

ANSI/SPI B151.15-2003

American National Standard

*for Plastics Machinery -
Extrusion Blow Molding Machines –
Safety Requirements for Manufacture,
Care, and Use*



ANSI/SPI B151.15-2003

Revision of
ANSI/SPI B151.15-2000

American National Standard
for Plastics Machinery –

**Extrusion Blow Molding Machines –
Safety Requirements for Manufacture,
Care, and Use**

Sponsor

The Society of the Plastics Industry, Inc.

Approved October 15, 2003

American National Standards Institute, Inc.

American National Standard

Approval of an American National Standard requires review 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 judgement 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 towards their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he 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 circumstances 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 interpretations 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CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time.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 by

**American National Standards Institute, Inc.
25 West 43rd Street, New York, NY 10036**

Copyright © 2003 by American National Standards Institute, Inc.
All rights reserved.

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

Printed in the United States of America

Contents

	Page
Foreword	ii
1 Scope, Purpose and Application	1
1.1 Scope	1
1.2 Purpose	1
1.3 Application	1
2 Normative references	2
3 Definitions	3
4 Instructions - Responsibility for.....	8
4.1 Manufacturer	8
4.2 Modifier	9
4.3 Remanufacturer	9
5 Manufacture, Remanufacture, and Modifications	9
5.1 Responsibility	9
5.2 Mold Area Guarding	10
5.3 General Guarding (Other than Mold Area Guarding)	13
5.4 Safety Signs	13
5.5 Setting Movements	13
6 Former Installations	15
6.1 Responsibility	15
6.2 Mold Area Guarding	15
6.3 General Guarding (Other than Point of Operation Guarding)	18
6.4 Safety Signs	18
6.5 Setting Movements	19
7 Care and Use - Responsibility for.....	20
7.1 Training of Maintenance Personnel	20
7.2 Training of Operators, and Setup and Supervisory Personnel	20
7.3 Inspection and Maintenance	20
7.4 Work Area	20
7.5 Parts Discharge Area	21
7.6 Ventilation	21
7.7 Ancillary Equipment	21
7.8 Personal Protective Equipment	21
8 Safety Signs	21

Foreword (This foreword is not part of American National Standard ANSI/SPI B151.15-2003.)

This standard is a revision of *American National Standard for Plastics Machinery - Extrusion Blow Molding Machines - Safety Requirements for Construction, Care, and Use*, ANSI/SPI B151.15-2000. The standard was revised because:

- 1) Some paragraphs required modification and some paragraphs were added to conform more closely to changes in technology;
- 2) Some paragraphs required modification for clarity and intent.

The project on safety requirements for the manufacture, care, and use of extrusion blow molding machines was initiated under the auspices of the Extrusion Blow Molding Section of the Machinery Division, and the Safety Committee of the Molders Management Division, of the Society of the Plastics Industry, Inc. (SPI).

Both divisions of the SPI have long been concerned with operator safety on plastics processing equipment. Accordingly, each section of the divisions has established a standards development committee charged with the task of establishing necessary standards.

A standard treating the manufacture, care, and use of extrusion molding machines 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 primary objective of this standard is to minimize hazards to personnel associated with machine activity by establishing requirements for the manufacture, care, and use of these machines.

To accomplish this objective, the committee decided to approach the problem of machine safety from two directions:

- 1) Eliminating by design certain recognized hazards and establishing standard approaches to design so that machines available from competitive manufacturers will have similar operational characteristics;
- 2) Safeguarding the machine to protect personnel from recognized hazards.

To assist in the interpretation of these requirements, responsibilities have been assigned to the manufacturer, the remanufacturer, the modifier, and the employer.

Recognizing the impossibility of updating equipment and changing operation methods allied with existing machines immediately after approval date of this standard, a 3-year period has been provided to employers for updating machines.

Recognizing the impossibility of immediate updating of design and manufacturing methods, Clauses 5 and 8 shall become effective one year after the approval date of this standard.

Suggestions for improvement of this standard will be welcome. They should be sent to the Society of the Plastics Industry, Inc, 1801 K Street, NW, Suite 600K, Washington, DC 20006-1301.

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 blow molding machines 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.

Alcona Associates
American Safety & Equipment
Association for Manufacturing Technology
Ford Visteon Division
Moody & Associates
Packaging Machinery Manufacturers Institute
Robotic Industries Association
Society of the Plastics Industry: Machinery Division

The Blow Molding Section, Standards Development Committee of the Machinery Division, The Society of the Plastics Industry, Inc, which was responsible for this standard, had the following members:

Douglas L. Sten, Chairperson (Uniloy Milacron, Inc.)	Glenn Atkinson (Husky IMS) Ronald Beaulieu (Improved Blowmolding) Karl Bruning (Bekum America) Frank Kennedy (Davis Standard) Tim Koury (Blue Water Plastics, Inc.) Robert Monteith (Milacron, Inc.) Peter Schmidt (Krupp Plastics & Rubber Machinery/USA)
---	---

Others who worked with the Blow Molding Section of the Machinery Division on the development of this standard were:

Walt Bishop, The Society of the Plastics Industry, Inc.
Secretariat to the committee

Explanation of Standard Format

American National Standard ANSI/SPI B151.15-2003 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 and is printed in bold type.

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.

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.

American National Standard
for Plastics Machinery –

Extrusion Blow Molding Machines –
Safety Requirements for
Manufacture, Care, and Use

STANDARD REQUIREMENTS

1 Scope, Purpose, and Application

1.1 Scope

The requirements of this standard shall apply to all EBMMs that process plastic materials to form a parison that is blown into the shape of a mold cavity held by a clamp(s). Safety requirements for the manufacture of ancillary equipment for EBMMs are not covered by this standard.

1.2 Purpose

The purpose of this standard is to minimize hazards to personnel.

1.3 Application

Extrusion Blow Molding Machines shall be referred to as EBMMs throughout this standard.

1.3.1 New Installations

The requirements of this standard pertaining to manufacture shall apply to all new or remanufactured EBMMs installed in the United States of America. Date of manufacture of the new or remanufactured machine (month and year) shall be affixed permanently and legibly to the machine along with the name of the manufacturer or remanufacturer. Compliance shall be achieved within one year after the approval date of this standard.

EXPLANATORY INFORMATION

(Not part of *American National Standard for Plastics Machinery – Extrusion Blow Molding Machines – Safety Requirements for Manufacture, Care, and Use*, ANSI/SPI B151.15-2003.)

E1.3 Application

Inquiries with respect to the application of, or substantive requirements of, this Standard should be addressed to the Society of the Plastics Industry, Inc., 1801 K Street, NW, Suite 600K, Washington, DC 20006-1301.

E1.3.1 New Installations

EBMMs may be manufactured or remanufactured anywhere in the world.