

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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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.



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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 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.

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Table of Contents

	Page No.
<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
1. Scope	1
2. Classification	1
3. Acceptance	1
4. Certification	1
5. Units of Measure and Rounding-Off Procedure	1
6. Summary of Tests	5
7. Retest	5
8. Weld Test Assemblies	6
9. Chemical Analysis	6
10. Radiographic Test	6
11. Tension Test	7
12. Impact Test	8
13. Method of Manufacture	8
14. Standard Sizes	9
15. Finish and Uniformity	9
16. Standard Package Forms	10
17. Winding Requirements	10
18. Electrode Identification	13
19. Packaging	13
20. Marking of Packages	13
Annex A (Informative)—Guide to AWS Specification for Carbon and Low-Alloy Steel Electrodes for 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

Table	Page No.
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 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 and Proposed ISO Designations	19
A.2 Discontinued Classifications.....	22

List of Figures

Figure	Page No.
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 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.