Designation: D5445 – 21

Standard Practice for
Pictorial Markings for Handling of Goods[1]

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 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

1.3 *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.*

1.4 *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.*

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 Goods[3]

ISO 7000 Registration of Markings and Symbols[3]

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 incorrect 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 stenciling, 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.
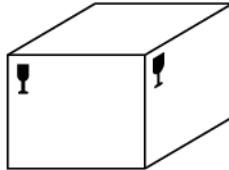
5.4 *Number, Location, and Position of Symbols:*

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).

Examples of display:

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"

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.
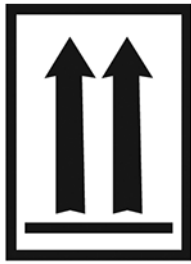
6. Handling Instructions

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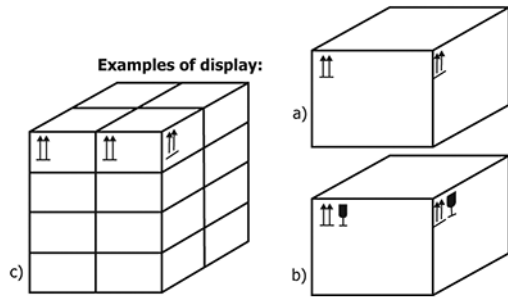
6.2 If necessary the cautionary basic text may appear below the symbol in English or in the national language of the country of destination, or both. However, to the extent possible, instructions should be written in languages commonly used in international trade.

7. Keywords

7.1 handling; packaging; pictorial markings; symbols

Package orientation

Examples of display:

a)

b)

c)

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
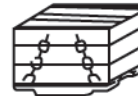
SYMBOL 2 "This Way Up"

FUNCTION: To indicate that hooks are prohibited for lifting the pack-
age.
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 Appendix X2.

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.
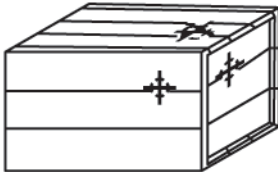ISO 7000/ No. 0625

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.
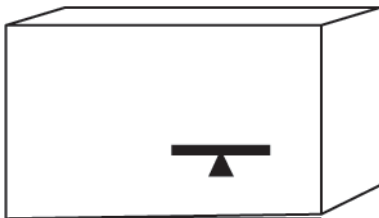ISO 7000/ No. 0626

SYMBOL 5 "Keep Dry"

3

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"

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"

FUNCTION: To indicate that the package is top heavy and may tip over.
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 s higher than ½ standing height and height is two times or greater than shorter base dimension.
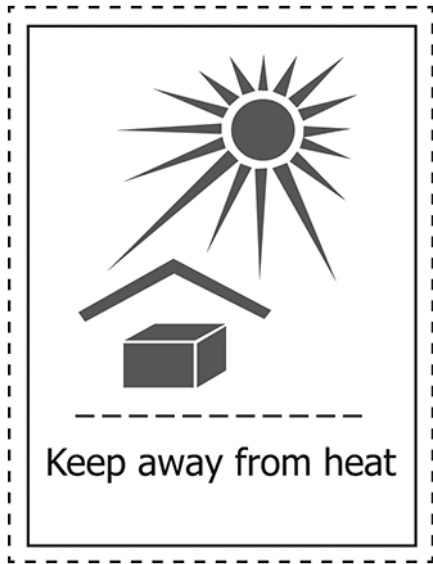Required in National Motor Freight Classification Item 680.

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.
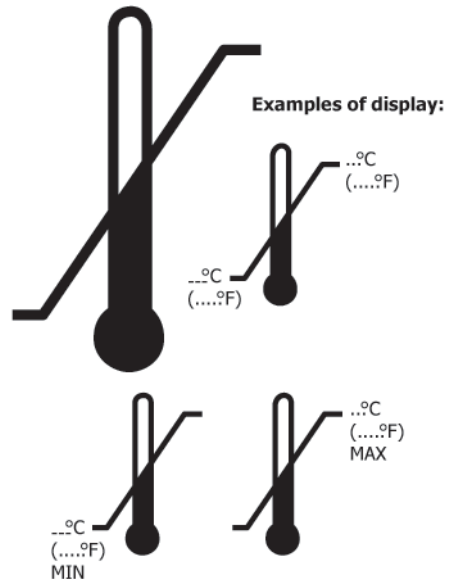
SYMBOL 9 "Do Not Roll"

NOTE 1—See ISO symbols, which are listed in Appendix X2.

FUNCTION: To indicate that the package shall be kept away from heat.
REMARKS: The symbol, letters, and border must be black and the background must be white, except for the starburst which must be red.

SYMBOL 10 "Keep Away from Heat"
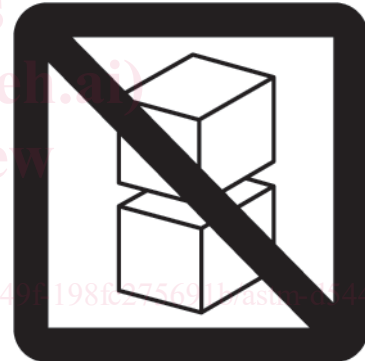

Examples of display:

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 the package shall be kept away from cold.
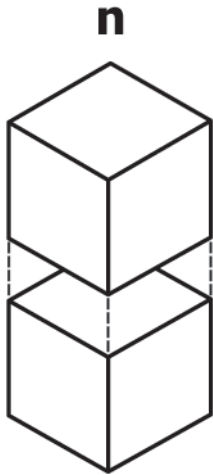
SYMBOL 11 "Keep Away from Cold"

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 Appendix X2.

n

FUNCTION: To indicate the limited stacking possibilities of the package when like packages are placed on top.
REMARKS: Place 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 Appendix X2.

..... 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 Appendix X2.

fork

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 Appendix X2.

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 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 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 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 22 "Use This Handling Device"