

**AWS A5.01M/A5.01:2019
(ISO 14344:2010 MOD)
An American National Standard**

**Welding
and Brazing
Consumables—
Procurement of
Filler Metals
and Fluxes**



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**Approved by the
American National Standards Institute
June 26, 2019**

Welding and Brazing Consumables— Procurement of Filler Materials and Fluxes

6th Edition

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Prepared by the
American Welding Society (AWS) A5 Committee on Filler Metals and Allied Materials

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This document provides a means by which the information needed for the procurement of welding and brazing consumables to a filler metal specification can be stated clearly, concisely, and completely. It includes a method by which the heat, lot, testing, and certification requirements that are essential to so many of today's welding and brazing applications can be specified in the procurement document. This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.



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Foreword

This foreword is not part of this standard but is included for informational purposes only.

This AWS A5.01M/A5.01:2019 (ISO 14344:2010 MOD) standard is a modified adoption of International Standard ISO 14344:2010, *Welding Consumables — Procurement of Filler Materials and Fluxes*. This standard contains certain modifications due to national requirements and the particular needs of the existing AWS filler metal specifications. These technical deviations and additional information have been added directly to the clauses to which they refer. A list of modifications is given in Annex D.

In this edition, clarification has been added for lot classes that impose a 24-hour restriction, the use for brazing filler materials and fluxes is more explicitly addressed, and inspection document types are referenced.

This document allows the use of both U.S. Customary Units and the International System of Units (SI). The choice of units shall be based on the referenced classification standard.

This document provides a method for specifying in the purchase order the information necessary for the procurement of welding filler metals to an AWS, ISO, or other applicable welding consumable specification. The current document is the sixth revision of the initial AWS document issued in 1978.

The initial version of this document, published in 1978, was the result of work by a task group appointed by the Committee on Filler Metals. The 1993 revision was prepared by a permanent subcommittee (Subcommittee on Filler Metal Procurement Guidelines) which has continued to review specifications in accordance with guidelines of the American National Standards Institute. The evolution took place as follows:

AWS A5.01-78	<i>Filler Metal Procurement Guidelines</i>
ANSI/AWS A5.01-87	<i>Filler Metal Procurement Guidelines</i>
ANSI/AWS A5.01-93	<i>Filler Metal Procurement Guidelines</i>
AWS A5.01M/A5.01:2008 (ISO 14344:2002 MOD)	<i>Procurement Guidelines for Consumables—Welding and Allied Processes—Flux and Gas Shielded Electrical Welding Processes</i>
AWS A5.01M/A5.01:2013 (ISO 14344:2010 MOD)	<i>Welding Consumables—Procurement of Filler Materials and Fluxes</i>

Use of the method described in this document can aid in procuring the required welding and brazing materials. With it, the applicable details are completely described in the purchase order using standard terms, thereby avoiding delays caused by incomplete or incorrect filler metal descriptions and testing requirements.

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

Comments and suggestions for the improvement of this specification are welcome. They should be sent to the Secretary, AWS A5 Committee on Filler Metals and Allied Materials.

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Welding and Brazing Consumables— Procurement of Filler Materials and Fluxes

1. Scope

1.1 This standard identifies various information necessary for communication between a purchaser and a supplier of welding or brazing consumables. This standard, together with an AWS, ISO, or other recognized welding or brazing consumable standard, provides a method for preparing those specific details needed for welding and brazing consumable procurement which consist of the following:

(1) the welding or brazing consumable classification (selected from the pertinent AWS, ISO, or other applicable welding or brazing consumable standard);

(2) the lot class (selected from Clause 4 of this standard),

(3) the testing schedule (selected from Clause 5 of this standard).

Selection of the specific welding or brazing consumable classification, lot class, and testing schedule will depend upon the requirements of the application for which the consumable is being procured.

1.2 *This specification makes use of both U.S. Customary Units and the International System of Units (SI). The measurements are not exact equivalents; therefore, each system must be used independently of the other without combining in any way when referring to weld metal properties. The specification with the designation A5.01M uses SI Units. The specification A5.01 uses U.S. Customary Units. The latter are shown within brackets [] or in appropriate columns in tables and figures. The standard dimensions based on either system may be used for the sizing of electrodes, packaging, or both under A5.01M or A5.01 specifications.*

2. Normative References

The following normative documents contain provisions which, through references in this text, constitute provisions of this standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest editions of the normative documents referred to apply. Members of ISO and IEC maintain registers of currently valid International Standards.

2.1 The following AWS standards are referenced in the mandatory section of this document.

AWS A3.0 M/A3.0, Standard Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying

AWS A5.02/A5.02M, Specification for Filler Metal Standard Sizes, Packaging, and Physical Attributes

2.2 The following ISO standards are referenced in the mandatory section of this document.

ISO 544, Welding consumables — Technical delivery conditions for welding filler materials — Type of product, dimensions, tolerances and markings

ISO 10474, Steel and steel products — Inspection documents

2.3 The following EN standard is referenced in the mandatory section of this document.

EN 10204, Metallic Products — Types of Inspection Documents