

# ANSI/ASSP Z359.7-2019

Qualification and Verification Testing  
of Fall Protection Products

Part of the Fall Protection Code



AMERICAN SOCIETY OF  
**SAFETY PROFESSIONALS**



The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Professionals (ASSP) as secretariat of the ANSI accredited Z359 committee or individual committee members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this standard, ASSP or the Z359 committee does not ensure that adherence to these recommendations will protect the safety or health of any persons or preserve property.

**ANSI®**  
**ANSI/ASSP Z359.7 – 2019**

**American National Standard**

**Qualification & Verification Testing  
of Fall Protection Products**

Secretariat

**American Society of Safety Professionals**  
520 N. Northwest Highway  
Park Ridge, Illinois 60068

**Approved April 2, 2019**

**Effective May 1, 2020**

**American National Standards Institute**

# American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published April 2019 by

**American Society of Safety Professionals**  
**520 N. Northwest Highway**  
**Park Ridge, Illinois 60068**  
**(847) 699-2929 • [www.assp.org](http://www.assp.org)**

Copyright ©2019 by American Society of Safety Professionals  
All Rights Reserved.

No part of this publication may be reproduced  
in any form, in an electronic retrieval system or  
otherwise, without the prior written permission  
of the publisher.

Printed in the United States of America

## Foreword

(This Foreword is not a part of American National Standard Z359.7-2019.)

## History

This standard was first published in 2011 in an effort to standardize testing of fall protection products labeled according to the Z359 Fall Protection Code. Prior to 2011, the testing requirements for each product and the related test equipment were included within individual product standards. This standard made industry-wide changes to standardize the laboratory equipment, specimens tested, recording and accreditation of the laboratory. The greatest benefit that occurred in 2011 was requiring all testing laboratories, regardless of who owned and operated them, be accredited to ISO 17025. This requirement increased the quality and consistency of testing being conducted and therefore created a process to demonstrate why consumers can have greater confidence in products labeled to Z359 Fall Protection Code standards.

Prior to 2011, testing of Z359 products was not consistent for each product. Each product standard included the test equipment, sampling and test protocols. Significant differences could be found with the standards due to the age differences between the standards. Administratively, this created issues with updating testing requirements, since each standard had to be updated individually, often times with years in between updates. Laboratories were challenged since different testing, recording and sampling requirements existed for some products and not others.

This standard has worked to alleviate many of these issues by having common requirements for all Z359 products. The standard required each laboratory to be accredited to ISO 17025, *General Requirements for the Competence of Testing and Calibration Laboratories*. This standard includes many requirements, but the highlights are:

- calibration of testing equipment (measuring devices, weights used, data recording equipment)
- control of materials
- qualifications of staff
- communication procedures
- adherence to test protocols
- accuracy of testing data
- internal and external quality control audits
- number of specimens tested

This standard covers and is referenced in all Z359 product standards. The goal is that all Z359 products capable of being tested through an ISO accredited laboratory achieve consistent and accurate testing results. This standard works in harmony with the individual Z359 product standards and includes common testing requirements and equipment.

## Need for a Standard

The Z359 committee desired to provide a methodology where product manufacturers could bring existing and new innovative products to market within a reasonable amount of time while still maintaining a high level of consumer confidence in the testing of the products. This standard allows manufacturers to test all of their own products and works to minimize conflicts and inconsistencies by requiring all laboratories be accredited to ISO 17025.

During the development of this standard and determining the need for it, there was significant discussion regarding product certification and the use of third-party independent laboratories and third-party product certification bodies. Users of this standard must recognize that this

standard is not a product certification standard. There is a difference between testing of product and certifying of product. Testing of the product is only one part of the certification process. A product has several requirements that are not verified by testing, such as marking of product, labeling and instruction requirements. There is a general misconception that once a product passes the tests, it is certified, and this is not true. Many requirements are not verified through testing and the manufacturer of the product still has a responsibility to verify that all parts of the standard have been met. Currently (and historically), the manufacturer has the responsibility to ensure that a product meets all the requirements of the standard not just the physical tests. This standard does not prohibit a manufacturer from using independent organizations for testing and/or certification of product. This standard allows a manufacturer, through an ISO accredited laboratory, to test fall protection products according to the standard. If the manufacturer makes a self-declaration that the product conforms to the requirements of a Z359 standard, the manufacturer must provide documentation (Declaration of Conformity) to the purchaser that they have tested the product accordingly and also that the product meets all of the related requirements of standard, including labeling and user information requirements. If the product is certified by a third-party certification organization, then the third-party certification organization is responsible for ensuring that the product tested meets all of the design and performance requirements, as well as the labeling and user information, meet the requirements as given in the standard. Third-party certification of a product, as well as ISO 17025 accreditation, includes ongoing surveillance of the manufacturer.

### **Standard Perspective**

This standard is written for manufacturers and laboratories of fall protection products. Although other organizations may benefit from the content within this standard, it is written from an equipment manufacturer and laboratory perspective.

### **Normative Requirements**

This standard uses the single-column format. The normative requirements appear aligned to the left margin. To meet the requirements of this standard, machinery, equipment and process suppliers and users must conform to these normative requirements. These requirements typically use the verb “shall.”

*NOTE: The informative or explanatory notes in this standard appear indented, in italics, in a reduced font size, which is an effort to provide a visual signal to the reader that this is informative note, not normative text, and is not to be considered part of the requirements of this standard; this text is advisory in nature only. The suppliers and users are not required to conform to the informative note. The informative note is presented in this manner in an attempt to enhance readability and to provide explanation or guidance to the sections they follow.*

### **Figures**

Figures provided in the standard are illustrated to show basic concepts of testing, types of products, examples of labels or other information from the standard. These figures are not to scale, nor do they represent absolute systems and requirements. They are for educational and informational purposes to explain content within a standard.

### **Suggestions for Improvements**

Suggestions for improvements to this standard are welcome. They should be sent to: American Society of Safety Professionals (ASSP), 520 N. Northwest Highway, Park Ridge, IL 60068 Attention: Z359 Secretariat.

## **Revisions**

The Z359 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording and the reason for the proposal. Pertinent documentation would enable the Z359 Committee to process the changes in a timely manner.

## **Interpretations**

Upon a request in writing to the secretariat, the Z359 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant section number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

No one but the Z359 Committee (through the Z359 Secretariat) is authorized to provide any interpretation of this standard.

## **Approval**

Neither the Z359 Committee nor the American National Standards Institute (ANSI) approves, certifies, rates or endorses any item, construction, proprietary device or activity.

## **Appendices**

Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

## **Committee Meetings**

Persons wishing to attend a meeting or join the committee should contact the secretariat for information.

## **Standard Approval**

This standard was processed and approved for submittal to ANSI by the Z359 Secretariat. Approval of the standard does not necessarily imply (nor is it required) that all committee members voted for its approval. At the time this standard was approved, the Z359 Committee had the following members:

Thomas Kramer, P.E., CSP, Chair  
 Dan Henn, Vice Chair  
 Ovidiu Munteanu, Secretary  
 Timothy Fisher, CSP, CHMM, CPEA, CAE, ARM, STS, Assistant Secretary  
 Jennie Dalesandro, Administrative Technical Support

<b>Organization Represented</b>	<b>Name of Representative</b>
3M	Raymond Mann
American Society of Safety Professionals	Mike Boraas Jubal Hamernik, Ph.D., P.E.
Bashlin Industries, Inc.	John Frost, CSP Bradley McGill Caleb Williams
Bayer AG	Adam Chapin Chad McDanel
Boeing	Joey Junio, P.E. Segis Wright
Buckingham Manufacturing Company	James Rullo DeForest Canfield
Certified Access ClimbTech	Dave Pasco Karl Guthrie Daniel Aleksovski
Elk River, Inc.	Mark Conover Delisa Calhoun
Ellis Fall Safety Solutions, LLC	J. Nigel Ellis, Ph.D., P.E., CSP, CPE John Whitty, P.E.
ExxonMobil	Freddie Johnson Zachary Shanklin
FallTech	Zack Winters Mike Tavis
Flexible Lifeline Systems General Motors Company	Michael Bailey, P.E. Graham Parr Ken Mahnick
GME Supply Company	Daniel Pobst Caleb Messer
Gorbel Inc.	Allen Baughman Kevin Duhamel
Gravitec Systems, Inc.	Kevin Denis David Lough
High Engineering Corporation Honeywell	William Parsons, P.Eng. Bradley Rohlf Steven McPherson
Indianapolis Power and Light Company INSPEC International Ltd.	Nick Hutchinson Paul Clarke, CEng, MIMechE Andrew Diamond, MInstP, BSc (Hons)
International Safety Equipment Association	Cristine Fargo Justin Patton Philip Clemmons
Jelco Kee Safety, Inc.	Graham Willmott John Ingram Jim Kinateder
KMI Construction Lawrence Livermore National Security, LLC Liberty Mutual	Louis Renner, CSP Glenn Sparks Matthew Zaffini

Lighthouse Safety, LLC	John Corriveau
LJB Inc.	Mark Benes
Malta Dynamics, LLC	Thomas Kramer, P.E., CSP
Martin/Martin Consulting Engineers	Rupert Noton, CEng, MIStructE
MSA	David Ivey
Murdock Webbing Company, Inc.	Chris Holland
National Association of Tower Erectors	Andrew Emmons, P.E.
Pensafe Inc.	Al Jording, P.E.
Petzl	Rob Willis
Pigeon Mountain Industries	Tim Bissett
Pure Safety Group	Rick Toll
Reliance Industries	Stephan Gelinias
Rigid Lifelines	John Jones
Rooftop Anchor, Inc.	Justin Miller
Safety Equipment Institute, Inc.	Keith Smith
Schreiber Foods	Jeremiah Wangsgard
Shell Oil Company	Keith Luscinski
SKYLOTEC North America LP	Jeff Bowles
Southern Weaving Company	Loui McCurley
Sparkling Clean Window Company	Warren Faber
SPRAT	Andre Pelland
STE	Dan Henn
Sturges Manufacturing, Inc.	W. Joe Shaw
SureWerx/PeakWorks	Arnie Galpin, P.E.
Travelers	Kynan Wynne
Trinity Industries, Inc.	Tyson Munford, P.E.
Tritech Fall Protection Systems, Inc.	Stephen Sanders
U.S. Air Force	Mark Winchester
U.S. Bureau of Reclamation	George Jerome
U.S. Department of Interior - BSEE	Edward Grosse
U.S. Navy	Gregory Byers
UAW	Douglas Mercier
	Michael Masterson, Jr.
	Andrew Broadway
	Curtiss Burdette
	Samuel Terry
	Art Schneider
	Charley Rankin, M.S.
	Cedric Smith
	Michael Wright, P.E., CPE, CSP
	Mark Williams
	Tyler Griffith
	Tim Accursi
	Juan Rangel
	Scott Richert, CSP, ARM, ALCM
	Robin Wagstaff
	Craig Siciliani
	Chris Moemke, EIT
	Robert Baker
	Robert Foster
	Shawn Smith, CSP
	Corey Dickson
	John Cushing, Jr.
	Basil Tominna, P.E.
	Ronald Silva, P.E.
	Matthew Uptmor, OHST

UL

Vertical Access LLC  
Walt Disney Parks & Resorts  
Werner Co.

Western Area Power Administration

WJE

Zachry Group

Beverly Stutts  
Andrew White  
Kelly Streeter, P.E.  
Ian Bevan  
Michael Cameron  
Cody Rappoport  
William Schnyer  
John Woodard, CIH, CSP  
Daniel Gach, AIA, NCARB  
Jason Kamman, CSP, CHST  
Adam Rubin

**Subgroup Z359.7 had the following members:**

Kevin Denis, Chair  
Paul Clarke, CEng, MIMechE  
Robert Golz  
Chris Holland  
David Lough  
Raymond Mann  
Bradley McGill  
David Pate, CUSA  
James Rullo  
Stephen Sanders  
W. Joe Shaw  
Daniel Shipp  
Keith Smith  
Beverly Stutts

**Contents**

- 1. Scope, Purpose, Application and Interpretations ..... 11
  - 1.1 Scope ..... 11
  - 1.2 Purpose and Application ..... 11
  - 1.3 Interpretations ..... 11
- 2. Definitions ..... 11
- 3. Requirements ..... 13
  - 3.1 General ..... 13
- 4. Testing ..... 14
  - 4.1 General ..... 14
  - 4.2 Test Equipment ..... 15
  - 4.3 Test Specimens ..... 16
- 5. Documentation ..... 17
  - 5.1 Recordkeeping ..... 17
  - 5.2 Declaration of Conformity ..... 17
- 6. References ..... 17
- APPENDIX A – Example of a Declaration of Conformity ..... 19