

# ANSI / PLASTICS B151.5 – 2020

*American National Standard for Plastics Machinery*

## **Safety Requirements for Plastic Film and Sheet Winding and Unwinding Machinery**

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

**APPROVED: 13 MARCH 2020**  
by the American National Standards Institute



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## Foreword

**(This Foreword is not part of American National Standard ANSI/PLASTICS B151.5-2020)**

This standard is a revision of *American National Standard for Plastic Film and Sheet Winding and Unwinding Machinery – Manufacture, Care and Use – ANSI B151.5 – 1999*.

The standard was revised because:

- 1) The scope needed to be expanded and the titles modified.
- 2) Additional definitions were required.
- 3) Some paragraphs required modification and some paragraphs were added to conform more closely to change in technology.
- 4) Some paragraphs required modification for clarity and intent.
- 5) For consistency with other PLASTICS machinery safety standards, Performance Levels were added. Please note that this addition may lead to new document retention requirements for manufacturers and users.
- 6) The document was reformatted to allow for related identified hazards and risk reduction measures to be located together.

A standard detailing safety requirements for plastic film and sheet winding and unwinding 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, production methods being used, and 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, a decision was made to approach the problem of machine safety as follows:

- 1) Eliminating by design certain recognized hazards and the establishment of standard approaches to design so those machines available from competitive manufacturers will have similar operational characteristics.
- 2) Safeguarding of the machine where recognized hazards cannot be designed out for technical or operational reasons.
- 3) Warning where elimination or safeguarding of hazards is not technically or operationally feasible.

To assist the interpretation of these requirements, responsibilities have been assigned to the supplier and the user.

## Application

Machinery that processes material other than plastic may benefit from applying this standard.

The words "safe" and "safety" are not absolutes. Safety begins with good design. While the goal of this standard is to eliminate injuries, this standard recognizes that risk factors cannot practically be reduced to zero in any human activity. This standard is not intended to replace good judgment and personal responsibility. Operator skill, attitude, training, job monotony, fatigue and experience are factors that affect safety and that must be considered by the user.

## Effective Date

This committee recommends that suppliers complete and implement design changes for new machines and machinery systems within 18 months of the approval of this standard.

The committee recommends that users evaluate whether existing machinery and machinery systems have acceptable risk within 18 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 to implement risk reduction measures (protective measures) for appropriate risk reduction.

The ANSI/PLASTICS B151.5 is considered a "type-C" standard. Plastics Industry Association standards can be associated with the ISO "A-B-C level" structure as described below:

- **Type-A standards** (basis standards) give basic concepts, principles for design, and general aspects that can be applied to machinery (e.g., ANSI B11.0; ANSI/ISO 12100);
- **Type-B standards** (generic safety standards) deal with one or more safety aspects or one or more types of safeguards that can be used across a wide range of machinery (e.g., ANSI B11.19; ISO 13849-1);
- **Type-C standards** (machinery safety standards) deal with detailed safety requirements for a particular machine or group of machines (e.g., ANSI/PLASTICS B151.1; EN 201).

Suggestions for improvement of this standard will be welcome. Inquiries with respect to the application of, or substantive requirements of, this standard should be addressed to the Plastics Industry Association, 1425 K Street, NW, Ste. 500, Washington, DC 20005. The PLASTICS Machinery Safety Technical Committee was responsible for the development of this standard, and had the following members during the development of this standard:

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ACS Group	Exponent	Riaz Bottlers Pvt Limited
Arburg Inc.	Husky Injection Molding Ltd.	Rockwell Automation
B11 Standards, Inc.	Ingenia Polymers Corp.	Safety and Forensic Enterprises, LLC
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## Explanation of the format of this American National Standard, and ANSI / PLASTICS B151 conventions

This ANSI/PLASTICS B151.5 – 2020 American National Standard uses a two-column format to provide supporting information for requirements. The material in the left column is confined to “Standards Requirements” only, and is so captioned. The right column, captioned “Explanatory Information” contains information that the writing committee believed would help clarify the requirements of the standard or to provide examples or additional reference information. This column is not a normative part of the standard as it contains no requirements and should not be construed as being a part of the requirements of this American National Standard.

As in all American National Standards, the term “SHALL” denotes a requirement that is to be strictly followed in order to conform to this standard; no deviation is permitted. The term “SHOULD” denotes a recommendation, a practice or condition among several alternatives, or a preferred method or course of action.

Similarly, the term “CAN” denotes a possibility, ability or capability, whether physical or causal, and the term “MAY” denotes a permissible course of action within the limits of the standard.

To achieve uniform interpretation, it is imperative to read and understand the definitions (clause 3) of this standard.

**B151 conventions:** Operating rules (safe practices) are not included in either column of this standard unless they are of such nature as to be vital safety requirements, equal in weight to other requirements, or guides to assist in compliance with the standard. The B151 standards generally do not use the term “and/or” but instead, preferentially use the term “OR” which is used as an inclusive disjunction, meaning *one or the other or both*.

Suggestions for improvement of this standard are welcomed.

They should be sent to:

**Plastics Industry Association**

**1425 K Street NW, Suite 500**

**Washington, DC 20005 - Attention: B151 Secretariat.**

<b>Table of Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>iii</b>
<b>Application</b> .....		<b>iv</b>
<b>1 Scope, Purpose, and Application</b> .....		<b>1</b>
1.1 Scope .....		1
1.2 Purpose .....		1
1.3 Application.....		1
<b>2 References</b> .....		<b>2</b>
2.1 Normative references .....		2
2.2 Informative references .....		2
<b>3 Definitions</b> .....		<b>5</b>
<b>4 Existing Machinery</b> .....		<b>11</b>
<b>5 Responsibility for manufacture, re-manufacture, repair, modification, rebuild</b> .....		<b>12</b>
5.1 Responsibility.....		12
5.2 Manufacture.....		12
5.3 Remanufacture .....		12
5.4 Modification .....		12
5.5 Repair .....		12
5.6 Rebuild .....		12
5.7 Instructions.....	.....Error! Bookmark not defined.	
5.7.1 Supplier.....	.....Error! Bookmark not defined.	
5.7.2 Modifier .....		13
5.7.3 Remanufacturer.....		13
<b>6 Requirements for risk reduction measures</b> .....		<b>14</b>
6.1 Hierarchy of Safe Design .....		14
6.1.1 Elimination by design .....		14
6.1.2 Substitution .....		15
6.1.3 Guards and safeguarding devices .....		15
6.1.4 Awareness devices.....		16
6.1.5 Procedures and training.....		16
6.1.6 Personal protective equipment (PPE).....		16
6.2 Information for use .....		17
6.2.1 Residual risk.....		17
6.2.2 Misapplication of information for use.....		17
6.3 General guarding .....		17
6.3.1 Guard locking device.....		19
6.3.2 Stopping time .....		19
6.4 General safety requirements .....		20
6.4.1 Window .....		20
6.4.2 Stored and residual hazardous energy .....		20
6.4.3 Thermal hazards.....		20
6.4.4 Electrical requirements .....		20
6.4.5 Interlocks .....		25
6.5 Start-up procedure.....		26

6.6	Manual Intervention .....	27
6.6.1	General .....	27
6.6.2	Manual Reel Changeover and Manual Removal of Wound Reels.....	28
6.6.3	Taking Material Samples, Checking Winding Quality, Winding Core Alignment.....	29
<b>7</b>	<b>Specific Hazard and Risk Reduction Measures .....</b>	<b>31</b>
7.1	Non-driven Roll(s).....	31
7.2	Driven or Vacuum Roll(s) .....	31
7.3	Nip Roll(s) .....	32
7.4	Film/sheet tension control .....	33
7.5	Material take-up point of a center winder .....	33
7.6	Intake nip of a surface winder .....	34
7.7	Unwind position .....	34
7.8	Pivot Arm .....	35
7.9	Turret Device .....	36
7.10	Guide Carriage Device.....	37
7.11	Lay-on roll.....	37
7.12	Winding core support.....	38
7.13	Winding core loading device .....	39
7.14	Reel change device.....	39
7.15	Film/sheet splicing device .....	40
7.16	Impact cutting device .....	41
7.17	Draw type cutting device.....	42
7.18	Reel unloading device .....	44
7.19	Spreader Roll.....	45
7.20	Slitting device.....	46
7.21	Film/sheet alignment device .....	46
7.22	Drive and power transmission systems .....	46
7.23	Cutting devices .....	47
7.24	Entrapment within the machine.....	47
7.25	Malfunction of pneumatic or hydraulic systems .....	47
7.26	Electrostatic discharge .....	47
7.27	Noise .....	47
7.28	Vapors and gases .....	48
7.29	Traversing.....	48
<b>8</b>	<b>Use of the Machinery .....</b>	<b>49</b>
8.1	Training of operators, set-up and supervisory personnel.....	49
8.2	Maintenance inspection .....	49
8.3	Working areas .....	50
8.4	Ventilation.....	50
8.5	Ancillary equipment.....	50
8.6	Personal Protective Equipment (PPE) .....	50
8.7	Energy isolation devices.....	51
<b>9</b>	<b>Safety Signs .....</b>	<b>51</b>
	<b>Annex A.....</b>	<b>52</b>
	<b>Annex B.....</b>	<b>54</b>
	<b>Annex C.....</b>	<b>56</b>

*American National Standard for Plastics Machinery***Safety Requirements for Plastic Film and Sheet Winding and Unwinding Machinery**

## STANDARD REQUIREMENTS

## EXPLANATORY INFORMATION

(Not a normative part of American National Standard B151.5-2020 – Safety Requirements for Plastic Film and Sheet Winding, and Unwinding Machinery)

**1 Scope, Purpose, and Application****1.1 Scope**

The requirements of this standard shall apply to all plastic film/sheet winding, slitter rewinding and unwinding machinery (Machinery). This standard does not include the material handling of material to be loaded or unloaded onto the winders.

Machinery suppliers and users shall use the risk assessment process in the manufacture, maintenance and use of the Machinery to eliminate or reduce risk.

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

Safety requirements of ancillary equipment used with the 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 Machinery.

**1.3 Application**

The user shall ensure that the use of the Machinery shall be in conformance with the requirements of clause 4.