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Standard Guide for Selection and Use of Flat Strapping Materials¹

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This standard has been approved for use by agencies of the U.S. Department of Defense.

INTRODUCTION

This guide covers two common categories of flat strapping materials: steel and nonmetallic. Within each of these two broad categories there are distinct types that lend themselves in differing degrees to particular applications.

The goal of this guide is to help the user focus on the desired elements of performance or service, and the unique properties of each strapping material in order to judge which of these strapping products is best suited for the intended strapping application. For further information, consult with your strapping supplier, your carrier, and any packaging/loading regulations applicable to your products. It is of particular importance, for both safety and satisfactory performance, that the user informs the strapping supplier of all intended uses and usage conditions that may differ from industry custom and practice or from intended strapping applications. Likewise, the user needs to inform the strapping supplier of any practice of the user's carrier that the user believes may differ from any requirement or recommendation of the carrier's association or of any applicable ASTM or regulatory provisions. The user also should inform the strapping supplier of the following expected conditions: load, unit, or package characteristics (rigid, expanding, shrinking, or combination); severity of handling; nature of transport equipment; storage conditions (stacking height and weight); exposure to environmental conditions; extreme temperatures (particularly if prolonged outdoor exposure is anticipated); exposure to chemicals; exposure to abrasive surfaces; and exposure to sharp or pointed objects that can cause nicks, scratches, or holes in the strapping. There are other materials not covered by this guide, which may also offer acceptable solutions or may be used in conjunction with flat strapping to provide acceptable solutions for the user's intended application. Examples of accessories, such as, edge protectors, seal protectors, etc. are shown in Fig. 1.

Strapping may be recyclable but must never be reused. Contact your supplier for further information.

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1. Scope

1.1 This guide¹ covers information on flat strapping materials (steel and nonmetallic) for the prospective user wanting initial guidance in selecting a strapping material and information on suggested application methods for use in packaging (closing, reinforcing, baling, bundling, unitizing, or palletizing), and loading applications (load unitization and securement to transport vehicle). The use applies to handling, securement, storage, and distribution systems.

1.2 Carrier associations have established certain packaging and loading requirements that (in some cases) specify the type of strap, the minimum size or strength, the type of joint or seal, and the number of straps, seals, and joints that must be used for particular types of shipments or under certain conditions. Users should consult with their carriers initially to determine if there are applicable published requirements. Individual carriers may establish their own requirements. (See 2.2.)

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

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1.3 *Limitations*—This guide is not intended to give specific information as to how strapping must be used in any particular packaging or loading situation. Rather, it is intended to be informational in nature and is offered as a starting point for the testing of strapping being considered by the user. Thorough user testing is essential, as is a review of pertinent regulations that can influence strap selection (size and type), and application methods.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*