



Standard Specification for Fitness Equipment and Fitness Facility Safety Signage and Labels¹

This standard is issued under the fixed designation F1749; 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.

INTRODUCTION

This specification sets forth guidelines for signage and labels associated with fitness equipment and fitness facilities. Its goal is to help alert and remind users of safe practices in utilizing fitness equipment. Like any other physical activity, exercise involving fitness equipment presents a potential for injury. No label or sign alone can prevent all injuries, especially when fitness equipment is used improperly. The ultimate responsibility for preventing injury lies with the equipment owner or equipment user, or both. This specification, however, intends to promote proper fitness equipment practices through standardization of signage and label requirements.

1. Scope

1.1 This specification establishes requirements for safety signage and labels for fitness equipment as defined in 3.1.3 and fitness facilities as defined in 3.1.4. It provides for the design, placement, and minimum wording required.

1.2 It is the intent of this specification to set guidelines for warnings and signage to be placed on fitness equipment and in fitness facilities where the intended users are 13 years old and older.

1.3 *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 *ANSI Standards*²

Z 535.1 Safety Color Code

Z 535.2 Environmental and Facility Safety Signs

Z 535.3 Criteria for Safety Symbols

Z 535.4 Product Safety Signs and Labels

3. Terminology

3.1 Definitions:

¹ This specification is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.30 on Fitness Products.

Current edition approved May 1, 2020. Published May 2020. Originally approved in 1996. Last previous edition approved in 2015 as F1749 – 15. DOI: 10.1520/F1749-15R20.

² Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

3.1.1 *consumer fitness equipment, n*—fitness equipment intended for use by one person or one family unit.

3.1.2 *control panel, n*—the console on fitness equipment where the user chooses/enters an exercise routine, resistance level, or otherwise interacts with the machine settings.

3.1.3 *fitness equipment, n*—a product designed for use in exercising specific or multiple muscles of the body.

3.1.4 *fitness facility, n*—a location where people go to use institutional fitness equipment.

3.1.5 *fitness facility equipment sign, n*— a general safety sign designed within the scope of this specification and complying with all applicable ANSI standards that is posted within a fitness facility and alerts users to potential hazards associated with institutional fitness equipment.

3.1.6 *general safety sign, n*—a sign addressing safe exercise practices, proper safety procedures, and the location of safety equipment.

3.1.7 *general safety sign signal word, n*— brief word(s) at the top of a general safety sign designed to draw attention to the sign.

3.1.7.1 *Discussion*—Examples of these words include *safety first, be careful* and *think*. The words *danger, warning* and *caution* shall not be used (see also *signal word*).

3.1.8 *general warning label, n*—a label designed in accordance with this specification that is affixed to a portion of the fitness equipment and draws attention to potential hazards associated with the use of that fitness equipment.

3.1.9 *hazard classification, n*—choice of a signal word based on the seriousness of the related potential hazard.

3.1.10 *institutional fitness equipment, n*—fitness equipment intended for use by numerous persons in a commercial or institutional, as opposed to a home, environment.

3.1.11 *instruction plate, n*—a placard on fitness equipment that describes how to use the equipment properly.

3.1.11.1 *Discussion*—The instruction plate, may, but is not required to, be part of the control panel.

3.1.12 *message panel, n*—the area of a warning label where the statement of hazard is placed.

3.1.13 *pictorial, n*—graphic representation that depicts or illustrates a potential hazard without the use of words.

3.1.14 *signal icon, n*—the symbol that precedes the signal word in the signal word panel.

3.1.14.1 *Discussion*—This symbol is a solid black triangle with an exclamation point.

3.1.15 *signal word, n*—brief word at the top of a label designed to draw attention to that label.

3.1.15.1 *Discussion*—The word(s) convey(s) the degree or level of seriousness of a potential hazard. Examples of signal words are *DANGER*, *WARNING*, and *CAUTION* (see also **general safety sign signal word**).

3.1.16 *signal word panel, n*—the location in which the signal word is placed.

3.1.16.1 *Discussion*—The color and placement of the signal word panel shall comply with all applicable ANSI standards and 4.2.

3.1.17 *site specific label, n*—a label designed within the scope of this specification affixed to fitness equipment that draws attention to a potential hazard in the immediate area of the label.

3.1.18 *statement of hazard, n*—the words that describe the hazard(s) or the potential consequences, or both, of not avoiding the hazard(s).

3.1.19 *surround shape, n*—the geometric configuration surrounding a pictorial.

4. Label and Sign Classifications

4.1 *Hazard Classification*—Product safety signs and labels shall be classified according to the relative seriousness of the potential hazards. The classifications shall be noted by the signal words *DANGER*, *WARNING*, and *CAUTION*. Fitness facility signs are classified as general safety signs and shall use signal words such as *safety first*, *be careful* and *think*.

4.1.1 *DANGER*—Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

4.1.2 *WARNING*—Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

4.1.3 *CAUTION*—Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

4.2 *Signal Word Panel Color*—The signal word panel color shall comply with ANSI Z535.1 as follows:

4.2.1 *DANGER*—The signal word *DANGER* shall be in white letters on a safety red background. The PMS color for the background shall be Pantone 179C.

4.2.2 *WARNING*—The signal word *WARNING* shall be in black letters on a safety orange background. The PMS color for the background shall be Pantone 152C.

4.2.3 *CAUTION*—The signal word *CAUTION* shall be in black letters on a safety yellow background. The PMS color for the background shall be Pantone 108C.

4.2.4 *General Safety Sign Signal Word(s)*—The signal word(s) for this type of sign or label shall be in white letters on a safety green background. The PMS color for the background shall be Pantone 3415C.

4.3 Multiple Hazard Identification:

4.3.1 *One Sign or Label*—When more than one hazard situation exists in close proximity to one another, they may be addressed on the same label or sign providing that the information for each hazard is presented effectively.

4.3.2 *Level of Seriousness*—When multiple hazards are addressed on one label, the hazard with the greatest level of severity shall be addressed first. The remaining hazards shall be presented in order according to their relative levels of severity.

5. Label Design

5.1 General Warning Label:

5.1.1 *Hazard Classification*—Fitness equipment shall be classified as *potentially hazardous*. If attention is not paid to the conditions of equipment usage, death or serious injury could occur.

5.1.2 *Signal Word*—The signal word for this label shall be *WARNING*.

5.1.3 *Label Design*—Design of the label shall comply with the following recommendations for signal word and signal icon placement, signal word panel design and color, message style and content, and letter size and placement (see Fig. 1).

5.1.3.1 *Label Orientation*—Vertical or horizontal label orientation may be used (see Fig. 1).

5.1.3.2 *Pictorial Panel*—Pictorials may be used provided they have been tested in accordance with ANSI Z535 for user acceptance and understandability and give the user immediate recognition of the applicable hazard(s).

5.1.3.3 *Border*—A contrast shall exist between the label and the mounting location on the fitness equipment. It is preferable that a border measuring at least 1.5 mm (0.06 in.) surround the entire label. When this is not possible, such as when the general warning label is incorporated into an instruction plate or control panel, a contrast shall exist between the warnings and the remainder of the words or instructions present on the control panel or instruction panel. This contrast shall be achieved by making the background of the warning a different color or shade than the remainder of the instruction/control panel.

5.1.3.4 *Color*—When the general label is to be applied to the fitness equipment, and it is not to be incorporated within the instruction plate or control panel, the signal word panel shall be safety orange. The remainder of the label shall be white, or possess a significant contrast with the black sans serif text of the message panel. A border as defined in 5.1.3.3 shall be

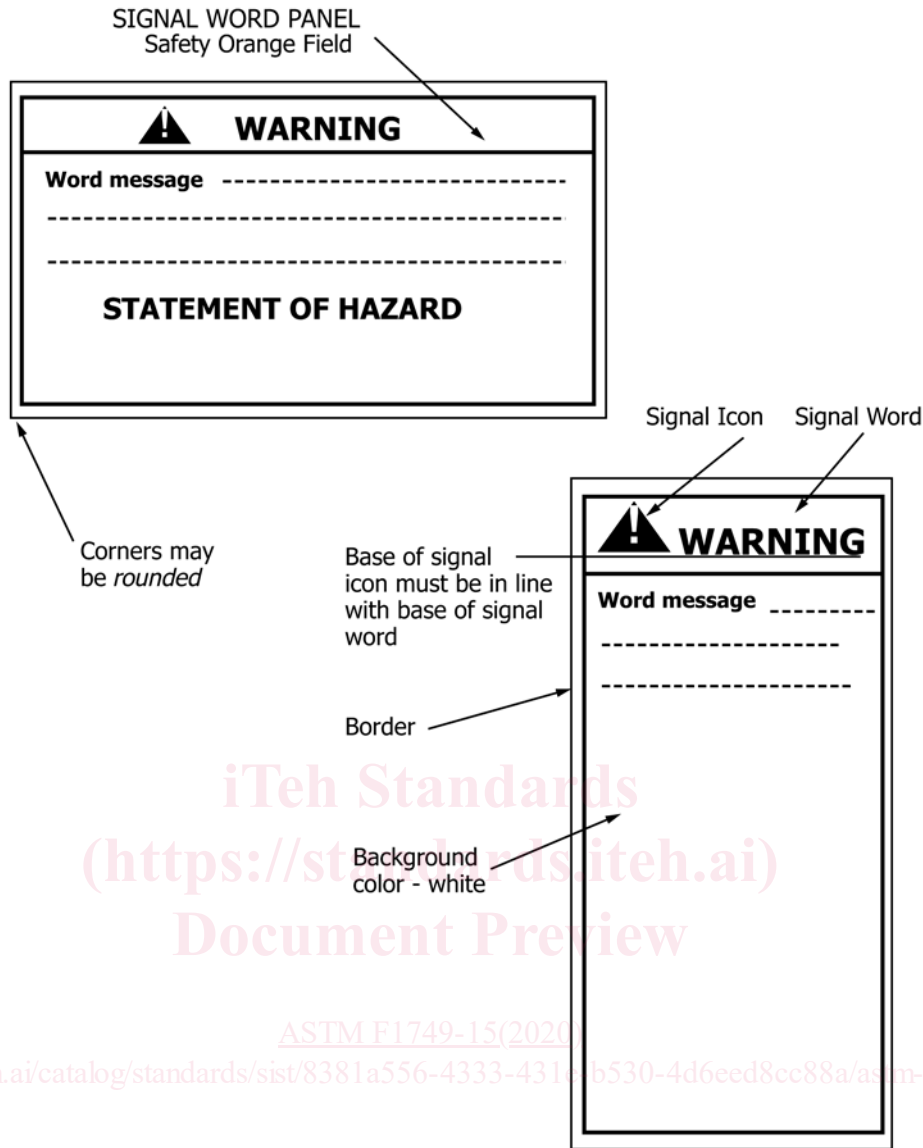


FIG. 1 Horizontal and Vertical General Warning Label Layout

present. When the general warning is incorporated within an instruction or control panel, special circumstances may preclude the use of the color parameters detailed above. The signal word panel and the general warning message panel area shall achieve significant contrast with the rest of the instruction plate or control panel. This shall be accomplished by bordering or incorporating, or both, contrasting colors or shades. In no case shall the signal word panel be yellow, red, or green when the signal word *WARNING* is used. In no case shall the message panel be yellow, red, or green when the signal word *WARNING* is used.

5.1.3.5 *Lettering*—Statement of hazard lettering and signal word *WARNING* shall be black and sans serif. Upper or lower case letters may be used within the statement of hazard. The signal word shall be all upper case letters. The bottom of the signal icon shall be in line with the bottom of the signal word.

(1) *Letter Size*—The letter size comprising the statement of hazard shall be a minimum of 1.5 mm (0.06 in.) in height. The

signal word shall be a minimum of 4 mm (0.16 in.) in height and at least 50 % greater size than the words comprising the statement of hazard. When the general warning label is included within the instructions of the control panel or exercise instruction plate, the letter size for the statement of hazard shall be equal to or exceed the minimum letter height used for the height of all other words.

5.1.3.6 *Mounting Location*—The label shall be positioned where it will be encountered by the user prior to commencing exercise.

5.1.3.7 *Material and Expected Life*—The label shall be printed on durable material using fade resistant inks or paints. The label shall not be obliterated through normal use or foreseeable misuse. Advisement shall be given in the owner’s manual to replace the label if it becomes damaged or illegible.

5.1.4 *Minimum Wording*—At a minimum, the label must address the following items:

5.1.4.1 The possibility of serious injuries or death, or both, (if applicable) if caution is not used.

5.1.4.2 Keep children away. If the equipment has the potential to cause injury to children, then this statement shall be designed and placed within this label in such a manner that it draws specific attention to this requirement.

5.1.4.3 All warnings and instructions be read and followed and, for institutional fitness equipment, that proper instruction be obtained prior to use.

5.1.4.4 For consumer fitness equipment, notice shall also be given to refer to the owner’s manual for additional warnings and safety information.

5.1.4.5 For institutional fitness equipment, cease exercise if you feel faint or dizzy.

5.1.4.6 For institutional fitness equipment, keep body, clothing, and fitness accessories clear of all moving parts.

5.1.4.7 For institutional fitness equipment, inspect the equipment before use and to not use if the machine appears damaged or inoperable.

5.1.4.8 For fitness equipment that displays heart rate, a statement shall be present indicating that the heart rate displayed may be inaccurate and should be used for reference only. This warning may be part of the general warning label or placed in proximity to the heart rate displayed. For consumer fitness equipment, this warning may be placed in the owner’s manual.

5.1.4.9 Specific additional items that may be addressed in existing ASTM standards for particular fitness equipment.

5.2 Site Specific Label Design:

5.2.1 Hazard Classification—Classifications established in 4.1 shall be used.

5.2.2 Signal Word—The signal words *caution*, *warning* and *danger* set forth in 3.1.15 and defined in 4.1 generally shall be used. However, these signal words are not required if pictorials are used in accordance with 5.2.3.2.

5.2.3 Label Design—Label design shall comply with applicable ANSI standards for signal word placement, surround

shape, signal word panel design, signal icon, statement of hazard, letter size, and placement.

5.2.3.1 Label Orientation—Vertical or horizontal label orientation may be used. (see Fig. 2).

5.2.3.2 Pictorials—Pictorials may be used provided they have been tested in accordance with ANSI Z535 for user acceptance and understandability and give the user immediate recognition of the applicable hazard(s). A signal word is not required if the proper surround shape is used in accordance with applicable ANSI standards. (see Fig. 2).

(1) Surround Shape—The surround shape shall comply with applicable ANSI standards. Surround shapes for site specific labels alerting users to potential hazards in the immediate area of the equipment shall be a triangle or diamond. Pictorials that are used as part of a multi-panel label are not required to have surround shapes. The shape of the site specific label may serve as the surround shape.

5.2.3.3 Border—The border shall conform to 5.1.3.3.

5.2.3.4 Color—The color of the signal word panel shall match the designation defined by 4.2. The remainder of the label shall follow the guidelines of 5.1.3.4. If a pictorial only is used, the color shall match the criteria defined in the applicable ANSI standards, as follows:

- (1) Danger—White image on a safety red background.
- (2) Warning—Black image on a safety orange background.
- (3) Caution—Black image on a safety yellow background.

5.2.3.5 Lettering—In accordance with ANSI Z535, all lettering must be sans serif and may be a combination of upper and lower case letters.

(1) Letter Size—The letter size shall conform to 5.1.3.5 (1).

5.2.3.6 Mounting Location—Site specific labels shall be permanently affixed to the equipment in the immediate area of the applicable hazard. The labels must be noticeable and readily accessible to the user.

5.2.3.7 Material and Expected Life—The label shall conform to 5.1.3.7.

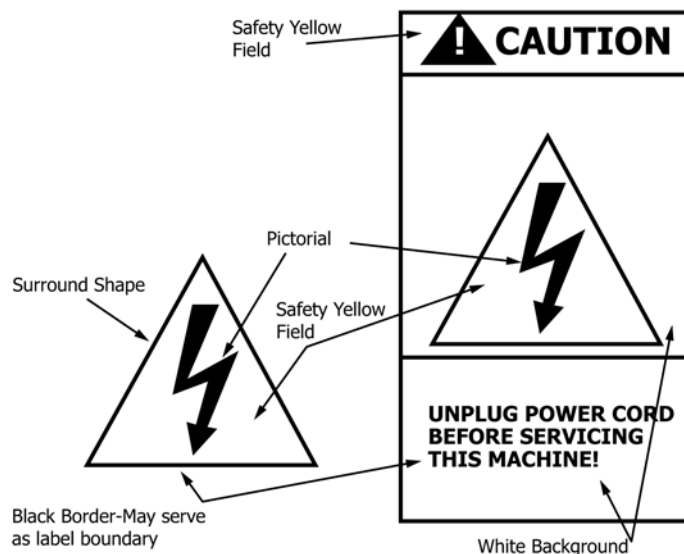


FIG. 2 Examples of Site Specific Labels and Pictorials—Vertical Orientation