

AWS C2.25/C2.25M:2012 (R2018)
An American National Standard



Specification for Thermal Spray Feedstock—Wire and Rods



**AWS C2.25/C2.25M:2012 (R2018)
An American National Standard**

**Approved by
the American National Standards Institute
September 5, 2012
Reaffirmed: September 1, 2017**

Specification for Thermal Spray Feedstock—Wire and Rods

2nd Edition

Supersedes AWS C2.25/C2.25M:2012

Prepared by the
American Welding Society (AWS) C2 Committee on Thermal Spraying

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This specification provides the as-manufactured chemical composition classification requirements for solid and composite wires and ceramic rods for thermal spraying. Requirements for standard sizes, marking, manufacturing, and packaging are included.



ISBN: 978-0-87171-926-3
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Foreword

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

This is a reaffirmation of the first revision of the specification originally issued in 2002. That document was developed by request of the U.S. Army Material Technology Center to supersede MIL-W-6712C, Metalizing Wire, with a U.S. National consensus standard. This revision describes a number of new feedstock materials.

The following editorial changes are included in this reaffirmation:

The safety subclause was revised, notes a and b in Figure 2 and note a in Figure 3 were renumbered to 3 and 4, and 3, respectively; the references to notes a and b in Figure 2 and note a in Figure 3 were deleted from the figures; “ASTM” was changed to “ASTM International” in footnote 1; the title of ISO 544 was changed to “*Welding consumables—Technical delivery condition for filler materials and fluxes—Type of product, dimensions, tolerances and markings*”; the first “not” in 9 (2) was deleted; “the” was changed to “this” in 11.2.3, 12 (2), first sentence, third sentence, and last sentence.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS C2 Committee on Thermal Spraying, American Welding Society, 8669 NW 36 St, # 130, Miami, FL 33166.

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Specification for Thermal Spray Feedstock—Wire and Rods

1. General Requirements

1.1 Scope. This specification prescribes requirements for the classification of thermal spray feedstock based on the as manufactured chemical composition. Thermal Spray Feedstock includes solid and composite wires and ceramic rods for thermal spraying. Requirements for standard sizes, marking, manufacturing, and packaging are included.

1.2 Units of Measurement. This standard makes use of both U.S. Customary Units and the International System of Units (SI). The latter are shown within brackets ([]) or in appropriate columns in tables and figures. The measurements may not be exact equivalents: therefore, each system must be used independently.

1.3 Safety. Safety and health issues and concerns are beyond the scope of this standard and therefore are not addressed herein. Safety and health information is available from the following sources:

American Welding Society:

- (1) ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*
- (2) AWS Safety and Health Fact Sheets
- (3) Other safety and health information on the AWS website

Material or Equipment Manufacturers:

- (1) Safety Data Sheets supplied by materials manufacturers
- (2) Operating Manuals supplied by equipment manufacturers

Applicable Regulatory Agencies

Work performed in accordance with this standard may involve the use of materials that have been deemed hazardous, and may involve operations or equipment that may cause injury or death. This standard does not purport to address all safety and health risks that may be encountered. The user of this standard should establish an appropriate safety program to address such risks as well as to meet applicable regulatory requirements. ANSI Z49.1 should be considered when developing the safety program.

2. Normative References

The following ASTM¹ standards are referenced in the mandatory sections of this document:

- (1) ASTM E29, *Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications*
- (2) ASTM E34, *Test Method for Chemical Analysis of Aluminum and Aluminum Alloys (referee)*

¹ ASTM [International](#) standards are published by the American Society of Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.