


**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**

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

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**Approved by the**  
**American National Standards Institute**  
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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**

550 N.W. LeJeune Road, Miami, FL 33126

## Foreword

This foreword is not part of ANSI/AWS A5.26/A5.26M-97 (R2009), *Specification for Carbon and Low-Alloy Steel Electrodes for Electrode Gas 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 Electrode Gas Welding of Carbon and High Strength Low-Alloy Steels*

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

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

# Table of Contents

|   | <b>Page No.</b> |
|---|-----------------|
| <i>Personnel (Reaffirmation)</i> .....  | v               |
| <i>Personnel (Original)</i> .....   | vii             |
| <i>Foreword</i> .....   | ix              |
| <i>List of Tables</i> .....   | xii             |
| <i>List of Figures</i> .....  | xii             |
| <b>1. Scope</b> .....   | 1               |
| <b>2. Classification</b> .....  | 1               |
| <b>3. Acceptance</b> .....  | 1               |
| <b>4. Certification</b> .....   | 1               |
| <b>5. Units of Measure and Rounding-Off Procedure</b> .....   | 1               |
| <b>6. Summary of Tests</b> .....  | 5               |
| <b>7. Retest</b> .....  | 5               |
| <b>8. Weld Test Assemblies</b> .....  | 6               |
| <b>9. Chemical Analysis</b> .....   | 6               |
| <b>10. Radiographic Test</b> .....  | 6               |
| <b>11. Tension Test</b> .....   | 7               |
| <b>12. Impact Test</b> .....  | 8               |
| <b>13. Method of Manufacture</b> .....  | 8               |
| <b>14. Standard Sizes</b> .....   | 9               |
| <b>15. Finish and Uniformity</b> .....  | 9               |
| <b>16. Standard Package Forms</b> .....   | 10              |
| <b>17. Winding Requirements</b> .....   | 10              |
| <b>18. Electrode Identification</b> .....   | 13              |
| <b>19. Packaging</b> .....  | 13              |
| <b>20. Marking of Packages</b> .....  | 13              |
| Annex A (Informative)—Guide to AWS Specification for Carbon and Low-Alloy Steel Electrodes for<br>Electrode Gas Welding ..... | 17              |
| Annex B (Informative)—Guidelines for the Preparation of Technical Inquiries .....   | 25              |
| AWS Filler Metal Specifications by Material and Welding Process .....   | 27              |
| AWS Filler Metal Specifications and Related Documents .....   | 29              |

## List of Tables

| <b>Table</b> | <b>Page No.</b>   |
|--------------|---|
| 1            | Chemical Composition Requirements for Solid Electrodes .....2   |
| 2            | A5.26 Tension Test Requirements (As Welded) .....2  |
| 2M           | A5.26M Tension Test Requirements (As Welded) .....3   |
| 3            | A5.26 Impact Test Requirements (As Welded) .....3   |
| 3M           | A5.26M Impact Test Requirements (As Welded).....3   |
| 4            | Chemical Composition Requirements for Weld Metal from Composite Flux Cored and<br>Metal Cored Electrodes .....4                       |
| 5            | Required Tests.....5  |
| 6            | Base Metals for Test Assemblies .....9  |
| 7            | Standard Sizes..... 12  |
| 8            | Standard Package Dimensions and Weights ..... 13  |
| A.1          | Comparisons of A5.26/A5.26M Classifications and Classifications in Other AWS Specifications<br>and Proposed ISO Designations ..... 19 |
| A.2          | Discontinued Classifications.....22   |

## List of Figures

| <b>Figure</b> | <b>Page No.</b>   |
|---------------|---|
| 1             | Groove Weld Test Assembly for Mechanical Properties and Soundness .....7                |
| 2             | Weld Ingot.....9  |
| 3             | Tension Test Specimen ..... 10  |
| 4             | Radiographic Acceptance Standards ..... 11  |
| 5             | Charpy V-Notch Impact Test Specimen..... 12   |
| 6A            | Dimensions of Standard 12 and 14 in. [300 and 350 mm] Spools ..... 14                   |
| 6B            | Dimensions of Standard 22, 24, and 30 in. [560, 610, and 760 mm] Spools (Reels)..... 15 |
| A.1           | Classification System..... 18   |

# Specification for Carbon and Low-Alloy Steel Electrodes for Electrode Gas Welding

## 1. Scope

This specification prescribes requirements for the classification of carbon and low-alloy steel electrodes for electrode gas 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 electrode gas welding, but that is not to prohibit their use with any other process for which they are found suitable.

## 3. Acceptance

Acceptance<sup>1</sup> of the electrodes shall be in accordance with the provisions of ANSI/AWS A5.01, *Filler Metal Procurement Guidelines*<sup>2</sup>.

## 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.<sup>3</sup>

## 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.

<sup>1</sup> 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*.

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

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