



Designation: D 3950 – 00

Standard Specification for Strapping, Nonmetallic (and Joining Methods)¹

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1. Scope

1.1 This specification covers nonmetallic strapping and joining methods intended for use in closing, reinforcing, and bundling articles for shipment, unitizing, palletizing, and bracing for car loading and truck loading.

1.2 The values stated in inch-pound units are to be regarded as standard.

1.3 The following safety hazards caveat pertains only to the test method portion, Section 12, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 996 Terminology of Packaging and Distribution Environments²

D 3951 Practice for Commercial Packaging²

D 4332 Practice for Conditioning Containers, Packages, or Packaging Components for Testing²

2.2 Other Standards:

ANSI/ASQC Z 1.4 Sampling Procedures and Tables for Inspection by Attributes³

ANSI/ASQC Z 1.9 Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming³

3. Terminology

3.1 For general definitions of packaging and distribution environments, see Terminology D 996.

4. Classification

4.1 Types and Grades:

Type I —Strapping, bonded rayon cord.

Grade 1—Light duty.

Grade 2—Regular duty.

Grade 3—Heavy duty.

Type IA —Strapping, bonded, or woven polyester cord.

Grade 1—Light duty.

Grade 2—Regular duty.

Grade 3—Heavy duty.

Grade 4—Extra heavy duty.

Grade 5—Special duty.

Type II — Strapping, polyolefin plastic.

Type III — Strapping, nylon plastic.

Type IV — Strapping, polyester plastic.

5. Ordering Information

5.1 The inquiry and order shall indicate the following:

5.1.1 Type, grade, and dimensions required (see 4.1 and 7.1),

5.1.2 Length per coil (see 8.1),

5.1.3 Joining method (see 6.2), type and size required (if needed),

5.1.4 If an embossed finish on strapping is desired or allowed (see Footnote in Table 1),

5.1.5 Make and model of strapping equipment that the strapping and joining method must work in, if applicable,

5.1.6 Coil dimensions (see 8.1),

5.1.7 Level of packaging and packing if other than commercial (see Section 15), and

5.1.8 ASTM designation and date of issue.

6. Materials and Manufacture

6.1 Materials shall be of the quality necessary to meet the physical requirements within the allowable dimensions.

6.1.1 Type I—Strapping shall consist of longitudinal rayon cords bonded with a plastic binder so that a nonwoven material is formed.

6.1.1.1 Type IA—Strapping shall consist of longitudinal polyester cords bonded with a plastic binder to form a nonwoven material or longitudinal polyester cords woven with a weft thread and treated with a plastic binder to form a woven material.

6.1.2 Type II—Strapping shall be an extruded, oriented polyolefin.

6.1.3 Type III—Strapping shall be an extruded, oriented nylon.

6.1.4 Type IV—Strapping shall be an extruded, oriented polyester.

6.2 Joining Methods— If seals or buckles are to be used, they shall be steel and have a coating of zinc, black iron oxide,

¹ This specification is under the jurisdiction of ASTM Committee D-10 on Packaging and is the direct responsibility of Subcommittee D10.25 on Palletizing and Unitizing of Loads.

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² Annual Book of ASTM Standards, Vol 15.09.

³ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.