



DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

GENERAL INDUSTRY SAFETY STANDARDS

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(By authority conferred on the director of the department of licensing and regulatory affairs
by sections 16 and 21 of 1974 PA 154, MCL 408.1016 and MCL 408.1021,
and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4,
MCL 445.2001, 445.2011, 445.2025, and 445.2030)

R 408.13701, R 408.13703, R 408.13704, R 408.13707, R 408.13711, R 408.13714, R 408.13721, R 408.13731,
R 408.13733, and R 408.13734 of the Michigan Administrative Code are amended
and R 408.13705 R 408.13723, R 408.13724, R 408.13731a, R 408.13734a, R 408.13737
and R 408.13738 are added, and Occupational Health Standard Rule 4501 is rescinded as follows:

PART 37. ACCIDENT PREVENTION SIGNS AND TAGS

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GENERAL PROVISIONS

R 408.13701 Scope.

Rule 3701. (1) This part provides specifications for the design, application, and use of signs or symbols and tags to define or signal a specific hazard in, around or about a place of employment where the failure to designate a hazard could harm workers or the public, or both, or to property damage.

(2) These specifications are intended to cover all safety signs except those designed for streets, highways, and railroads. These specifications do not apply to plant bulletin boards or to safety posters.

(3) All new signs and replacements of old signs shall be in accordance with these specifications.

R 408.13702 Applicability.

Rule 3702. An employer who has an established sign or tag system or policy on the effective date of this part which is equivalent to that prescribed in this part may continue with the policy or system if the key color prescribed in the rule is used. The key color:

- (a) Of danger is red.
- (b) Of caution is yellow.
- (c) Of safety is green.

R 408.13703 Definitions; A to D.

Rule 3703. (1) "Accident prevention sign" means the surface on which letters or markings are used to warn of a hazard, provide safety instructions, or provide directions. An accident prevention sign may be temporarily or permanently affixed or placed.

(2) "Accident prevention tag" means the surface on which letters or markings are used to warn of an existing or immediate hazard and which is temporarily attached to a part of equipment or structure.

(3) "Biological hazard" or "BIOHAZARD" means those infectious agents presenting a risk of death, injury, or illness to employees.

(4) "Caution sign or tag" means a sign or tag used to warn of a potential hazard or to warn against an unsafe practice.

(5) "Danger sign or tag" means a sign or tag used to signal an immediate hazard.

(6) "Do not start tag" means a tag used to tag out a starting mechanism which would cause a hazard if started.

R 408.13704 Definitions; E to S.

Rule 3704. (1) "Exit sign" means a sign used to designate a point of discharge from a room or building.

(2) "In-plant traffic sign" means a sign used to direct the safe use of a vehicle on plant property.

(3) "Major message" means that portion of a tag's inscription that is more specific than the signal word and that indicates the specific hazardous condition or the instruction to be communicated to the employee. Examples include: "High Voltage," "Close Clearance," "Do Not Start," or "Do Not Use" or a corresponding pictograph used with a written text or alone.

(4) "Out of order tag" means a tag used to indicate a machine is malfunctioning and its use might create a hazard.

(5) "Pictograph" means a pictorial representation used to identify a hazardous condition or to convey a safety instruction.

(6) "Plant thoroughfare" means the company streets on plant property.

(7) "Safety instruction sign" means a sign used for general instruction or suggestion relative to safety.

(8) "Sign" refers to a surface as prepared for the warning of, or safety instructions of, industrial workers or members of the public who may be exposed to hazards. "Sign" does not mean news releases, displays commonly known as safety posters, or bulletins used for employee education.

(9) "Signal word" means that portion of a tag's inscription that contains the word or words that are intended to capture the employee's immediate attention.

(10) "Tag" means a device usually made of card, paper, pasteboard, plastic, or other material used to identify a hazardous condition.

R 408.13705 Adoption of standards by reference; access to other MIOSHA rules.

Rule 3705. (1) This standard is adopted by reference in these rules, American National Standard Institute Standard ANSI Z53.1, "USA Standard Safety Color Code for Marking Physical Hazards," 1971 edition, and is available from IHS Global, 15 Inverness Way East, Englewood, Colorado, 80112, USA, telephone number: 1-800-854-7179 or via the internet at website: <http://global.ihs.com>; at a cost as of the time of adoption of these rules of \$20.00.

(2) The following standards are adopted by reference in these rules and are available from the American Society of Agricultural and Biological Engineers (ASABE), 2950 Niles Road, St. Joseph, Michigan 49085, Phone: (269) 429-0300 or via the internet at website: <http://www.asabe.org/>, at a cost as of the time of adoption of these rules, as stated in this subrule.

(a) American Society of Agricultural Engineers Standard ASAE R276, "Emblem for Identifying Slow-Moving Vehicles," 1966 edition. Cost: \$80.00.

(b) ASAE S276.2 "Slow-Moving Vehicle Identification Emblem," 1968 edition. Cost: \$80.00.

(3) The standards adopted in subrules (1) and (2) of this rule are also available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(4) Copies of the standards adopted in subrules (1) and (2) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in this rule, plus \$20.00 for shipping and handling.

(5) The General Industry Safety Standard Part 6 "Fire Exits," R 408.10601 to R 408.10698, is referenced in these rules. Up to 5 copies of this standard may be obtained at no charge from the Michigan Department of licensing and regulatory affairs, MIOSHA standards section, 7150 Harris Drive, P.O. Box 30643, Lansing, MI, 48909-8143 or via the internet at website:

www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.

R 408.13706 Employer responsibility.

Rule 3706. An employer shall provide, install and maintain signs and tags as prescribed by this part where an employee might be or would likely be injured if not alerted to the hazard.

R 408.13707 Signs generally.

Rule 3707. (1) All signs shall be furnished with rounded or blunt corners and shall be free of sharp edges, burrs, splinters, or other sharp projections. The ends or heads of bolts or other fastening devices shall be located in such a way that they do not constitute a hazard.

(2) Danger signs. The colors red, black, and white shall be those of opaque glossy samples as specified in table 1 "Fundamental Specification of Safety Colors for CIE Standard Source "C"," in American National Standard Institute ANSI standard Z53.1, "USA Standard Safety Color Code for Marking Physical Hazards," 1971 edition, as adopted in R 408.13705.

(3) Caution signs. 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 in ANSI Z53.1, 1971 edition, as adopted in R 408.13705.

(4) Safety instruction signs. Standard color of the background shall be white; and the panel, green with white letters. Any letters used against the white background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 in ANSI Z53.1, 1971 edition, as adopted in R 408.13705.

R 408.13708 Lettering.

Rule 3708. (1) A letter shall be block style, upper case for the upper panel, and upper or upper and lower case for the lower panel.

(2) Letter size shall be determined by the length of the message and maximum visibility and readability. See table 1 for a guide for minimum letter height at safe viewing distance.

(3) Table 1 reads as follow:

Table 1

Minimum Height of Letters (Inches)	Viewing Distance (Feet)
5	200-250
4 1/2	150-200
4	120-150
3 1/2	105-120
3	90-105
2 1/2	75-90
2	60-75
1 1/2	40-60
1	30-40
3/4	20-30
1/2	10-20
1/4	Less than 10
NOTE 1: Crowding of letters and words reduces legibility.	
NOTE 2: A rule-of-thumb of 35-40 feet viewing distance per inch of letter height may be used for heights of letters greater than 5 inches.	

R 408.13709 Sign placement and illumination.

Rule 3709. (1) An accident prevention sign shall be so placed:

(a) To alert and inform in time to avoid the hazard or to take appropriate action.

(b) As to be legible, without distraction and not create a hazard in itself.

(c) On a movable object or adjacent so that it will not be obscured when the object is moved.

(2) An accident prevention sign shall be displayed with not less than 2 foot candles of illumination at or near the point of installation during hours when an employee would be present.

CLASSIFICATION OF SIGNS

R 408.13711 Danger signs.

Rule 3711. (1) A danger sign shall be used only where an immediate hazard exists. The sign shall be removed when the hazard is removed.

(2) A danger sign shall have the signal word "danger" in white within a red oval outlined in white on a black rectangular background in the upper panel. The lower panel where additional wording may be used shall be black or red letters on a white background. (See figure 1.)

(3) Danger signs shall have no variation in the type of design of signs posted to warn of specific dangers and radiation hazards.

(4) An employee shall be instructed that a danger sign indicates immediate danger and that special precautions are necessary.

(5) Figure 1 reads as follows:

**Figure 1
Danger Sign**



R 408.13713 Caution signs.

Rule 3713. (1) A caution sign shall be used to warn of a potential hazard or to caution against an unsafe practice.

(2) A caution sign shall have the signal word "caution" in yellow on a black background in the upper panel. The lower panel where additional wording may be used shall be black letters on a yellow background. (See figure 2.)

(3) An employee shall be instructed that a caution sign indicates a possible hazard and that proper precautions shall be taken.

(4) Figure 2 reads as follows:

**Figure 2
Caution Sign**



SYMBOLS

R 408.13714 Exit signs.

Rule 3714. (1) An exit sign shall be used as prescribed in subrule (3) of R 408.10685 and R 408.10686 of the General Industry Safety Standard Part 6 "Fire Exits," as referenced in R 408.13705.

(2) An exit sign installed after December 13, 1974 shall consist of red or white letters on a contrasting red or white field. An internally illuminated sign shall consist of translucent letters either red or white on a contrasting background of red or white. The background may be either opaque or translucent.

(3) A directional arrow used on an exit sign shall be the same color as the word "exit."

R 408.13715 Safety instruction signs.

Rule 3715. (1) A safety instruction sign shall be used for a general instruction or suggestion relative to safety measures.

(2) A safety instruction sign shall have the signal word in white on a green background in the upper panel. The lower panel where additional wording may be used shall be black letters on a white background.

R 408.13716 Directional signs.

Rule 3716. (1) A safety related directional sign shall have a white arrow on a black upper panel with the lower panel white and any letters in black.

(2) A directional arrow used on a danger, caution, and safety instructional sign shall be black.

R 408.13717 Rescinded.

R 408.13718 Rescinded.

R 408.13721 Emblem for slow-moving vehicles.

Rule 3721. (1) An emblem, as prescribed in figure 3, shall be used on the rear of a vehicle used on a public road which, by design, moves at 25 miles per hour or less outside a building.

(2) An emblem, described in subrule (1) of this rule, shall not be used as a clearance marker for wide machinery or as a replacement for required lighting.

(3) Advertising or other markings shall not be placed on the emblem.

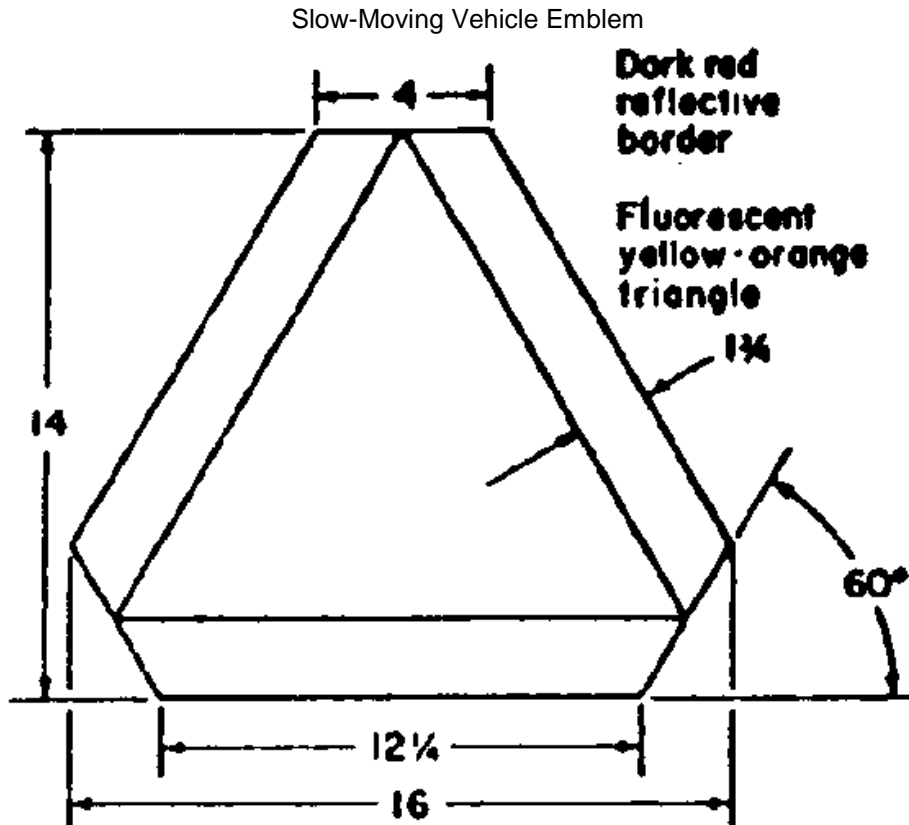
(4) This slow-moving vehicle emblem shall consist of a fluorescent yellow-orange triangle with a dark red reflective border. (See figure 3.)

It shall be entirely visible in daylight and at night from all distances between 600 and 100 feet from the rear when directly in front of the lawful upper beam of the headlamps.

(5) The emblem shall be mounted, point up, in a plane perpendicular to the direction of travel, plus or minus 10 degrees. It shall be placed centrally at the rear of the vehicle, unobscured, and 2 to 6 feet above the ground measured from the lower edge of the emblem. It shall be securely attached to the vehicle.

(6) The material, location, mounting, and other elements, of the emblem shall be in accordance with the American Society of Agricultural Engineers Standard ASAE R276, "Emblem for Identifying Slow-Moving Vehicles," 1966 edition or ASAE S276.2 "Slow-Moving Vehicle Identification Emblem," 1968 edition, as adopted in R 408.13705.

(7) Figure 3 reads as follows:



Note: All dimensions are in inches.

R 408.13722 Rescinded.

R 408.13723 Sign wordings.

Rule 3723. (1) The wording of any sign shall be easily read and concise. The sign shall contain sufficient information to be easily understood. The wording shall make a positive, rather than negative suggestion and shall be accurate in fact.

(2) The biological hazard warning signs 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.

Note: For the purpose of this rule the term "biological hazard," or "biohazard," shall include only those infectious agents presenting a risk or potential risk to the well-being of man.

R 408.13724 Accident prevention tags.

Rule 3724. (1) These rules apply to all accident prevention tags used to identify hazardous conditions and provide a message to employees with respect to hazardous conditions, as set forth in R 408.13731, or to meet the specific tagging requirements of other Michigan Occupational Safety and Health Administration (MIOSHA) standards.

(2) This rule does not apply to construction or agriculture.

TAGS

R 408.13731 Tags generally.

Rule 3731. (1) An accident prevention tag shall be used as a temporary means of warning an employee of an existing hazard, such as defective tools or equipment.

A tag shall not be used in place of an accident prevention sign or considered a complete warning method.

(2) A tag shall be affixed by string, wire, or adhesive.

(3) A tag shall be large enough to attract attention to the hazard, with the minimum letter size for the signal word in perspective to a safe viewing distance in accordance with R 408.13708.

(4) The signal word shall be in bolt type.

(5) There shall be no variation in the type of design of tags posted or hung to warn of a specific hazard.

(6) A tag shall be protected or be of such material to last and maintain legibility during the assignment of the tag.

(7) Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment, or operations and which are out of the ordinary, unexpected, or not readily apparent.

(8) Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed.

(9) Tags need not be used where signs, guarding, or other positive means of protection are being used.

R 408.13731a General tag criteria.

Rule 3731a. All required tags shall meet the following criteria:

(a) Tags shall contain a signal word and a major message, like any of the following:

(i) The signal word shall be either "Danger," "Caution," "Biological Hazard," "BIOHAZARD," or the biological hazard symbol.

(ii) The major message shall indicate the specific hazardous condition or the instruction to be communicated to the employee.

(b) The signal word shall be readable at a minimum distance of five feet (1.52 m) or such greater distance as warranted by the hazard.

(c) The tag's major message shall be presented in either pictographs or written text, or both.

(d) The signal word and the major message shall be understandable to all employees who may be exposed to the identified hazard.

(e) All employees shall be informed as to the meaning of the various tags used throughout the workplace and what special precautions are necessary.

(f) Tags shall be affixed as close as is safely possible to their respective hazards by a positive means such as string, wire, or adhesive that prevents their loss or unintentional removal.

R 408.13732 "Do not start" tags.

Rule 3732. A "do not start" tag shall be used to tag out the starting mechanism of equipment that would cause a hazardous condition if activated, unless it is locked out.

R 408.13733 "Danger" tags.

Rule 3733. A "danger" tag shall be used only in major hazard situations where an immediate hazard presents a threat of death or serious injury to employees.

R 408.13734 "Caution" tags.

Rule 3734. A "caution" tag shall be used only in minor hazard situations where a non-immediate or potential hazard or unsafe practice presents a lesser threat of employee injury.

R 408.13734a Warning tags.

Rule 3734a. Warning tags may be used to represent a hazard level between "Caution" and "Danger," instead of the required "Caution" tag, provided that they have a signal word of "Warning," an appropriate major message, and otherwise meet the general tag criteria of R 408.13731a.

R 408.13735 “Out of order” tags.

Rule 3735. An “Out of order” tag should be used only for the specific purpose of indicating that equipment or machinery is out of order and that its use might create a hazard.

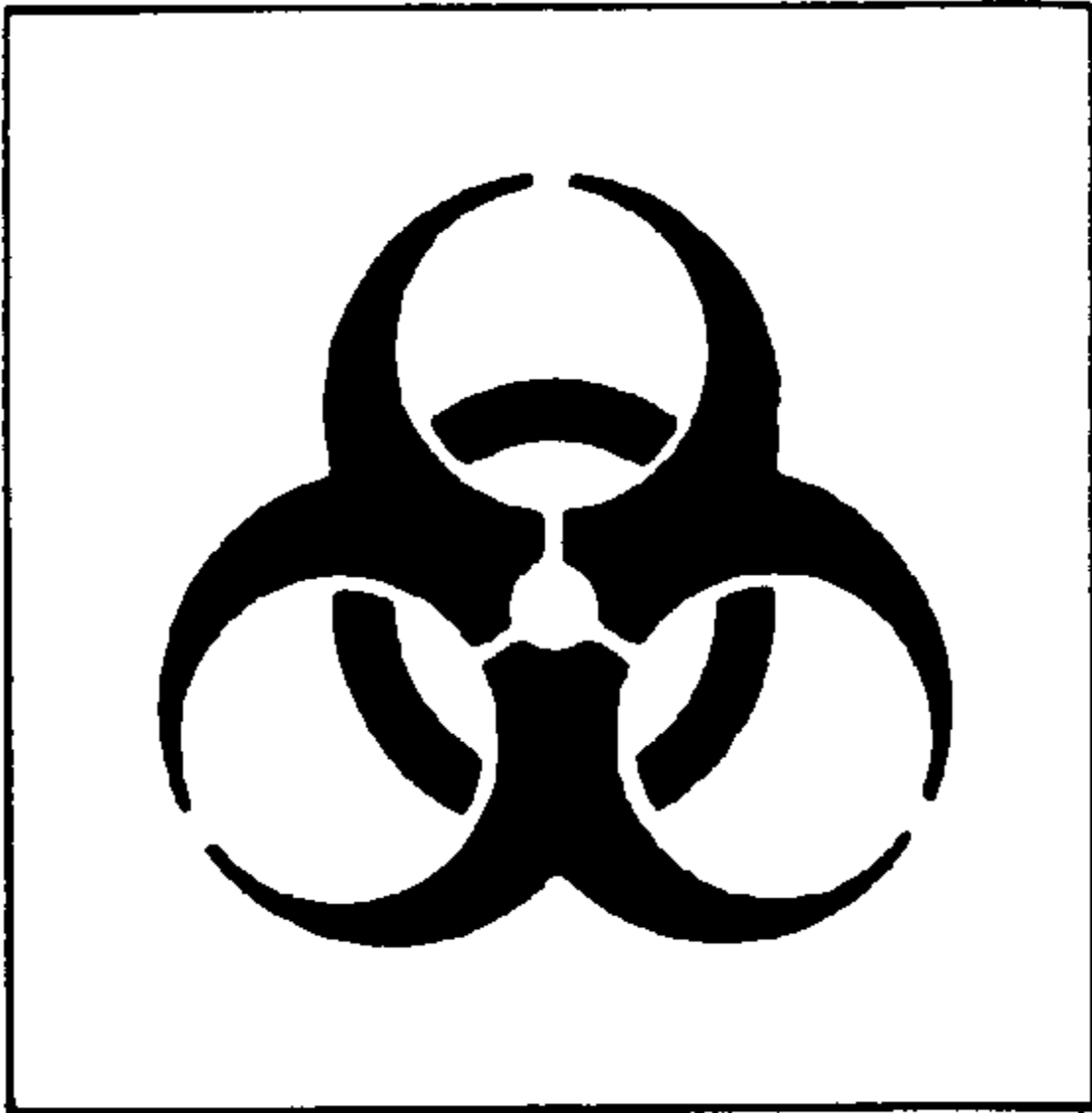
R 408.13736 Rescinded.

R 408.13737 Biological hazard tags.

Rule 3737. (1) Biological hazard tags shall be used to identify the actual or potential presence of a biological hazard and to identify equipment, containers, rooms, experimental animals, or combinations thereof that contain or are contaminated with hazardous biological agents.

(2) The symbol design for biological hazard tags shall conform to the design shown below in Figure 2:

**FIGURE 2
BIOLOGICAL HAZARD SYMBOL CONFIGURATION**



R 408.13738 Other tags.

Rule 13738. Other tags may be used in addition to those required by these rules or in other situations where these rules do not require tags, provided that they do not detract from the impact or visibility of the signal word and major message of any required tag.

Rule 4501 Rescinded.



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