

ANSI/PLASTICS B151.20-2013 (R2018)

American National Standard for Plastics Machinery

Safety Requirements for Plastic Sheet Production Machinery

**Secretariat and Accredited Standards Developer
Plastics Industry Association
1425 K Street, NW, Suite 500
Washington, DC 20005**

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PREFACE TO AMERICAN NATIONAL STANDARD B151.20

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Foreword

(This Foreword is not a normative part of American National Standard ANSI/PLASTICS B151.20)

This standard is a revision of American National Standard ANSI/PLASTICS B151.20-1999: *Requirements for the Manufacture, Care, and Use of Plastic Sheet Production Machinery*. The standard was revised because:

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

PLASTICS 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 plastic sheet production machinery was initiated under the auspices of the Extrusion Safety Committee of the Equipment Council of the Society of the Plastics Industry, Inc. (SPI) (now the Plastics Industry Association).

A standard treating the manufacture, care, and use of plastic sheet production 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 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 as follows:

The committee developed a list of hazards common to Plastic Sheet Production Machinery and listed these in clause 6 of this standard. For each hazard identified within the scope of the standard, the committee assessed the potential severity of injury related to the hazard, the frequency of exposure to the hazard, and possible avoidance. This process involved discussion among the committee, and resulted in the recommended 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 Plastic Sheet Production Machinery may require additional risk reduction measures not included in this standard.

To assist in the interpretation and implementation of these requirements, responsibilities have been assigned to the supplier, the remanufacturer, 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 PLASTICS, Director of Industry Standards, 1425 K Street, NW, Suite 500, Washington, DC 20005

The Extrusion Safety and Standards Development Committee of PLASTICS, which was responsible for this standard, had the following members (at time of publication of ANSI/SPI B151.20-2013):

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Explanation of Standard Format

American National Standard ANSI/PLASTICS B151.20-2013 (R2018) uses a two-column format to provide for 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 normative part of the standard. Where supplementary photographs or sketches are required, they are designated as "Illustrations."

Operating rules (safe practices) are not included in either column unless they are of such a nature as to be vital safety requirements that are equal in weight to other requirements, or unless they are guides to assist in compliance with the standard.

STANDARD REQUIREMENTS

EXPLANATORY INFORMATION

American National Standard for Plastics Machinery

Safety Requirements for Plastic Sheet Production Machinery

STANDARD REQUIREMENTS

EXPLANATORY INFORMATION

(Not a normative part of American National Standard for Plastics Machinery – Safety Requirements for Plastic Sheet Production Machinery ANSI/PLASTICS B151.20-2013 (R2018))

1 Scope and purpose

1.1 Scope

The requirements of this standard shall apply to plastic sheet production machinery.

Plastic sheet production 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.

This standard also specifies safety requirements relating to the design and construction of multi-roll calenders intended for the processing of plastics and concerns the calender including all components fixed to its frame.

Safety requirements of ancillary equipment used with plastic sheet production machinery 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, the plastic sheet production machinery.

E1.1

In developing the requirements of this standard, the committee used the risk assessment process. A list of hazards typical of Plastic Sheet Production Machinery appears in clause 6 of this standard. For each hazard identified within the scope of the standard, the committee assessed the potential severity of injury related to the hazard, the frequency of exposure to the hazard, and possible avoidance. This process involved discussion among the committee, and resulted in the recommended 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 Plastic Sheet Production 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.