

**AWS F2.3M:2011**  
**An American National Standard**



# **Specification for Use and Performance of Transparent Welding Curtains and Screens**



**American Welding Society**

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**An American National Standard**

**Approved by the**  
**American National Standards Institute**  
**July 7, 2010**

# **Specification for Use and Performance of Transparent Welding Curtains and Screens**

**2nd Edition**

**Supersedes AWS F2.3M:2001**

Prepared by the  
American Welding Society (AWS) Committee on Safety and Health

Approved by the  
AWS Board of Directors

## **Abstract**

This standard informs the reader of reasonable and adequate means, ways, and methods for the testing, selection, and safe use of transparent welding curtains and screens. These devices are designed to provide outside viewers, at some distance from the welding arc or operation, a safe view of the operation and operator.



**American Welding Society**

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# Personnel

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J. D. Jennings, 2nd Vice Chair	<i>Miller Electric Manufacturing Company</i>
S. P. Hedrick, Secretary	<i>American Welding Society</i>
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D. G. Harvey	<i>Hobart Brothers</i>
K. A. Lyttle	<i>Praxair, Incorporated</i>
A. F. Manz	<i>A. F. Manz Associates</i>

## Advisors to the AWS Safety and Health Committee

J. F. Hinrichs	<i>Friction Stir Link, Incorporated</i>
N. Jenkins	<i>The Ohio State University</i>
T. Lyon	<i>Consultant</i>
J. Petkovsek	<i>The Lincoln Electric Company</i>
D. H. Sliney	<i>Consultant</i>
R. J. Tucker	<i>Consultant</i>

## Foreword

This foreword is not part of AWS F2.3M:2011, *Specification for Use and Performance of Transparent Welding Curtains and Screens*, but is included for informational purposes only.

This specification was originally developed by the AWS Safety and Health Committee, with the assistance from manufacturers and users of transparent welding curtains and screens. The goal was a standard to provide the minimum safety requirements for these products and to differentiate them from welding filters. This revision is the second edition of *Specification for Use and Performance of Transparent Welding Curtains and Screens* and supersedes the edition published in 2001. The major change from the first edition is the inclusion of the new Annex C, Measurement of Spectral Transmittance, and the guidance to exclude the measurement of any fluorescence.

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# Specification for Use and Performance of Transparent Welding Curtains and Screens

## 1. Scope and Purpose

**1.1 Scope.** This standard shall apply to transparent welding curtains and screens used for all welding and cutting operations or processes where harmful sparks, spatter, and radiation are emitted, and excludes those sources that emit x-rays, gamma rays, particulate radiation (such as alpha and beta radiation), laser light, or electron beams. This standard makes use of the International System of Units (SI).

**1.2 Purpose.** The purpose of this standard is to provide reasonable and adequate means, ways, and methods for the testing, selection, and safe use of transparent welding curtains and screens. In order to carry this out, the function of these transparent welding curtains and screens needs to be understood clearly. These devices are designed to provide outside viewers, at some distance from the welding arc or operation, a safe view of the operation and operator. Transparent welding curtains and screens are not meant to replace a welding filter plate or to provide a close-up view of the welding operation. It is recommended that the transparent welding curtain or screen be at least 1 meter from the arc or operation. In establishing safety requirements, the hazards for a viewer at least 1 meter away were considered, with an 8 hour viewing time. In addition, a worst-case welding arc for ultraviolet and blue light emission was used (GMAW on aluminum with an argon shield gas). This represents a conservative approach for eye safety.

Because of this philosophy, curtain or screen grades were not referenced to the welding or cutting operation. The user is free to choose a device of whatever level of visible light transmission for the particular situation. Consequently, all devices must provide a minimally adequate level of ultraviolet and blue light attenuation. For example, if a low level of glare attenuation is desired, a light shade curtain can be selected, and the user would be assured of adequate levels of attenuation of ultraviolet and blue light radiation.

## 2. Normative References

The standards listed below contain provisions, which, through reference in this text, constitute mandatory provisions of this AWS standard. For undated references, the latest edition of the referenced standard shall apply. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

(1) AWS A3.0, *Standard Welding Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying*<sup>1</sup>

(2) ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*

(3) ANSI Z87.1, *Practice for Occupational and Educational Eye and Face Protection*<sup>2</sup>

<sup>1</sup> AWS standards and ANSI Z49.1 are published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

<sup>2</sup> ANSI Z87.1 is published by the International Safety Equipment Association, 1901 North Moore Street, Suite 808, Arlington, VA 22209.