



Standard Practice for Pictorial Markings for Handling of Goods¹

This standard is issued under the fixed designation D5445; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

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

1. Scope

1.1 This practice establishes a set of symbols to be used for marking of packages or containers to indicate special handling and storage requirements.

1.2 *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:*²

D996 Terminology of Packaging and Distribution Environments

2.2 *ISO Standards:*

ISO 780 Pictorial Marking for Handling of Goods³

ISO 7000 Registration of Markings and Symbols³

3. Terminology

3.1 *Definitions*—General definitions for packaging and distribution are found in Terminology D996.

4. Significance and Use

4.1 Packages are often marked with handling instructions in the language of the country of origin. While this may safeguard the consignment to some extent, it is of little value for goods consigned to, or through, countries using different languages, and of no value at all if people unloading the packages are illiterate. Pictorial symbols offer the most likely means of conveying the consignor's intention and their adoption will, therefore, undoubtedly reduce loss and damage through incor-

rect handling. The use of pictorial symbols does not provide any guarantee of satisfactory handling; proper protective packaging is therefore of primary importance.

5. Symbols

5.1 *Display of Symbols*—Symbols may appear on a label or should preferably be printed directly on the package. It is recommended that printed symbols be painted, stenciled (see Note 1), preprinted or otherwise reproduced, as specified herein. Affirmative symbols need not be framed by border lines, but all negative symbols, that is, “DO NOT ...,” shall have borders with a slash mark across.

NOTE 1—For stencilling, the symbols may be provided with bars if required (see Appendix X1).

5.2 *Color of Symbols*—The preferred color for symbols is black. If the color of the package is such that the symbol would not show clearly, provide a panel of a suitable contrasting color, preferably white, as a background. Take care to avoid the use of colors that could lead to confusion with the labeling of dangerous goods. The color red may be used when increased emphasis is required to focus attention of package handlers.

5.3 *Size of Symbols*—The suggested sizes of symbols shall be 100, 150, or 200 mm (4, 6, or 8 in.). The size or shape of the package may, however, necessitate use of larger or smaller sizes for the symbols, scaled proportionately.

5.4 *Number, Location, and Position of Symbols:*

5.4.1 Use only those pictorial markings required for the package.

5.4.2 The number of identical symbols to be affixed to any package depends on its size and shape (see remarks column for each symbol).

5.4.3 When packages are formed into a unit load, locate symbols so as to ensure they are visible (see Symbol 2).

5.4.4 Give particular attention to the correct application of the marks. Faulty application may lead to misinterpretation. Apply Symbols 4, 6, 7, and 32 in their correct respective positions to convey their meanings clearly and fully.

6. Handling Instructions

6.1 Indicate handling instructions on packages by using the corresponding symbols given in the remarks column of each symbol. Symbol 1 contains two messages.

¹ This practice is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.11 on Terminology (definitions).

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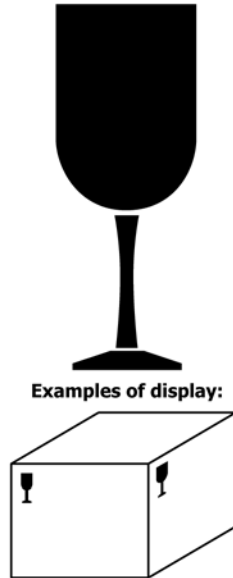
² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute, 25 W. 43rd St., New York, NY 10017.

6.2 If necessary the cautionary basic text may appear below the symbol in English or in the national language of the country of destination, or both. However, to the extent possible, instructions should be written in languages commonly used in international trade.

7. Keywords

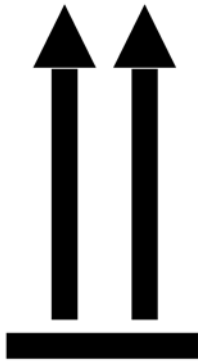
7.1 handling; packaging; pictorial markings; symbols



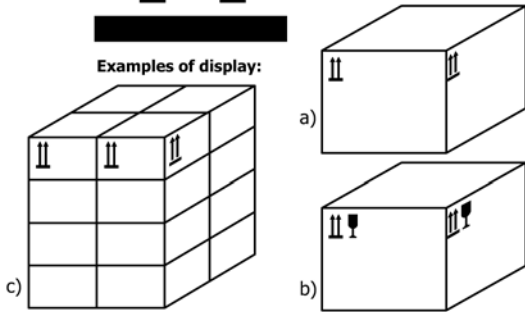
FUNCTION: To indicate a) that the contents of the package are fragile;
b) That it has to be handled with care

REMARKS: Place on at least two adjacent sides in upper corner
When used with symbol 2, that symbol shall be closest to corner (see 2b)
ISO 7000/ No. 0621

SYMBOL 1 "Fragile Handle With Care"



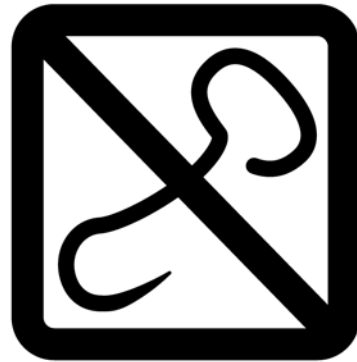
Examples of display:



FUNCTION: To indicate the correct upright position of the package

REMARKS: Shall be shown near the left hand upper corner on all four upright sides of the package
Arrows should never be shown on top of the package
ISO 7000/ No. 0623

SYMBOL 2 "This Way Up"



FUNCTION: To indicate that hooks are prohibited for lifting the package

REMARKS: For bags, symbol should be visible no matter how bags are stacked

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 3 "Use No Hooks"

NOTE 1—See ISO symbols which are listed in the appendix.



Examples of display:



FUNCTION: To indicate where the slings shall be placed for lifting the package

REMARKS: Place on at least two opposite faces of the package
ISO 7000/ No. 0625

SYMBOL 4 "Sling Here"



FUNCTION: To indicate that the package shall be kept dry

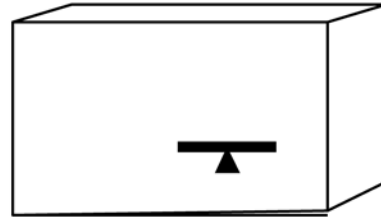
REMARKS: Place on at least two adjacent sides in upper corner

ISO 7000/ No. 0626

SYMBOL 5 "Keep Dry"



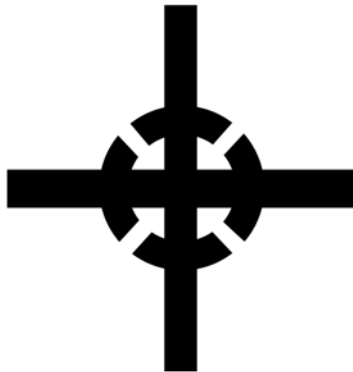
Examples of display:



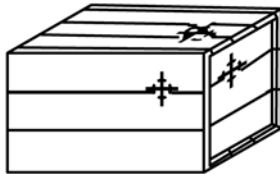
FUNCTION: To Indicate center of balance in plane parallel to floor

REMARKS: Place on at least two opposite sides of package, whenever center of balance is different than geometric center

SYMBOL 7 "Center of Balance"



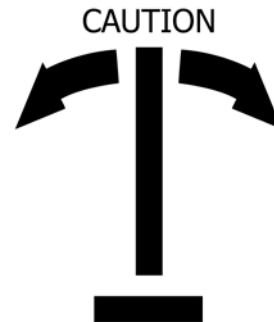
Examples of display:



FUNCTION: To indicate the center of gravity of the package
Example shows center of gravity not identical to that assumed by geometrical shape of package

REMARKS: Place on all six sides of package, relating to real position of center of gravity when different than geometric center
ISO 7000/ No. 0627

SYMBOL 6 "Center of Gravity"



TOP HEAVY

FUNCTION: To indicate that the package is top heavy and may tip over easily

REMARKS: Place on at least two opposite sides of package

Use on any package over 90 kg (200 lb) weight and over 1.2 m (48 in.) high where center of gravity is higher than 1/2 standing height and height is two times or greater than shorter base dimension

Required in National Motor Freight Classification Item 680

SYMBOL 8 "Package May Tip Over Easily"

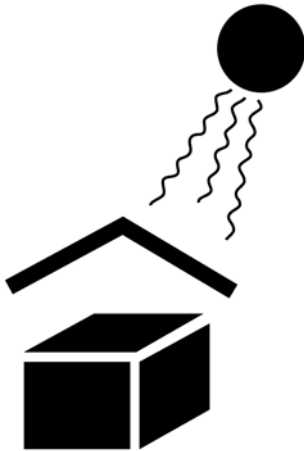


FUNCTION: To indicate that the package shall not be rolled while handling

REMARKS: This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 9 "Do Not Roll"

NOTE 1—See ISO symbols which are listed in the appendix.



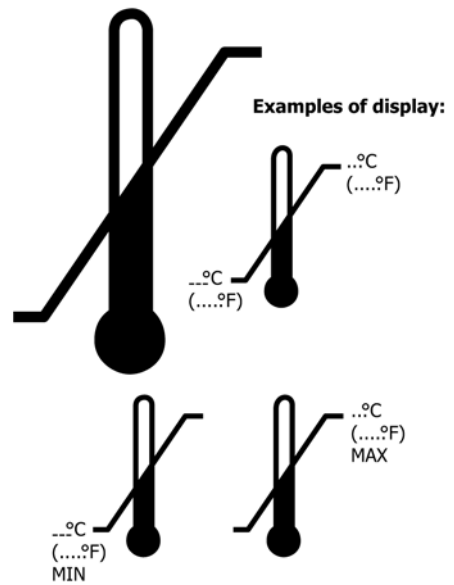
FUNCTION: To indicate that the package shall be kept away from heat

SYMBOL 10 "Keep Away from Heat"



FUNCTION: To indicate that the package shall be kept away from cold

SYMBOL 11 "Keep Away from Cold"



FUNCTION: To indicate the temperature limits within which the package shall be kept and handled

REMARKS: ISO 7000/ No. 0632

SYMBOL 12 "Temperature Limits"



FUNCTION: To indicate that stacking of the package is not allowed

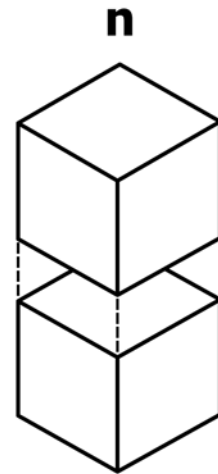
No other load shall be placed on any package with this symbol

REMARKS: Use on at least two adjacent sides

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 13 "Do Not Stack"

NOTE 1—See ISO symbols which are listed in the appendix.



FUNCTION: To indicate the limited stacking possibilities of the package when like packages are placed on top

REMARKS: Use on at least two adjacent sides, where N = number of packages, maximum for stacking

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 14 "Stacking Limitation by Number"

NOTE 1—See ISO symbols which are listed in the appendix.

..... kg max (.....lb max)



FUNCTION: To indicate the limited stacking possibilities of the package when unlike packages are placed on top

REMARKS: Use on at least two adjacent sides
ISO 7000/ No. 0630

SYMBOL 15 "Stacking Limitation by Weight"



FUNCTION: To indicate where hand trucks shall not be placed when handling the package

REMARKS: Place on lower part of each side of package where hand trucks are not to be used

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 16 “No Hand Trucks Here”

NOTE 1—See ISO symbols which are listed in the appendix.



FUNCTION: To indicate that the lift truck type depicted shall not be used to handle the package

REMARKS: Place on each side of package where the lift truck is prohibited from handling

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 17 “Do Not Use This Lift Truck for Handling”

NOTE 1—See ISO symbols which are listed in the appendix.



FUNCTION: To indicate that the lift truck type depicted shall not be used to handle the package

REMARKS: Place on each side of package where the lift truck is prohibited from handling

SYMBOL 18 “Do Not Use This Lift Truck for Handling”



FUNCTION: To indicate that the lift truck type depicted shall not be used to handle the package

REMARKS: Place on each side of package where the lift truck is prohibited from handling

SYMBOL 19 “Do Not Use This Lift Truck for Handling”



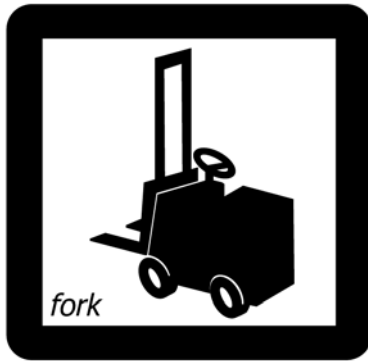
FUNCTION: To indicate what type handling device may be used for handling of package or unit load
REMARKS: Place on each side of package where the handling device may be used

SYMBOL 20 "Use This Handling Device"



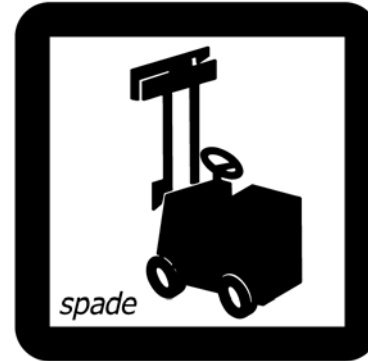
FUNCTION: To indicate what type handling device may be used for handling of package or unit load
REMARKS: Place on each side of package where the handling device may be used

SYMBOL 22 "Use This Handling Device"



FUNCTION: To indicate what type handling device may be used for handling of package or unit load
REMARKS: Place on each side of package where the handling device may be used

SYMBOL 21 "Use This Handling Device"



FUNCTION: To indicate what type handling device may be used for handling of package or unit load
REMARKS: Place on each side of package where the handling device may be used

SYMBOL 23 "Use This Handling Device"

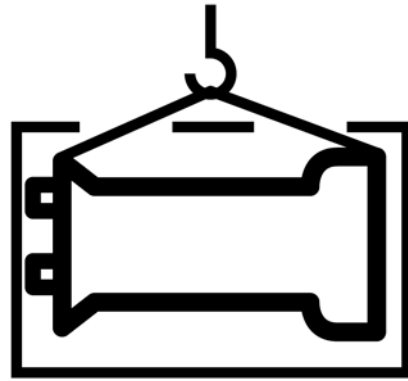


FUNCTION: To indicate where clamps shall be used for handling the package

REMARKS: Place symbol on two opposite sides of package so it is in visible range of clamp truck operator when approaching the package

Used primarily in international trade
ISO 7000/ No. 0631

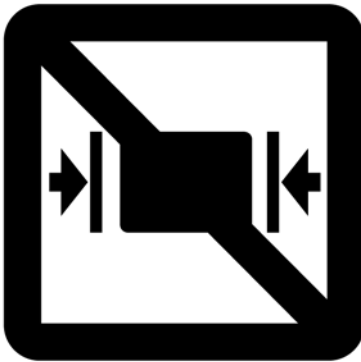
SYMBOL 24 "Clamp Here"



FUNCTION: To indicate that only the direct lifting of goods is permissible, that is, lifting of the goods at the package is not allowed

REMARKS: Use on at least two adjacent sides of package

SYMBOL 26 "Lift Goods Directly (Inner Fastening)"



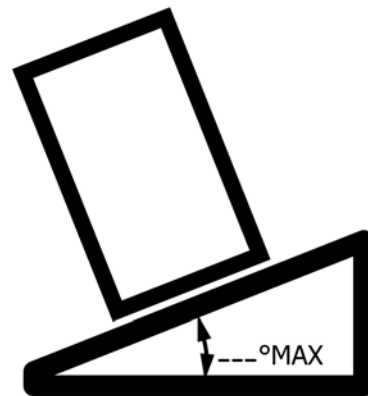
FUNCTION: To indicate where clamps shall not be used for handling the package

REMARKS: Place symbol on two opposite sides of package so it is in visible range of clamp truck operator when approaching the package

This symbol is different than the ISO standard symbol for the same meaning or implication

SYMBOL 25 "Do Not Clamp Here"

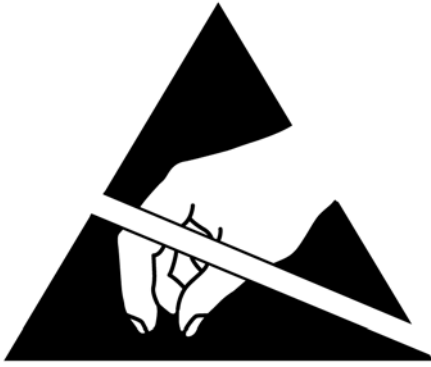
NOTE 1—See ISO symbols which are listed in the appendix.



FUNCTION: To indicate that package should not be tilted more than specified angle

REMARKS: Use on at least two opposite sides of package

SYMBOL 27 "Limit for Tilting Package"



FUNCTION: To indicate that contents of the package are electrostatic sensitive

REMARKS: Contents should be handled only at static-safe work stations
417 IEC 5134

SYMBOL 28 "Contents Electrostatic Sensitive"



FUNCTION: To indicate that items on the pallet are not to be taken off until final destination, that is, no break bulk while in transit

REMARKS: Place symbol on at least two opposite ends of pallet load

SYMBOL 30 "Do Not Break Bulk (Depalletize)"



FUNCTION: To indicate that package should not be dropped

REMARKS: Place symbol on all four sides
Used primarily when package is susceptible to damage from drop impacts

SYMBOL 29 "Do Not Drop"



FUNCTION: To indicate that stacking two packages is not allowed during forklift handling

REMARKS: Use on at least two opposite sides of package

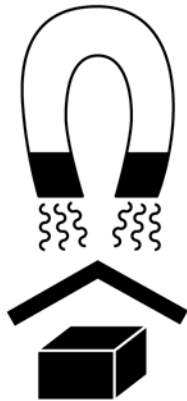
SYMBOL 31 "Do Not Stack Two On Forklift"



FUNCTION: To indicate that a person should not step on the package surface marked

REMARKS: Place symbol on the surface upon which a person should not step or stand

SYMBOL 32 "Do Not Step Here"

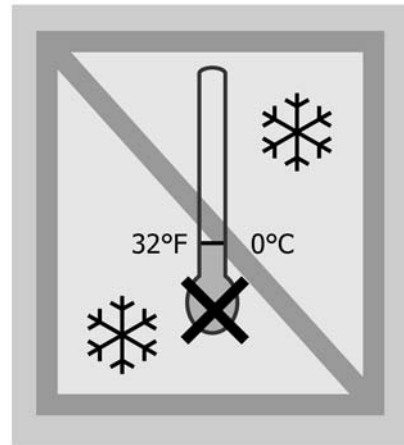


FUNCTION: To indicate that the contents are magnetically sensitive and should not be placed near anything which is magnetic

REMARKS: Place symbol on at least two opposite sides of package

Required in National Motor Freight Classification Item 682

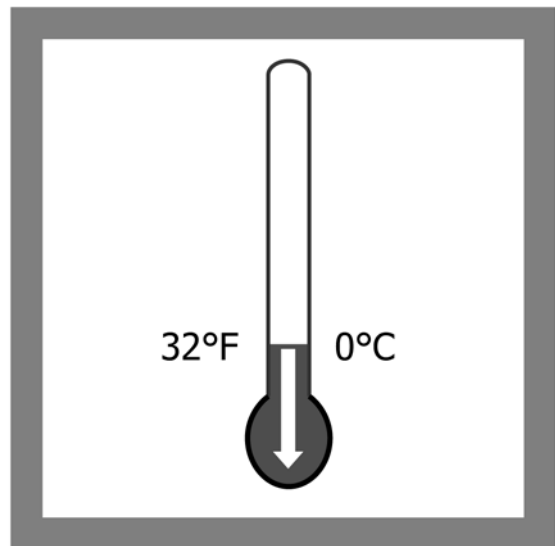
SYMBOL 33 "Magnetically Sensitive"



Function: To indicate that contents are temperature sensitive and must not be subjected to freezing temperatures

Note: Areas of the symbols including those in gray may be printed in red for increased emphasis and recognition

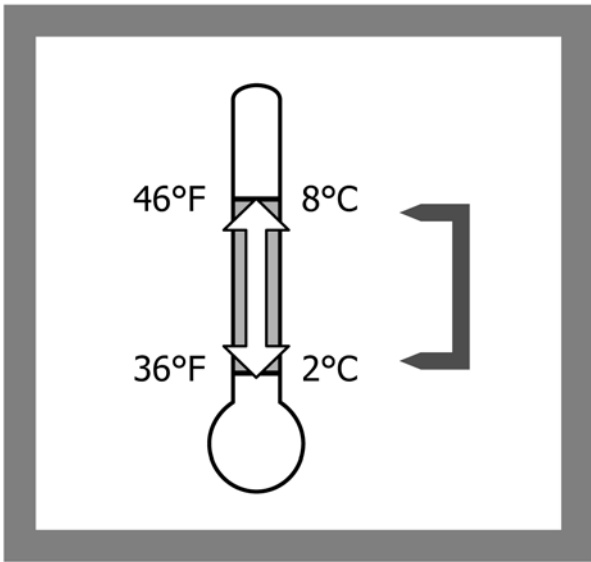
SYMBOL 34 "Do Not Freeze"



Function: To indicate that contents are temperature sensitive and must remain frozen.

Note: Areas of the symbols including those shown in gray may be printed in red for increased emphasis and recognition.

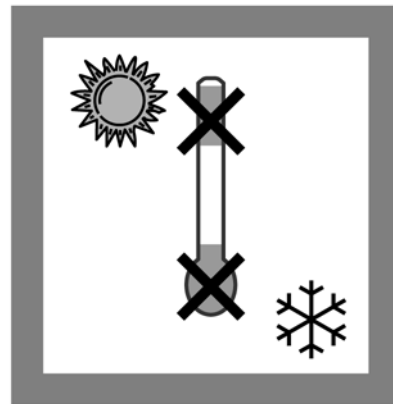
SYMBOL 35 "Keep Frozen"



Function: To indicate that contents are temperature sensitive and must remain refrigerated.

Note: Areas of the symbols including those shown in gray may be printed in red for increased emphasis and recognition.

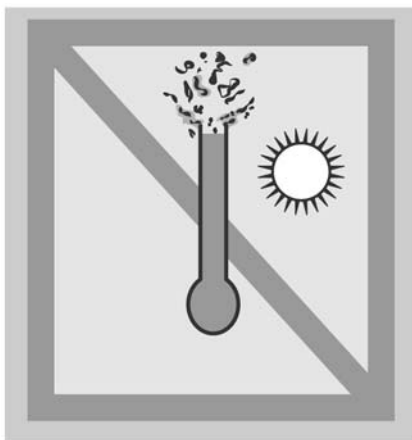
SYMBOL 36 "Keep Refrigerated"



Function: To indicate that contents are temperature sensitive and must be kept away from heat and freezing

Note: Areas of the symbols including those in gray may be printed in red for increased emphasis and recognition

SYMBOL 38 "Avoid Extreme Temperatures"



Function: To indicate that contents are temperature sensitive and must be kept away from heat

Note: Areas of the symbols including Those in gray may be printed in red For increased emphasis and recognition

SYMBOL 37 "Avoid Heat"

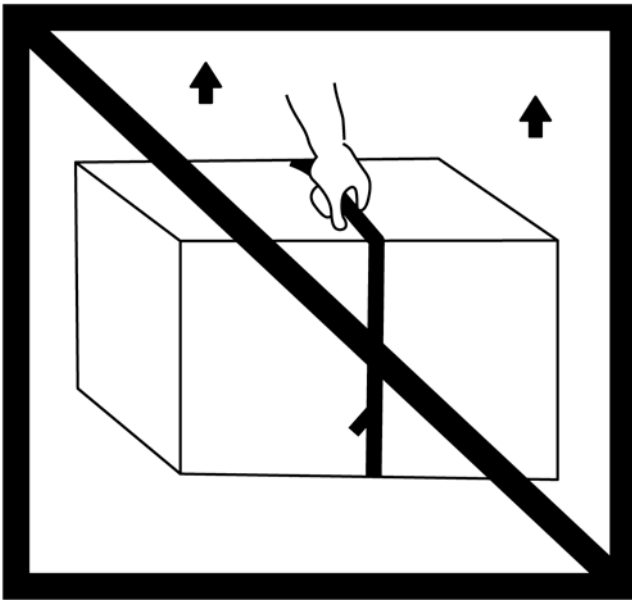


FUNCTION: To indicate that the package must be floor loaded on the truck

REMARKS: For use on domestic truck shipments

Use on at least 2 adjacent sides of the package

SYMBOL 39 "Floor Load Only"



Function: To indicate that strapping should not be used to move (lift or pull) on packages

Remarks: Use on top and sides of packages where strapping is applied

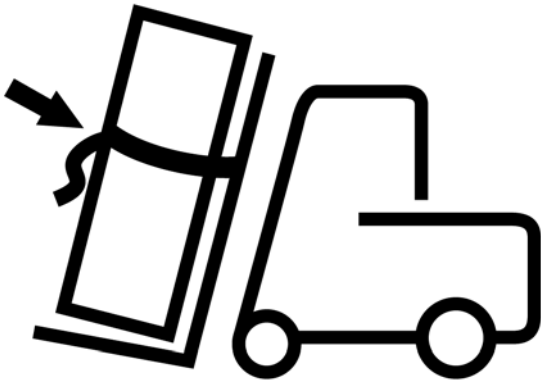
SYMBOL 42 Do Not Use Strapping to Move (Lift or Pull) Packages



Function: To indicate that strapping should not be used to move (pull or lift) unitized loads

Remarks: Use on top and sides of unitized loads where strapping is applied

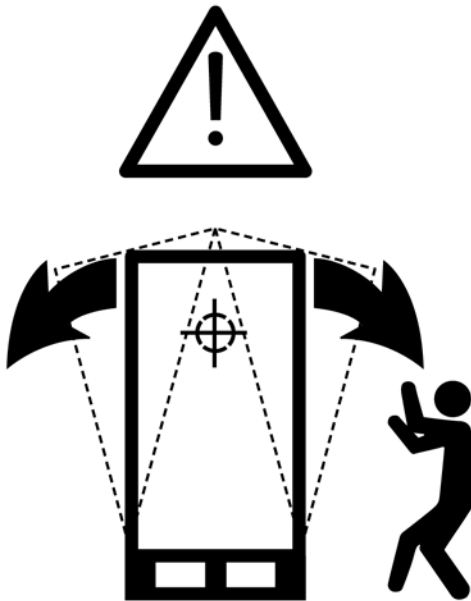
SYMBOL 43 Do Not Use Strapping to Move (Pull or Lift) Unitized Loads



FUNCTION: To indicate the package shall be strapped/secured to the mast when using forklift and tilted to mast

REMARKS: Place on at least two adjacent sides in upper corner

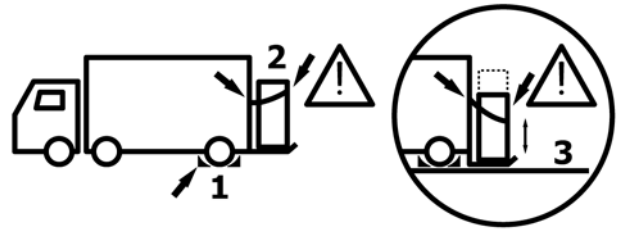
SYMBOL 44 "Proper Fork Lift Handling"



FUNCTION: To indicate that the package is top heavy and may tip over easily, and thus become a hazard

REMARKS: Place on all 4 sides in upper portion of package

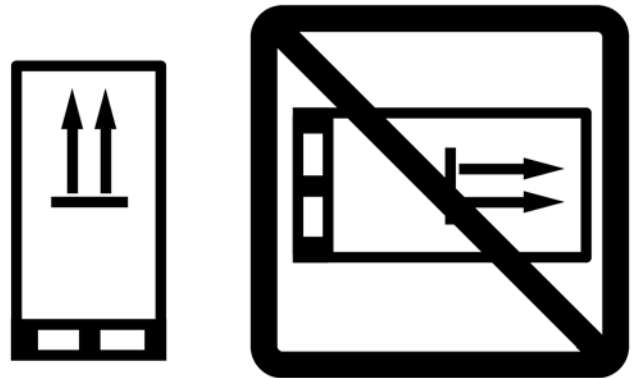
SYMBOL 45 "Top Heavy"



FUNCTION: To indicate proper securement of the package to the truck while moving the liftgate. Also, chock the wheel tires to secure the truck during loading and unloading.

REMARKS: Place on at least two opposite sides of the package.

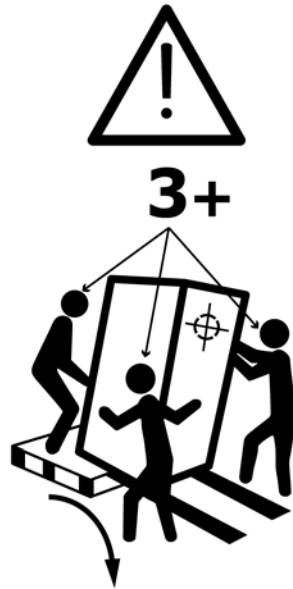
SYMBOL 46 "Proper Securement to Unload"



FUNCTION: To indicate product must be kept upright at all times. Do not lay the package down.

REMARKS: Place on all 4 sides in upper portion of package.

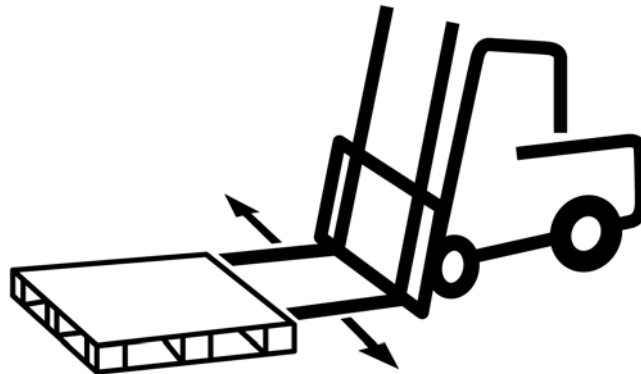
SYMBOL 47 "Do Not Lay Down"



FUNCTION: To indicate importance of handling with at least 3 people while depalletizing and handling.

REMARKS: Place at least two opposite sides of package.

SYMBOL 48 "Ramp Handling Safety"



FUNCTION: To indicate that the operator is to extend the fork times to the widest position that will enter the pallet

REMARKS: Place on each face of the package that can be accessed by the fork lift

SYMBOL 49 "Fork Lift Safety"



FUNCTION: To indicate that box cutters are not to be used to open or cut into the package.

REMARKS: Place symbol on all four sides of package.

SYMBOL 50 "No Box Cutters"

APPENDIXES

(Nonmandatory Information)

X1. EXAMPLE FOR SYMBOLS WITH BARS FOR APPLICATION BY STENCILLING

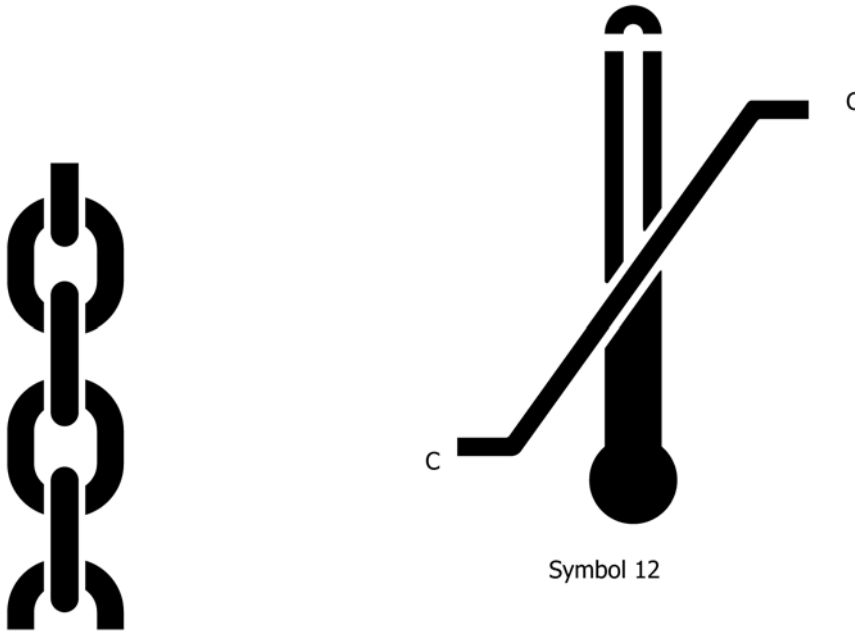


FIG. X1.1 Example for Symbols With Bars for Application by Stencilling

X2. ISO 780 PICTORIAL MARKINGS

X2.1 See Table X2.1.

TABLE X2.1 ISO Pictorial Markings which Differ from ASTM Symbols

ASTM Symbol	Instruction/Information	Symbol	Meaning	Reference/Remarks
9	DO NOT ROLL		Transport package shall not be rolled.	ISO 7000, No. 2405
16	DO NOT USE HAND TRUCK HERE		Hand trucks shall not be placed on this side when handling the transport package.	ISO 7000, No. 0629
17	USE NO FORKS		Transport package should not be handled by forklift trucks.	ISO 7000, No. 2406
25	DO NOT CLAMP AS INDICATED		Transport package should not be handled by the clamps on the sides indicated.	ISO 7000, No. 2404
3	USE NO HAND HOOKS		Hooks are prohibited for handling the transport package.	ISO 7000, No. 0622
14	STACKING LIMIT BY NUMBER		Maximum number of identical packages which may be stacked on one another, where "n" is the limiting number.	See 2.4.4 ISO 7000, No. 2403
13	DO NOT STACK		Stacking of the transport package is not allowed and no load should be placed on the transport package.	ISO 7000, No. 2402

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