

# ANSI / SPI B151.7- 2014

## American National Standard for Plastics Machinery Safety Requirements for Extrusion Machines

Secretariat and Accredited Standards Developer  
The Society of the Plastics Industry, Inc.  
d/b/a SPI – The Plastics Trade Industry Association  
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American National Standards Institute



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## Foreword

(This Foreword is not part of American National Standard ANSI/SPI B151.7)

This standard is a revision of the American National Standard, ANSI B151.7-1996, *Requirements for the Manufacture, Care, and Use of Plastic Extrusion Machines*. The standard was revised because:

- some paragraphs required modification for clarity and intent;
- additional explanatory material was added;
- additional definitions were required;
- some paragraphs required modification and some paragraphs were added to conform more closely to changes in technology.

SPI has long been concerned with operator safety on plastics processing equipment. Accordingly, the organization has established a standards development committee charged with the task of establishing necessary standards. The project on requirements for the manufacture, care, and use of extrusion machinery was initiated under the auspices of the Extrusion Safety Committee of the Equipment Council of the Society of the Plastics Industry, Inc. (SPI).

A standard treating the manufacture, care, and use of extrusion machinery is complicated by the wide variety and sizes of machines manufactured and in use, and by the virtually infinite combinations of parts being produced, the production methods used, and the operating conditions existing in industry today.

The purpose and primary objective of this standard is to identify and address known hazards to personnel working on, or adjacent to, an extrusion machine. Compliance with this standard is considered to adequately control hazards identified in clause 6. Other hazards not listed in clause 6 that can occur with extrusion machines may require additional risk reduction measures not included in this standard.

The project on requirements for the manufacture, care, and use of extrusion machines was initiated under the auspices of the Extrusion Section of the Equipment Council of the Society of the Plastics Industry, Inc. (SPI). To assist in the interpretation of these requirements, responsibilities have been assigned to the supplier, the rebuilder, the modifier, and the user.

## Effective Date

The following information on effective dates is informative guidance only, and not a normative part of this standard. This committee recognizes that some period of time after the approval date on the title page of this document is necessary for suppliers and users to develop new designs, or modify existing designs or manufacturing processes in order to incorporate the new or revised requirements of this standard into their product development or production system.

This committee recommends that suppliers complete and implement design changes for new machines and machinery systems within 12 months of the approval of this standard.

The committee recommends that users evaluate whether existing machinery and machinery systems have acceptable risk within 12 months of the approval date of this standard using generally recognized risk assessment methods. If the risk assessment shows that modification(s) is necessary, refer to the requirements of this standard or the machine-specific (C-level) standard to implement risk reduction measures (protective measures) for appropriate risk reduction.

Suggestions for improvement of this standard will be welcome. They should be sent to the Society of the Plastics Industry, Inc, 1667 K Street, NW, Suite 1000 Washington, DC 20006.

Consensus for this standard was achieved by use of the Canvass Method. The following organizations recognized as having an interest in the standardization of extrusion were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI. The Extrusion Safety and Standards Development Committee of the Equipment Council of The Society of the Plastics Industry, Inc., which was responsible for this standard, had the following members:

John L. Radovich - Chairman	Davis-Standard, LLC
Brian Bish	Milacron
Steve Boyette	Ross Controls
Matthew Caruso	Techmer PM
Joe Cassidy	Welex
Ken Cavanagh	Parkinson Technology
Farid Danial	Ipex
David Dorosa	PTI
Brad Eisenbarth	American Maplan Corporation
Steve Gammell	Macchi North America, Inc.
Steve Gates	Entek
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Larry Keller	Milacron, LLC
Wayne Leidy	Welex
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Jim Pilavdzic	Husky Injection Molding Systems, Inc.
Dave Rossi	Welex
Steve Schroeder	Invensys
Joe Suhay	Macro Engineering
Rich Taylor	Coperion
David Felinski, Secretary	SPI Standards Program Coordinator

Secretariat to the Committee: Jackie Dalzell, The Society of the Plastics Industry, Inc.

## Explanation of Standard Format

American National Standard ANSI/SPI B151.7 – 2014 uses a two-column format to provide both specific requirements and supporting information.

The left column, designated "Standard Requirements," is confined solely to these requirements.

The right column, designated "Explanatory Information," contains only information that is intended to clarify the standard. This column is not a part of the standard. Where supplementary illustrations are required, they are designated as "figures."

Operating rules (safe practices) are not included in either column unless they are of such a nature as to be vital safety requirements, equal in weight to other requirements, or guides to assist in compliance with the standard. The Annex includes common procedures practiced on plastics machinery. This is considered "Explanatory Information" and is supplementary to the standard.



STANDARD REQUIREMENTS

EXPLANATORY INFORMATION

*American National Standard for Plastics Machinery –*

# Safety Requirements for Extrusion Machines

**STANDARD REQUIREMENTS**

**EXPLANATORY INFORMATION**

(Not part of *American National Standard for plastics machinery – Safety Requirements for Extrusion Machines* (ANSI/SPI B151.7-2014))

## 1 Scope, Purpose, Application

### 1.1 Scope

The requirements of this standard shall apply to extrusion machines that are used in the plastics industry.

Extrusion machinery suppliers and users shall use the risk assessment process in the manufacture, care, and use of the machinery.

Deviations from the requirements of this standard shall be based on a documented risk assessment.

Safety requirements of ancillary equipment used with extrusion machines are not covered by this standard.

### 1.2 Purpose

The purpose of this standard is to identify and address known hazards to personnel working on, or adjacent to, an extrusion machine.

### 1.3 New or Remanufactured Extruders

The requirements of this standard pertaining to manufacture shall apply to all new or remanufactured extrusion machines installed in the United States of America.

#### 1.3.1 Nameplate

Date of manufacture (month and year) shall be affixed permanently and legibly to the machine along with the name of the supplier or remanufacturer.

### E1.1

In developing the requirements of this standard, the committee used the risk assessment process. A list of hazards typical of extrusion machines appears in clause 6. For each hazard identified within the scope of the standard, the committee discussed and recommended the risk reduction measures included in clauses 7 through 10 inclusive and additional Annex reference material.

Compliance with this standard is considered to adequately control hazards identified in clause 6. Other hazards not listed in clause 6 that can occur with extrusion machinery should be evaluated using the risk assessment process and may require additional risk reduction measures not included in this standard. See ANSI B11.0 or ANSI/PMMI B155.1 for additional information on the risk assessment process.

### E1.3

#### E1.3.1

Date of manufacture is understood to be the date the extruder was complete and available for delivery to the user.