrawn at the latest by September 2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

For aluminium welding consumables there is no unique relationship between the product form (solid wire or rod) and the welding process used (e.g. gas shielded metal arc welding, gas tungsten arc welding, plasma arc welding or other welding processes). For this reason the solid wires or rods may be classified on the basis of any of the above product forms and can be used as appropriate, for more than one of the above processes.

This document is a preview generated by EVS

1 Scope

This standard specifies requirements for classification of solid wires and rods for fusion welding of aluminium and aluminium alloys. The classification of the solid wires and rods is based on their chemical composition.

2 Normative references

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).

EN ISO 544, *Welding consumables – Technical delivery conditions for welding filler metals – Type of product, dimensions, tolerances and markings (ISO 544:2003)*.

ISO 31-0:1992, *Quantities and units – Part 0: General principles*.

ISO 14344, *Welding and allied processes – Flux and gas shielded electrical welding processes – Procurement guidelines for consumables*.

3 Classification

The classification is divided into two parts:

- a) the first part indicates the product form being solid wires or rods, see 4.1;
- b) the second part gives a numerical symbol indicating the chemical composition of the solid wire or rod, see Table 1.

The aluminium or aluminium alloy chemical composition limits specified are strictly identical to those registered to the Aluminum Association, Washington DC 20066, USA, for the corresponding alloys.

4 Symbols and requirements

4.1 Symbols for the product form

The symbol for the solid wire and rod shall be S.

NOTE One product form may be used for more than one welding process.

4.2 Symbol for the chemical composition

The numerical symbol in Table 1 indicates the chemical composition of a solid wire and rod, determined under conditions given in clause 6.

NOTE In addition the chemical symbol may be used.

5 Mechanical properties of the weld metal

Mechanical properties of the weld metal are not part of the classification.