

AWS D3.9/D3.9M:2019
An American National Standard



Specification for the Classification of Weld-Through Paint Primers



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An American National Standard

Approved by the
American National Standards Institute
May 14, 2019

Specification for the Classification of Weld-Through Paint Primers

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Prepared by the
American Welding Society (AWS) Committee on Welding in Marine Construction

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This specification prescribes the requirements for the classification of weld-through paint primers. The classification is based on paint film thickness and welding procedure. Manufacturers may classify their products to different film thicknesses or welding procedures if they provide the details of their tests.



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Foreword

This Foreword is not part of this standard but is included for information purposes only.

Industries, notably shipbuilding firms, have introduced weld-through primers in plate and shape fabrication lines in order to increase productivity. The ability to weld directly through these coatings permits reductions in construction costs and improvements in schedule times.

An obstacle to the immediate introduction of this technology into the welding operations has been the inconsistent quality of welds due to interaction with the primed base metal. By using a standard test procedure to classify weld-through primers, potential users will be able to determine the base line levels of painting and welding required for their applications and to specify these requirements to their coating supplier.

In 1996, the AWS D3 Committee on Welding in Marine Construction established a Subcommittee on Weld-Through Paint Primers and requested that they develop a standard to classify weld-through paint primers.

The first edition of this document was published in 2010. This second edition makes use of both the U.S Customary Units and International System of Units (SI) and contains updated information regarding safety precautions. Underlined text or a vertical line in the margin denotes a technical change from the previous edition.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS D3 Committee on Welding in Marine Construction, American Welding Society, 8669 NW 36th St, #130, Miami, FL 33166.

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Specification for the Classification of Weld-Through Paint Primers

1. General Requirements

1.1 Scope. This standard specifies the requirements for classification of weld-through paint primers only. The paint primers are classified based on the maximum coating thickness for successful welding and the welding procedure used during the classification test. This standard provides a system for paint manufacturers to classify the weldability features of weld-through paint primers. This standard is limited to weld-through paint primers only and does not include galvanized or other types of protective coatings.

1.2 Units of Measurement. This standard makes use of both the U.S Customary Units and 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; some safety and health information is provided, but such issues are not fully 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

Society for Protective Coatings:

- (1) SSPC-Guide 17, *Guide to Developing a Corporate Safety Program for Industrial Painting and Coating Contractors*

Material or Equipment Manufacturers:

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

Applicable Regulatory Agencies

US Department of Labor Regulations:

- (1) CFR-29, Part 1915.53, *Welding, cutting and heating in way of preservative coatings*
- (2) CFR-29, Part 1926.354, *Welding, cutting, and heating in way of preservative coatings*

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.