



Designation: **D5445–15** **D5445 – 21**

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 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~~ safety, health, and ~~health~~ 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 [7982-4237-949f-198fc275691b/astm-d5445-21](https://doi.org/10.1520/D5445-21)

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

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). Current edition approved Sept. 1, 2015 (Oct. 1, 2021). Published September 2015 (December 2021). Originally approved in 1993. Last previous edition approved in 2011 (2015 as D5445-11a). DOI: 10.1520/D5445-15- 15. DOI: 10.1520/D5445-21.

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~~ standard's Document Summary page on the ASTM website.

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

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 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.

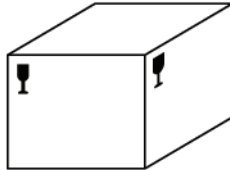
6.2 If necessary the cautionary basic text may appear below the symbol in English or in the national language of the country of destination, or both. However, to the extent possible, instructions should be written in languages commonly used in international trade.

7. Keywords

7.1 handling; packaging; pictorial markings; symbols



Examples of display:



FUNCTION: To indicate (a) that the contents of the package are fragile;

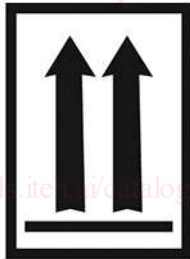
(b) that it has to be handled with care.

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).

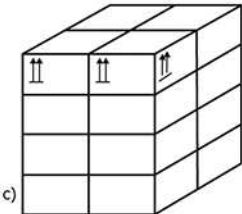
ISO 7000/ No. 0621

SYMBOL 1 “Fragile Handle With Care”

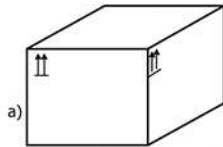


Package orientation

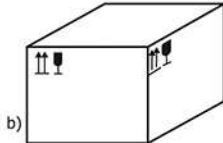
Examples of display:



c)



a)



b)

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.

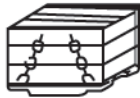
This symbol is different than the ISO standard symbol for the same meaning or implication.

SYMBOL 3 “Use No Hooks”

NOTE 1—See ISO symbols₂ which are listed in [Appendix X2](#) the appendix.



Examples of display:



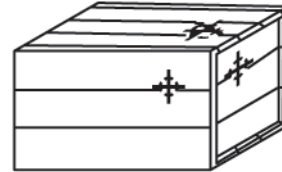
FUNCTION: To indicate where the slings shall be placed for lifting the package.

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

SYMBOL 4 “Sling Here”



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”



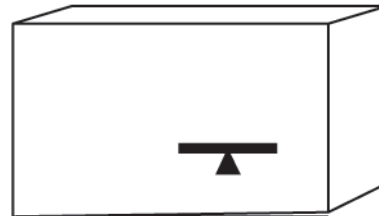
FUNCTION: To indicate that the package shall be kept dry.

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.

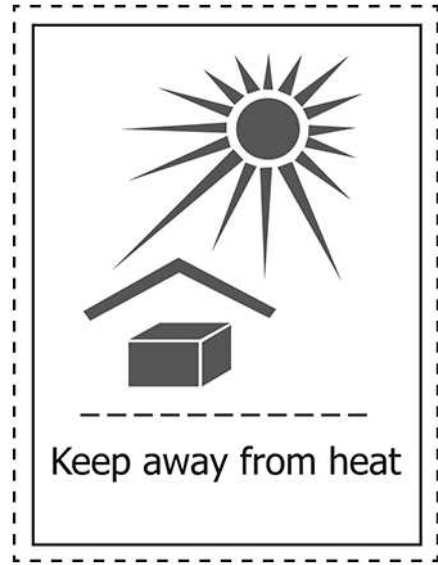
REMARKS: Place on at least two opposite sides of package, whenever center of balance is different than geometric center.

SYMBOL 7 “Center of Balance”



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 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 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”



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.

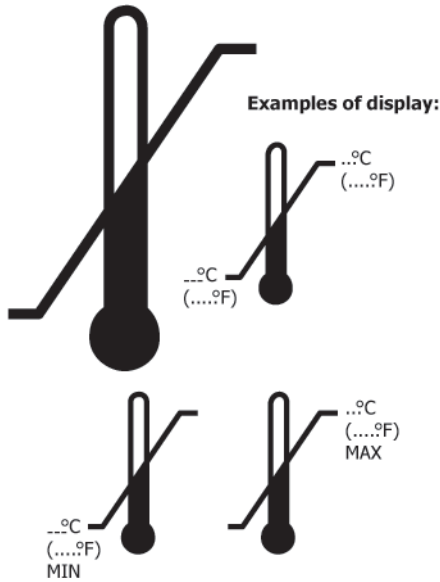
SYMBOL 9 “Do Not Roll”

NOTE 1—See ISO symbols, which are listed in [Appendix X2](#) the appendix.



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 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](#) the appendix.



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](#) 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 [Appendix X2](#) 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. 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](#) 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 19 “Do Not Use This Lift Truck for Handling”