

ANSI/AWS A5.26/A5.26M-97 (R2009)
An American National Standard

**Specification for
Carbon and
Low-Alloy Steel
Electrodes for
Electrogas Welding**



American Welding Society

Key Words—Filler metal specifications, low-alloy steel electrodes, carbon steel electrodes, welding electrodes, flux cored electrodes, electrogas welding electrodes

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Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding

Supersedes ANSI/AWS A5.26-91

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

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

Classification requirements are specified for solid and composite (flux cored and metal cored) electrodes for electrogas welding. The requirements include chemical composition of the electrode for solid electrodes and of weld metal for composite (cored) electrodes, in addition to the mechanical properties and soundness of weld metal taken from a groove weld made with these electrodes using the prescribed welding procedure. Standard electrode sizes, marking, and packaging requirements are included.

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.



American Welding Society

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Foreword

This foreword is not part of ANSI/AWS A5.26/A5.26M-97 (R2009), *Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding*, but is included for informational purposes only.

This document is the first of the A5.26 specifications which 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. In selecting rational metric units the ANSI/AWS A1.1, *Metric Practice Guide for the Welding Industry*, and ISO 544, *Welding consumables — Technical delivery conditions for welding filler materials — Type of product, dimensions, tolerances and markings*, are used as guides. Tables and figures make use of both U.S. Customary and SI units, which with the application of the specified tolerances provide for interchangeability of products in both U.S. Customary and SI units.

Added Annex B (Informative), Guidelines for the Preparation of Technical Inquiries.

The current document is the second revision of this specification, as shown below:

Document Development

ANSI/AWS A5.26-78 *Specification for Consumables for Electrogas Welding of Carbon and High Strength Low-Alloy Steels*

ANSI/AWS A5.26-91 *Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding*

ANSI/AWS A5.26-97R *Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding*

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS A5 Committee on Filler Metals, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

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Specification for Carbon and Low-Alloy Steel Electrodes for Electrogas Welding

1. Scope

This specification prescribes requirements for the classification of carbon and low-alloy steel electrodes for electrogas welding. It covers solid and composite (flux cored and metal cored) electrodes used with external gas shielding, and composite (self-shielded flux cored) electrodes used without external shielding.

Part A General Requirements

2. Classification

2.1 The *solid electrodes* covered by this specification are classified according to the chemical composition of the electrode, as specified in Table 1 and the mechanical properties of the weld metal as specified in Tables 2 and 3.

2.2 The *composite (flux cored and metal cored) electrodes* covered by this specification are classified according to the need for external shielding gas (Table 4) and the chemical composition and mechanical properties of the weld metal, as specified in Tables 2, 3, and 4.

2.3 Electrodes classified under one classification shall not be classified under any other classification in this specification, except as specifically permitted by Note (a) to Table 3.

2.4 The electrodes classified under this specification are intended for electrogas welding, but that is not to prohibit their use with any other process for which they are found suitable.

3. Acceptance

Acceptance¹ of the electrodes shall be in accordance with the provisions of ANSI/AWS A5.01, *Filler Metal Procurement Guidelines*².

4. Certification

By affixing the AWS Specification and Classification designations to the packaging, or the classification to the product, the manufacturer certifies that the product meets the requirements of this specification.³

5. Units of Measure and Rounding-Off Procedure

5.1 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. The specification with the designation A5.26 uses U.S. Customary units. The specification A5.26M uses SI units. The latter are shown in appropriate columns in tables or within brackets [] when used in the text.

¹ See Section A3 (in Annex A) for further information concerning acceptance, testing of the material shipped, and ANSI/AWS A5.01, *Filler Metal Procurement Guidelines*.

² AWS standards are published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

³ See Section A4 (in Annex A) for further information concerning certification and the testing called for to meet this requirement.