



DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
DIRECTOR'S OFFICE
OCCUPATIONAL HEALTH STANDARDS

Filed with the Secretary of State on January 1, 1975

This rule takes effect 15 days after filing with the Secretary of State

PART 476. SPECIFICATIONS FOR ACCIDENT PREVENTION SIGNS AND TAGS

Rule 4501 Specifications for Accident Prevention Signs and Tags

(1) Scope.

(a) These specifications apply to the design, application, and use of signs or symbols (as included in subsections (3) through (4) of this rule) intended to indicate and, insofar as possible, to define specific hazards of a nature such that failure to designate them may lead to accidental injury to workers or the public, or both, or to property damage. These specifications are intended to cover all safety signs except those designed for streets, highways, railroads, and marine regulations. These specifications do not apply to plant bulletin boards or to safety posters. [1910.145(a)(1)]

(b) All new signs and replacements of old signs on or after August 31, 1971, shall be in accordance with these specifications. [1910.145(a)(2)]

(2) Definitions.

As used in this rule, the word "sign" refers to a surface on which letters or other markings appear, prepared for the warning of, or safety instructions of, industrial workers or members of the public who may be exposed to hazards. Excluded from this definition, however, are news releases, displays commonly known as safety posters, and bulletins used for employee education. [1910.145(b)]

(3) Radiation sign design and colors. (See also Rule 2410)

(a) Purple. Purple shall be the basic color for designating radiation hazards. "Radiation" as used in this paragraph refers to radiation types such as X-ray, alpha, beta, gamma, neutron, proton, deuteron, and meson. Yellow should be used in combination with purple for markers such as tags, labels, signs, and floor markers. [1910.144(a)(6)]

(b) Standard color of the background shall be yellow; the panel, reddish-purple with yellow letters; the symbol, reddish-purple; any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of American National Standard, Z53.1-1967. [1910.145(d)(3)(i)]

(c) The standard symbol shall be as in Figure J-3. Method of dimensioning, design, and orientation of the standard symbol (one blade pointed downward and centered on the vertical axis) shall be executed as illustrated. The symbol shall be prominently displayed, and of a size consistent with the size of the equipment or material or area to which it is attached. [1910.145(d)(3)(ii)]

(d) Format shall be as in Figure J-2. Sign proportions shall be the same as those for danger signs in Table J-1. [1910.145(d)(3)(iii)]

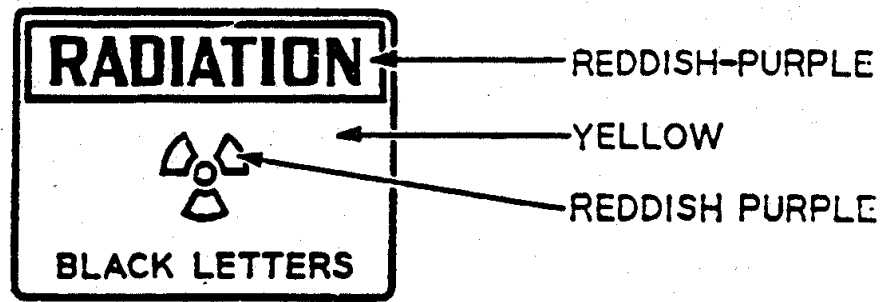


Fig. J-2
Radiation Warning Sign

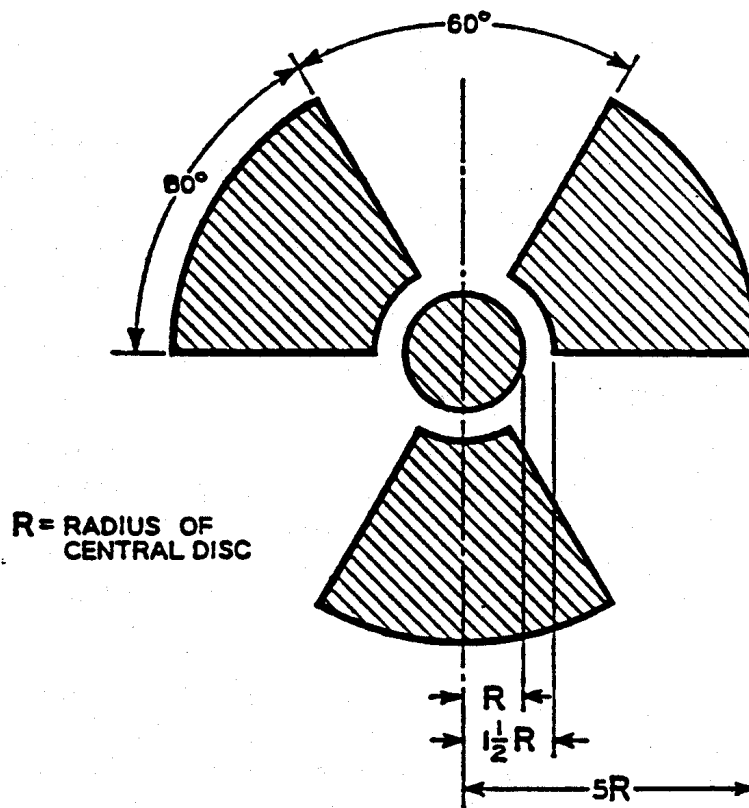


Fig. J-3
Standard Radiation Symbol

TABLE J-1--STANDARD PROPORTIONS FOR DANGER SIGNS

Sign size, inches Height Width	Black rectangular panel, inches Height Width	Red oval, inches Height Width	Word danger, height inches	Maximum space available for sign wording inches
HORIZONTAL PATTERN				
7 x 10	$3 \frac{1}{4} \times 9 \frac{3}{8}$	$2 \frac{7}{8} \times 8 \frac{1}{2}$	$1 \frac{7}{16}$	$2 \frac{3}{4} \times 9 \frac{3}{8}$
10 x 14	$4 \frac{5}{8} \times 13 \frac{3}{8}$	$4 \frac{1}{8} \times 11 \frac{7}{8}$	$2 \frac{1}{16}$	$4 \frac{1}{4} \times 13 \frac{3}{8}$
14 x 20	$6 \frac{1}{2} \times 19 \frac{3}{8}$	$5 \frac{3}{4} \times 17$	$2 \frac{7}{8}$	$6 \frac{1}{4} \times 19 \frac{3}{8}$
20 x 28	$9 \frac{1}{4} \times 27 \frac{3}{8}$	$8 \frac{1}{4} \times 23 \frac{7}{8}$	$4 \frac{1}{8}$	$9 \frac{1}{2} \times 27 \frac{3}{8}$
UPRIGHT PATTERN				
10 x 7	$2 \frac{3}{8} \times 6 \frac{3}{8}$	$2 \frac{1}{8} \times 5 \frac{7}{8}$	$1 \frac{1}{16}$	$6 \frac{3}{8} \times 6 \frac{3}{8}$
14 x 10	$3 \frac{1}{4} \times 9 \frac{3}{8}$	$2 \frac{7}{8} \times 8 \frac{1}{2}$	$1 \frac{7}{16}$	$9 \frac{1}{2} \times 9 \frac{3}{8}$
20 x 14	$4 \frac{5}{8} \times 13 \frac{3}{8}$	$4 \frac{1}{8} \times 11 \frac{7}{8}$	$2 \frac{1}{16}$	$14 \times 13 \frac{3}{8}$
28 x 20	$6 \frac{1}{2} \times 19 \frac{3}{8}$	$5 \frac{3}{4} \times 17$	$2 \frac{7}{8}$	$20 \frac{1}{4} \times 19 \frac{3}{8}$

[1910.145 Table J-1]

(4) Sign wordings.

(a) Examples of wordings. The following paragraph (b) is intended to serve as a guide for choosing the correct sign design for the message to be displayed. [1910.145(e)(1)]

(b) Biological hazard signs. The biological hazard warning shall be used to signify the actual or potential presence of a biohazard and to identify equipment, containers, rooms, materials, experimental animals, or combinations thereof, which contain, or are contaminated with, viable hazardous agents. For the purpose of this paragraph the term "biological hazard," or "biohazard," shall include only those infectious agents presenting a risk or potential risk to the well-being of man. The biohazard symbol shall be designed and proportioned as illustrated in Figure J-9. [1910.145(e)(4)]

The symbol design shall be a fluorescent orange or orange-red color. Background color is optional as long as there is sufficient contrast for the symbol to be clearly defined. Appropriate wording may be used in association with the symbol to indicate the nature or identity of the hazard, name of individual responsible for its control, precautionary information, etc., but never should this information be superimposed on the symbol. [1910.145(e)(4)]

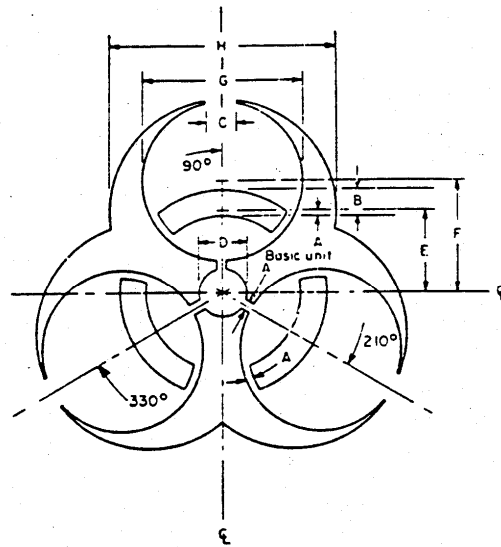
(c) For non-ionizing radiation (rf) signs: see Rule 2420.

(d) For "A" designated substances (carcinogens) signs: see Rule 2302.

(e) For vinyl chloride warning signs: see Rule 2260.

(f) For asbestos warning signs: see Rule 2205.

(g) For welding, cutting and brazing signs: see Rule 3240.



Dimension	A	B	C	D	E	F	G	H
Units	1	3 2	4	6	11	15	21	30

Fig. J-9
Symbol for Biological Hazard

(5) Accident prevention tags.

(a) Scope and purpose.

- (i) The tags are a temporary means of warning all concerned of a hazardous condition, defective equipment, radiation hazards, etc. The tags are not to be considered as a complete warning method, but should be used until a positive means can be employed to eliminate the hazard; for example, a "Do Not Start" tag on power equipment shall be used for a few moments or a very short time until the switch in the system can be locked out; a "Defective Equipment" tag shall be placed on a damaged ladder and immediate arrangements made for the ladder to be taken out of service and sent to the repair shop. [1910.145(f)(1)(i)]

- (ii) The purpose of this subsection is to establish a set of specifications for tags based on experience and previous use. The tags are to be used in industry, mercantile establishments, or wherever such tags can be utilized to help prevent accidental injury to personnel or damage to property, or both. [1910.145(f)(1)(ii)]

(b) Definitions. The word "tag" as used in this subsection refers to a surface (usually card, paper, pasteboard, or some temporary or nonpermanent material) on which letters or markings, or both, appear. These letters or markings, or both, are for warning (cautioning) or safety instruction of employees who may be exposed to hazards. They are to be affixed to the device in question by string, wire, or adhesive. [1910.145(f)(2)]

(c) Radiation tags.

- (i) The standard background for Radiation tags shall be yellow; the panel shall be reddish-purple. Any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1, Fundamental Specification of Safety Color Code for Marking Physical Hazards and the Identification of Certain Equipment, Z53.1.1967. [1910.145(f)(7)(i)]

- (ii) The method of dimension, design, and orientation of the standard (one blade pointed downward and centered on the vertical axis) shall be executed as illustrated in Figure J-14. The symbol shall be prominently displayed and of a size consistent with the size of the equipment or area in which it is to be used. [1910.145(f)(7)(ii)]

(d) Biological hazard tags.

- (i) The standard background color for the Biological Hazard symbol is optional as long as there is sufficient contrast for the symbol to be clearly defined. The symbol design (see Figure J-15) shall be a fluorescent orange or orange-red color. [1910.145(f)(8)(i)]

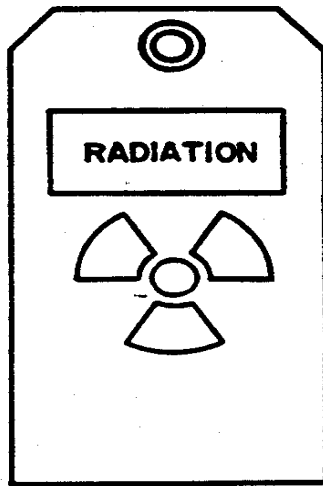
- (ii) The Biological Hazard tag shall be used to signify the actual or potential presence of a biohazard, to identify equipment, containers, rooms, materials, experimental animals, or combinations thereof, which contain or are contaminated with viable hazardous agents. [1910.145(f)(8)(ii)]

- (iii) For the purpose of this paragraph, the term "biological hazard" shall include only those infectious agents presenting a risk or potential risk to the well-being of man. [1910.145(f)(8)(iii)]

Yellow tag

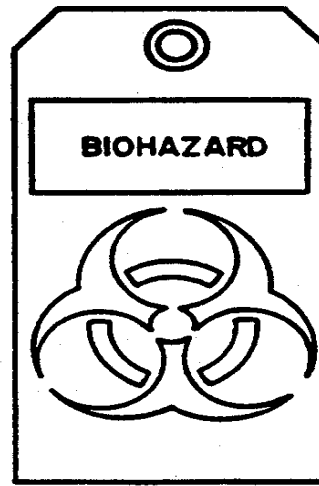
yellow letters in
reddish-purple panel
(Added wording in black
on yellow background)

Fig. J-14
Radiation Tag

**White tag**

black letters on
fluorescent-orange
background and
symbol

Fig J-15
Biological Hazard Tag

**(6) Caution signs.**

(a) Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices. [1910.145(c)(2)(i)]

(b) All employees shall be instructed that caution signs indicate a possible hazard against which proper precaution should be taken. [1910.145(c)(2)(ii)]

(c) Standard color of the background shall be yellow; and the panel, black with yellow letters. Any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of American National Standard Z53.1-1967. [1910.145(d)(4)(i)]

(d) Standard proportions shall be as indicated in Table J-2, and format shall be as in Figure J-4. [1910.145(d)(4)(ii)]

TABLE J-2--STANDARD PROPORTIONS FOR CAUTION SIGNS

Sign size, inches Height Width	Black rectangular panel, inches Height Width	Word "Caution" height of letters, inches	Maximum space available for sign wording below panel inches Height Width
HORIZONTAL PATTERN			
7 x 10	$2 \frac{1}{4} \times 9 \frac{3}{4}$	$1 \frac{5}{8}$	$3 \frac{1}{4} \times 9 \frac{2}{3}$
10 x 14	$3 \frac{1}{4} \times 13 \frac{3}{4}$	$2 \frac{1}{4}$	$5 \frac{2}{3} \times 13 \frac{2}{3}$
14 x 20	$3 \frac{1}{4} \times 19 \frac{5}{8}$	$2 \frac{3}{4}$	$9 \times 19 \frac{3}{8}$
20 x 28	$4 \frac{1}{4} \times 27 \frac{3}{8}$	$3 \frac{1}{4}$	$14 \frac{2}{3} \times 27 \frac{3}{8}$
UPRIGHT PATTERN			
10 x 7	$1 \frac{5}{8} \times 6 \frac{3}{8}$	$1 \frac{1}{8}$	$7 \times 6 \frac{3}{8}$
14 x 10	$2 \frac{1}{4} \times 9 \frac{3}{8}$	$1 \frac{3}{8}$	$10 \frac{2}{3} \times 9 \frac{3}{8}$
20 x 14	$3 \frac{1}{4} \times 18 \frac{3}{8}$	$2 \frac{1}{4}$	$15 \frac{2}{3} \times 13 \frac{3}{8}$
28 x 20	$3 \frac{3}{4} \times 19 \frac{3}{8}$	$2 \frac{3}{4}$	$24 \times 19 \frac{3}{8}$

Fig. J-4
Caution Sign



Michigan Occupational Safety and Health Administration
PO Box 30643
Lansing, Michigan 48909-8143
Ph: 517.322.1845

The Department of Licensing and Regulatory Affairs will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.