GI Part 33. Personal Protective Equipment
Compared with
29 C.F.R. 1910 Subpart I Personal Protective Equipment:
1910.132 General requirements
1910.133 Eye and face protection
1910.134 Respiratory protection
1910.135 Head protection
1910.136 Occupational foot protection
1910.137 Electrical protective devices
1920.138 Hand protection

Summary: The significant differences between GI Part 33. Personal Protective Equipment and 29 C.F.R. regulations are in:

- General Provisions
- Employer's And Employee's Responsibilities
- Face And Eye Protection
- Welding Helmets And Hand Shields
- Face Shields
- Eye Protectors
- Head Protection Equipment
- Toe Protection
- Foot Protection
- Electrical Protective Equipment
- Safety Belts, Harnesses, Lifelines, And Lanyards
- Hand Protection
- Body Protection

The comparisons show only those provisions where MIOSHA rules are different than OSHA or where MIOSHA rules are not included in 29 C.F.R.

****means there is a comparable OSHA rule to this paragraph

MIOSHA	OSHA
GENERAL PROVISIONS	
R 408.13310. Employer's and employee's responsibilities. Rule 3310. (1) An employer shall provide to an employee, at no expense to the employee, the initial issue of the type of personal protective equipment which is suitable for the work to be performed as required by this standard or any other general industry safety standard, unless specifically indicated otherwise in this standard or any other general industry safety standard. The employer shall also provide replacement equipment if necessary due to wear and tear on the previous equipment or if the equipment is lost due to the work environment, unless covered by a collective bargaining agreement. (2) An employee shall use all of the personal protective equipment provided by the employer.	**No comparable OSHA provision.**

MIOSHA	OSHA
FACE AND EYE PROTECTION	
R 408.13311. Certification. Rule 3311. (1) All eye and face protection devices purchased after July 5, 1994, shall be in compliance with occupational and educational eye and face protection of the American national standards institute standard Z87.1-1989 or the devices shall be demonstrated by the employer to be equally effective. The standard is adopted by reference in these rules and may be purchased from the American National Standards Institute, 11 West 42 Street, New York, New York 10036, or from the Safety Standards Division, Michigan Department of Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $18.00. (2) If it is impractical for eye and face protection devices to be marked in compliance with ANSI standard Z87.1-1989, then the containers for eye and face protection shall be in compliance with the standard. (3) Eye and face protection devices purchased before July 5, 1994, shall be in compliance with the ANSI standard entitled "Occupational and Educational Eye and Face Protection," Z87.1-1968, or the devices shall be demonstrated by the employer to be equally effective. The standard is adopted by reference in these rules and may be purchased from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Safety Standards Division, Michigan Department of Consumer and Industry Services, Box 30643, Lansing, Michigan 48909, at a cost at the time of adoption of these rules of $18.00.	**1926.102(a)(2)** Eye and face protection equipment required by this Part shall meet the requirements specified in American National Standards Institute, Z87.1-1968, Practice for Occupational and Educational Eye and Face Protection.
R 408.13312. Face and eye protection generally. Rule 3312. (1) An employer shall ensure that each affected employee shall use appropriate eye or face protection as prescribed in R 408.13311 if a hazard exists due to any of the following: (a) Flying objects or particles. (b) Harmful contacts. (c) Exposures. (d) Molten metal. (e) Liquid chemicals. (f) Acids or caustic liquids. (g) Chemical gases or vapors. (h) Glare. (i) Injurious radiation. (j) Electrical flash. (k) A combination of the hazards specified in this subrule. (2) Table 1 shall be used as a guide to select the proper eye and face protection. Each affected employee shall use eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors, such as clip-on or slide-on side shields, that are in compliance with the pertinent requirements of this rule are acceptable. (3) Contact lenses or federal drug administration (FDA) standard hardened or plastic lenses are not eye protection as required by these rules.	**1926.102(a)(1)** Employees shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents. **1926.102(a)(3)** Employees whose vision requires the use of corrective lenses in spectacles, when required by this regulation to wear eye protection, shall be protected by goggles or spectacles of one of the following types: **1926.102(a)(3)(i)** Spectacles whose protective lenses provide optical correction; **1926.102(a)(3)(ii)** Goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles; **1926.102(a)(3)(iii)** Goggles that incorporate corrective lenses mounted behind the protective lenses. **1926.102(a)(4)** Face and eye protection equipment shall be kept clean and in good repair. The use of this type equipment with structural or optical defects shall be prohibited.

MIOSHA	OSHA
(4) A face or eye protector shall be in compliance with all of the following minimum requirements: (a) It shall protect against the particular hazards for which it is designed. (b) It shall fit snugly and shall not unduly interfere with movements of the wearer. (c) It shall be capable of withstanding sanitizing. (5) A protector shall be distinctly marked to identify the manufacturer. (6) Limitations or precautions indicated by the manufacturer shall be transmitted to the user and care taken to see that the limitations or precautions are observed. (7) Table 1 reads as follows: See Table 1 in Standard (8) Each affected employee shall use equipment that has filter lenses which have shade numbers appropriate for the work being performed for protection from injurious light radiation. Table 2 is a listing of appropriate shade numbers for various operations. (9) Table 2 reads as follows: See Table 2 In Standard	**1926.102(a)(6)** Protectors shall meet the following minimum requirements: **1926.102(a)(6)(i)** They shall provide adequate protection against the particular hazards for which they are designed. **1926.102(a)(6)(ii)** They shall be reasonably comfortable when worn under the designated conditions. **1926.102(a)(6)(iii)** They shall fit snugly and shall not unduly interfere with the movements of the wearer. **1926.102(a)(6)(iv)** They shall be durable. **1926.102(a)(6)(v)** They shall be capable of being disinfected. **1926.102(a)(6)(vi)** They shall be easily cleanable. **1926.102(a)(7)** Every protector shall be distinctly marked to facilitate identification only of the manufacturer. **1926.102(a)(8)** When limitations or precautions are indicated by the manufacturer, they shall be transmitted to the user and care taken to see that such limitations and precautions are strictly observed.
R 408.13313. Maintenance and cleanliness of protectors. Rule 3313. (1) A face or eye protector shall be kept clean and in good repair. (2) Cleaning facilities for protectors shall be provided away from the hazard, but readily accessible to the wearer. (3) A slack, worn out, sweat-soaked, knotted, or twisted headband shall be replaced. (4) A face or eye protector is a personal item and shall be for the individual and exclusive use of the person to whom it is issued. If circumstances require reissue, the protector shall be thoroughly cleaned, sanitized, and in good condition.	**1926.102(a)(6)(v)** They shall be capable of being disinfected. **1926.102(a)(6)(vi)** They shall be easily cleanable.

MIOSHA	OSHA
WELDING HELMETS AND HAND SHIELDS	
R 408.13320. Purposes, types, styles, and marking. Rule 3320. (1) The devices described in R 408.13320 to R 408.13330 are designed to provide protection for the face, eyes, ears, and neck against intense radiant energy and spatter resulting from arc welding. (2) A helmet and a hand shield are the only permissible types. (3) A helmet and a hand shield shall be made with the same basic design and of the same basic materials: an opaque, bowl-shaped or modified bowl-shaped device containing a window with filter plate which allows the wearer to see the radiant object, yet prevents harmful intensities or radiation from reaching his eyes. A helmet shall be supported on the head by an adjustable headgear. A hand shield shall have a handle attached to the bottom by which it is held in the hand. The basic designs may be modified to provide protection against special hazards, but modified equipment shall meet the same requirements as the basic design. (4) A helmet and a hand shield shall bear a permanent and legible marking by which the manufacturer may be readily identified.	**1910.252(b)(2)** Eye protection. **1910.252(b)(2)(i)** Selection. **1910.252(b)(2)(i)(A)** Helmets or hand shields shall be used during all arc welding or arc cutting operations, excluding submerged arc welding. Helpers or attendants shall be provided with proper eye protection. **1910.252(b)(2)(ii)(A)** Helmets and hand shields shall be made of a material which is an insulator for heat and electricity. Helmets, shields and goggles shall be not readily flammable and shall be capable of withstanding sterilization. **1910.252(b)(2)(ii)(B)** Helmets and hand shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc. **1910.252(b)(2)(ii)(C)** Helmets shall be provided with filter plates and cover plates designed for easy removal. **1910.252(b)(2)(ii)(D)** All parts shall be constructed of a material which will not readily corrode or discolor the skin. **1910.252(b)(2)(ii)(E)** Goggles shall be ventilated to prevent fogging of the lenses as much as practicable. **1910.252(b)(2)(ii)(F)** All glass for lenses shall be tempered, substantially free from striae, air bubbles, waves and other flaws. Except when a lens is ground to provide proper optical correction for defective vision, the front and rear surfaces of lenses and windows shall be smooth and parallel. **1910.252(b)(2)(ii)(G)** Lenses shall bear some permanent distinctive marking by which the source and shade may be readily identified. **1910.252(b)(2)(ii)(H)** The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.
R 408.13321. Rigid helmet bodies. Rule 3321. A helmet body of a rigid helmet shall be of such size and shape as to protect the face, forehead, ears, and neck to a vertical line back of the ears. It shall have 1 or more openings in the front for filter plates or filter lenses. The helmet body shall be attached to the headgear so that it will not come in contact with any part of the head and so that it can be lifted up from in front of the face and hold its position in front of the head. The helmet body shall be made of vulcanized fiber, reinforced plastic, or other suitable material which shall be thermally insulating, noncombustible or slow burning, opaque to visible, ultraviolet, and infrared radiations, and capable of withstanding sanitizing. The inside of the helmet body shall have a low light reflecting finish. Rivets or other metal parts, if terminating on the inside surface, shall be adequately separated from the wearer’s head.	**No comparable OSHA provision**

MIOSHA	OSHA
R 408.13322. Rigid helmet headgear or cradles. Rule 3322. A rigid helmet shall have a headgear or cradle that shall hold the helmet body comfortably and firmly on the wearer's head, but shall permit the helmet body to be tilted back over the head. The headgear shall be readily adjustable for all head sizes from 6 1/2 to 7 5/8, without the use of tools. The headgear shall be made of materials which are thermally insulating, noncombustible or slow burning, resistant to heat, and capable of withstanding sanitizing. Where required, the headgear shall be fitted with a removable and replaceable sweatband covering at least the forehead portion of the headband. The sweatband shall be made of leather or other suitable material which is slow-burning and nonirritating.	**No comparable OSHA provision**
R 408.13323. Rigid helmet headgear substitutes. Rule 3323. A headgear for a rigid helmet may be replaced by an impact resistant hat or cap that meets the requirements of R 408.13370 to R 408.13378 of this part, or other suitable device to which the helmet body is connected, if the helmet body may be lifted and adjusted to permit unobstructed vision or lowered to furnish complete protection, as required. The alternative device shall meet the requirements for sanitizing and resistance to heat and, in addition, shall meet the applicable requirements of any additional functions, such as protection against falling objects.	**No comparable OSHA provision**
R 408.13324. Rigid helmet filter plates. Rule 3324. (1) A filter plate on a rigid helmet shall fit into the frame and cover the window. (2)**** (3) Table 2 of R 408.13312 shall be used to select the proper shade number of filter lenses or plates during welding operations. (4) When specified, a filter plate shall be impact resistant, unless impact-resistant eye protection is worn in conjunction with a welding helmet. (5) A filter plate shall be marked with the shade designation and a permanent and legible marking by which the manufacturer may be readily identified. In addition, a glass filter plate, when treated for impact resistance, shall be marked with the letter "H." (6) A cover plate made of plain glass, of glass coated on 1 or on both sides with plastic, or of a slow-burning solid plastic sheet shall be used to protect a filter plate from damage. A cover plate shall be the same peripheral size and shape as the filter plate, and the thickness of a cover plate shall not be less than 0.050 inches. A cover plate shall transmit not less than 75% of the luminous radiation and shall be substantially free from optical imperfections.	**No comparable OSHA provisions** Equivalent **1910.252(b)(2)** Eye protection. **1910.252(b)(2)(ii)** Specifications for protectors. 1**910.252(b)(2)(ii)(C)** Helmets shall be provided with filter plates and cover plates designed for easy removal. **1910.252(b)(2)(ii)(D)** All parts shall be constructed of a material which will not readily corrode or discolor the skin. **1910.252(b)(2)(ii)(E)** Goggles shall be ventilated to prevent fogging of the lenses as much as practicable. **1910.252(b)(2)(ii)(G)** Lenses shall bear some permanent distinctive marking by which the source and shade may be readily identified. **1910.252(b)(2)(ii)(H)** The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs. See Table

MIOSHA	OSHA
R 408.13325. Nonrigid helmets. Rule 3325. A helmet may be made of nonrigid materials where it is to be used in confined spaces, or may be collapsible for convenience in carrying or storing. The helmet may be of the same general shape as a rigid helmet, except that a more complete covering of the top of the head is necessary in order to maintain the face, side, and windows in proper position. The requirements for the filter plates, cover plates, and lens mounting frame are the same as for a rigid helmet. A headgear may be used. The material shall be nonconducting and opaque to ultraviolet, visible, and infrared radiations. Stitched seams shall be welded. No stitching shall be exposed.	**No comparable OSHA provision**
R 408.13327. Hand shield. Rule 3327. A hand shield shall be constructed of materials similar to those used for a helmet and in like manner. The materials, lens mounting arrangement, and filter and cover plates shall conform to the requirements for the corresponding parts of the helmet body with headgear. The handle shall be made of a material that is a nonconductor of electricity and is noncombustible or slow burning. It shall be of such size and shape as to be held easily by 1 hand and shall be firmly attached to the lower portion of the shield. A hand shield intended for use by other than a welding operator shall have filter and cover plates suitable for the intended use.	**1910.252(b)(2)(i)(A)** Helmets or hand shields shall be used during all arc welding or arc cutting operations, excluding submerged arc welding. Helpers or attendants shall be provided with proper eye protection. **1910.252(b)(2)(ii)(A)** Helmets and hand shields shall be made of a material which is an insulator for heat and electricity. Helmets, shields and goggles shall be not readily flammable and shall be capable of withstanding sterilization. **1910.252(b)(2)(ii)(B)** Helmets and hand shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc.
R 408.13329. Helmet and hand shield lift fronts and chin rests. Rule 3329. (1) The lift front of the helmet shall be fabricated from metal, plastic, or other suitable material. A snap hinge shall be provided so that the front part will stay up or down but will not remain in a partially opened position. The lift front seal against the helmet shall be light tight. The lift front shall be designed to accommodate 3 plates: a clear impact-resisting plate in the back or fixed part; a filter plate, impact-resisting, when specified; and a cover plate in the front part. The back or fixed part plate shall be clear heat treated glass or plastic not more than 3/16 inch thick or less than 1/8 inch and capable of withstanding the impact test. (2) To avoid contact of a helmet or hand shield with the face of the wearer, a chin rest or adjustable position stop shall be provided. They shall be constructed of suitable rigid material and shall be detachable from the body of the hand shield.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13330. Helmet snoods, neck protectors, and aprons. Rule 3330. (1) A snood or back-of-head-and-neck protector where required shall be of material that is flame resistant, that is a good insulator of heat and electricity, and that is capable of withstanding sanitizing. They shall be designed for easy attachment to the helmet, helmet headgear, or cradle. (2) An apron or bib, where required for a helmet, shall be of nonflammable, nonconducting material that is flexible and capable of withstanding sanitizing.	**No comparable OSHA provision.**
R 408.13332. Effect of head protection standards. Rule 3332. The characteristics and performance requirements of these rules for welding helmets shall in no way be altered through their attachment to protective hats and caps, as required by R 408.13370 to R 408.13378 of this part.	**No comparable OSHA provision.**
FACE SHIELDS	
R 408.13340. Purposes and uses. Rule 3340. (1) The devices described in R 408.13340 to R 408.13347 of this part are designed to provide protection to the front part of the head, including forehead, cheeks, nose, mouth, and chin, and to the neck, where required, from flying particles and sprays of hazardous liquids, and to provide filter protection where required. Such devices shall be worn over suitable basic eye protection devices. (2) Typical uses for face shields include, but are not limited to, the following situations: (a) Woodworking operations where chips and particles fly. (b) Metal machining causing flying particles. (c) Buffing, polishing, wire brushing, and grinding operations causing flying particles or objects. (d) Spot welding. (e) Handling of hot or corrosive materials.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13342. Types and materials. Rule 3342. (1) Face shields are of 3 basic styles: headgear without crown protector; headgear with crown protector; and headgear with crown protector and chin protector. Each of these styles shall accommodate any of the following styles of windows: (a) Clear transparent. (b) Colored transparent. (c) Wire screen. (d) Combination of plastic and wire screen. (e) Fiber window with filter plate mounting. (2) Materials used in the manufacture of a face shield shall be nonirritating to the skin when subjected to perspiration and shall be capable of withstanding frequent sanitizing. Metals, when used, shall be resistant to corrosion. Plastic materials shall be slow burning. Clear or colored plastic materials used in windows shall be of an optical grade. Plastic windows shall not be used in connection with welding operations unless they meet the requirements of table 1 of this part.	**1910.252(b)(2)(ii)(D)** All parts shall be constructed of a material which will not readily corrode or discolor the skin.
R 408.13343. Components. Rule 3343. A face shield shall consist of a detachable transparent plastic window, wire screen window, or opaque frame with window; a tilting support, an adjustable headgear; and, as required, a crown protector and chin protector.	**No comparable OSHA provision.**
R 408.13344. Windows. Rule 3344. (1) A window shall be designed to fit the contour of the window support. (2) A window supporting or window holding member, which shall be a band or crown protector, shall be attached to the headgear. The window support shall position the window in front of the face to provide clearance for the nose and eyeglasses of the wearer. (3) The attachment of the window to the window support shall be secure and shall permit easy removal and replacement. The several sizes and types of windows for a face shield shall be interchangeable for attachment to the window support. (4) A plastic or wire screen window without frame shall be not less than 9 1/2 inches wide at the top and 8 ½ inches wide at the bottom, measured over its curved surfaces when attached and in position on the window support, and not less than 6 inches high. A window, when used in a frame, shall not be less than 4 inches wide and 2 inches high, and the frame shall conform to the dimensions specified for a window without a frame. A plastic window shall be not less than 0.040 inch nominal thickness. (5) The exposed borders of a wire screen window shall be suitably bound or otherwise finished to eliminate sharp, rough, or unfinished edges. A wire screen window shall not be less than 20-mesh screen.	**No comparable OSHA provision.**

MIOSHA	OSHA
(6) A window support shall be pivotally attached to the sides of the headgear to permit easy tilting, either upward or downward, of the supporting member and of the window attached thereto. The window shall be capable of being tilted sufficiently upward so that the center of its bottom edge shall be out of the line of horizontal vision. The tension of the tilting mechanism shall be sufficient to hold the window without slippage in either the up or down position.	**No comparable OSHA provisions**
R 408.13345. Headgear. Rule 3345. (1) A headgear shall consist of at least a headband and a crown strap. The headgear shall be made from materials having a low heat conductivity. The design shall hold the window and window support comfortably and firmly in place on the wearer's head and shall provide for tilting the window away from the face. (2) A headgear shall be readily adjustable to head sizes from 6 1/2 to 7 5/8 without the use of tools. The crown strap or band shall be attached to and extend between the front and rear centers or from the middle sides of the headband. It shall form an arc over the head to assist in positioning and holding the headgear in place. An adjusting device shall be positive and hold firmly in place after being adjusted. Its mechanisms and movements shall be protected so that the wearer's hair cannot catch in the device. (3) For greater protection, headgear may be replaced by an impact resistant hat or cap to which the window support is connected. The attachment may be either rigid or swiveled. If swiveled, the design shall permit lifting and adjusting of the window to permit unobstructed vision or lowering to furnish protection.	**No comparable OSHA provisions**
R 408.13346. Crown and chin protectors. Rule 3346. (1) A crown protector and chin protector shall be made of material having an impact resistance not less than that of the plastic window. When the crown protector is used in conjunction with the chin protector for protection against sprays of hazardous liquids, the assembly of the crown protector and window support and the assembly of the chin protector and window shall not allow liquids to pass through any opening in the assembly and reach the face, forehead, or chin of the wearer. (2) A crown protector shall be shaped to cover at least the frontal portion of the head and shall extend around each side at least to a vertical line at the front of the ears. It may be an integral part of the window support or a separate assembly. The design shall provide a comfortable clearance over the forehead and the head of the wearer. (3) A chin protector shall be shaped to cover at least the chin and upper part of the neck. The design shall provide a comfortable clearance under the chin of the wearer.	**No comparable OSHA provision**

MIOSHA	OSHA
R 408.13347. Marking; special operating conditions. Rule 3347. (1) When a face shield is used in atmospheres or working areas requiring special conditions of nonconductivity or nonsparking, materials used shall meet these requirements. A face shield shall be plainly and permanently labeled, identifying it as a "nonconductive face shield" or "nonsparking face shield."	**No comparable OSHA provision**
EYE PROTECTORS	
R 408.13352. Materials. Rule 3352. Materials used in the manufacturing of eye protectors shall combine mechanical strength and lightness of weight to a high degree, shall be nonirritating to the skin when subjected to perspiration, and shall withstand frequent sanitizing. Metals, where used, shall be corrosion resistant. Plastic materials, when used, shall be noncombustible or slow burning. Cellulose nitrate, or materials having flammability characteristics approximately those of cellulose nitrate, shall not be used. **R 408.13353. Lenses.** Rule 3353. (1) Lenses intended for use in eye protectors are of 4 basic types, as follows: (a) Clear lenses which are impact-resisting and provide protection against flying objects. (b) Absorptive lenses of shades 1.7 through 3.0 which are impact-resisting and provide protection against flying objects and glare or which are impact-resisting and provide protection against flying objects, and narrowband spectral transmittance of injurious radiation. (c) Protective-corrective lenses which are impact-resisting and either clear or absorptive, as specified for persons requiring visual correction. (d) Filter lenses which are impact-resisting and provide protection against flying objects and narrow-band spectral transmittance of injurious radiation. (2) Glass filter lenses intended for use in eyecup goggles shall be heat treated. (3) The height of the safety lens shall not be less than 30 millimeters.	**1926.102(a)(6)** Protectors shall meet the following minimum requirements: **1926.102(a)(6)(i)** They shall provide adequate protection against the particular hazards for which they are designed. **1926.102(a)(6)(ii)** They shall be reasonably comfortable when worn under the designated conditions. **1926.102(a)(6)(iii)** They shall fit snugly and shall not unduly interfere with the movements of the wearer. **1926.102(a)(6)(iv)** They shall be durable. **1926.102(a)(6)(v)** They shall be capable of being disinfected. **1926.102(a)(6)(vi)** They shall be easily cleanable. **1926.102(a)(7)** Every protector shall be distinctly marked to facilitate identification only of the manufacturer. **1926.102(a)(8)** When limitations or precautions are indicated by the manufacturer, they shall be transmitted to the user and care taken to see that such limitations and precautions are strictly observed.
R 408.13355. Eyecup goggles; components. Rule 3355. Eyecup goggles shall consist of 2 eyecups with lenses and lens retainers, connected by an adjustable bridge, and a replaceable and adjustable headband or other means for retaining the eyecups comfortably in front of the eyes. Recommended applications for the use of eyecup goggles are shown in table 1 of R 408.13312(7).	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13356. Eyecup goggles; types and models. Rule 3356. (1) Eyecup goggles shall be of 2 types as follows: (a) Cup-type goggles designed to be worn by individuals who do not wear corrective spectacles. (b) Cover cup-type goggles designed to fit over corrective spectacles. (2) The 2 types of eyecup goggles are subdivided into the following classes: (a) Chipper's models providing impact protection against flying objects. (b) Dust and splash models providing protection against fine dust particles or liquid splashes and impact. (c) Welder's and cutter's models providing protection against glare, injurious radiations, and impact. (3) The basic designs may be modified to provide more protection against special hazards, but the modified equipment shall meet the same requirements as the basic design.	**No comparable OSHA provision.**
R 408.13357. Eyecup goggles; fit. Rule 3357. (1) The edge of the eyecup of eyecup goggles which bears against the face shall have a smooth surface free from roughness or irregularities which might exert undue pressure or cause discomfort to the wearer. The eyecups shall be of such shape and size as to protect the entire eye sockets. (2) Cover cup-type goggles shall provide ample clearance and not interfere with the spectacles of the wearer. The edge of the goggles which bears against the face shall have a smooth surface free from roughness or irregularities which might exert undue pressure or cause discomfort to the wearer.	**No comparable OSHA provision.**
R 408.13359. Eyecup ventilation. Rule 3359. (1) Eyecups of chipper's models shall be ventilated in a manner to permit circulation of air. (2) Eyecups of dust and splash models shall be ventilated in a manner to permit circulation of air. The ventilation openings shall be baffled or screened to prevent direct passage of dust or liquids into the interior of the eyecups. (3) Eyecups of welder's and cutter's models shall be ventilated in a manner to permit circulation of air and shall be opaque. The ventilation openings shall be baffled to prevent passage of light rays into the interior of the eyecup.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13360. Eyecup lenses and retaining rings. Rule 3360. (1) An eyecup shall be provided with a rigidly constructed lens retaining ring of metal or of plastic designed to accommodate lenses and to permit their ready removal and replacement without damage to the eyecup or to the lenses and without the use of tools. The ring shall provide a complete clamping action against the lens. Lens retainers for welder's and cutter's models shall accommodate a filter lens, fiber gasket, and cover lens. (2) A filter lens shall be marked with the shade designation and a permanent and legible marking by which the manufacturer may be readily identified. A glass filter lens, when treated for impact resistance, shall also be marked with the letter "H".	**No comparable OSHA provision.**
R 408.13362. Flexible and cushioned fitting goggles; construction. Rule 3362. Flexible and cushioned fitting goggles shall consist of a wholly flexible frame, forming a lens holder or with a separable lens holder or a rigid frame with integral lens or lenses, having a separate cushioned fitting surface on the full periphery of the facial contact area. Materials used shall be chemical-resistant, nontoxic, nonirritating, and slow burning. There shall be a positive means of support on the face, such as an adjustable headband of suitable material or other suitable means of support to retain the frame comfortable and snugly in place in front of the eyes. A frame which is a lens holder or has a separable lens holder shall hold the lenses firmly and tightly and be removable or replaceable without the use of tools. The goggles may be ventilated or not, as required by their intended use. Where chemical goggles are ventilated, the openings shall be such as to render the goggles splashproof.	**No comparable OSHA provision.**
R 408.13363. Flexible and cushioned fitting goggles; protection. Rule 3363. (1) Chipper's models of flexible and cushioned fitting goggles shall provide protection against impact. (2) Dust and splash models shall provide protection from fine dusts, fumes, liquids, splashes, mists, and spray, alone or with reflected light or glare, wind, and impact. (3) Gas welder's and cutter's models shall provide protection against glare, injurious radiations, and impact.	**No comparable OSHA provision.**
R 408.13364. Flexible and cushioned fitting goggles; marking. Rule 3364. (1) The frame of flexible and cushioned fitting goggles shall bear a trademark or name identifying the manufacturer. (2) Each separate lens shall be distinctly marked in a manner by which the manufacturer may be identified. (3) A heat-treated glass filter plate or lens shall also be marked with the shade designation and the letter "H". (4) The marking shall be clear cut and permanent and so placed as not to interfere with the vision of the wearer.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13366. Foundrymen's goggles; construction. Rule 3366. (1) A foundryman's goggles shall consist of a mask made of a flexible, nonirritating, and noncombustible or slow-burning material, such as a leather or flexible plastic, suitable ends holders attached thereto, lenses, and a positive means of support on the face, such as an adjustable headband, to retain the mask comfortably and snugly in place in front of the eyes. The edge of the mask on contact with the face shall be provided with a binding of corduroy or other suitable material. The lens holders shall hold the lenses firmly and tightly and may be readily removable or replaceable. The lens holders shall be ventilated to permit circulation of air.	**No comparable OSHA provision.**
R 408.13367 Foundrymen's goggles; protection. Rule 3367. (1) A foundryman's goggles shall provide protection against impact and hot-metal splash hazards encountered in foundry operations such as melting, pouring, chipping, babbitting, grinding, and riveting. Where required, they shall also provide protection against dusts. (2) Applications for use of foundryman's goggles are shown in Table 1 or R 408.13312(7). (3) Materials shall resist flame, corrosion, water, and sanitizing.	**No comparable OSHA provision.**
R 408.13369. Metal, plastic, and combination metal and plastic spectacles. Rule 3369. (1) Spectacles of metal, plastic, or a combination thereof, shall consist of 2 lenses in a frame which supports the lenses around their entire periphery of suitable size and shape for the purpose intended connected by a nose bridge, and retained on the face by temples or other suitable means. The spectacles shall be furnished with or without sideshields depending upon their intended use. The frames, temples, and sideshields may be metal or plastic and when made of plastic shall be of the slow-burning type. (2) Spectacles shall provide protection to the eye from flying objects, and, when required, from glare and injurious radiations. Spectacles without sideshields are intended to provide frontal protection. Where side as well as frontal protection is required, the spectacles shall be provided with sideshields. See Table 1 of R 408.13312(7). (3) Frames shall be designed for industrial exposure and shall bear a trademark identifying the manufacturer on both fronts and temples. The frame front shall carry a designation of the eye size and bridge size, where applicable. Temples shall be marked as to the overall length or fitting value. (4) Temples may be of the cable or spatula type, as specified, and shall be of such design as to permit adjustment and fit comfortably and securely on the wearer. The size of the temples shall be clearly marked. (5) Safety lens in frames which do not comply with this part shall not be worn.	**No comparable OSHA provision.**

MIOSHA	OSHA
HEAD PROTECTION EQUIPMENT	
R 408.13370. Head protection generally. Rule 3370. (1) An employer shall ensure that each affected employee shall be provided with, and shall wear, head protection equipment and accessories when the employee is required to be present in areas where a hazard exists from falling or flying objects or from other harmful contacts or exposures or where there is a risk of injury from electric shock, hair entanglement, chemicals, or temperature extremes. (2) Service facilities shall be provided for the sanitizing and replacement of needed parts when necessary and before head protection equipment is reissued. (3) Head protection equipment that has been physically altered or damaged shall not be worn or reissued to an employee. (4) An employee shall not physically alter, and shall guard against damage to, the head protection equipment provided. (5) An employee shall use the provided head protection equipment in accordance with the instructions and training received.	**1910.135(a) General requirements.** **1910.135(a)(1)** The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects. **1910.135(a)(2)** The employer shall ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head. **1910.135(b) Criteria for protective helmets.** **1910.135(b)(1)** Protective helmets purchased after July 5, 1994 shall comply with ANSI Z89.1-1986, "American National Standard for Personnel Protection-Protective Headwear for Industrial Workers-Requirements," which is incorporated by reference as specified in Sec. 1910.6, or shall be demonstrated to be equally effective. **1910.135(b)(2)** Protective helmets purchased before July 5, 1994 shall comply with the ANSI standard "American National Standard Safety Requirements for Industrial Head Protection," ANSI Z89.1-1969, which is incorporated by reference as specified in Sec. 1910.6, or shall be demonstrated by the employer to be equally effective.
R 408.13375. Protective helmets. Rule 3375. (1) Protective helmets or safety hats and caps shall be of the following types: (a) Class - A - Limited voltage protection. (b) Class - B - High voltage protection. (c) Class - C - No voltage protection. (d) Class - D - Limited voltage protection – fire fighters service helmets with full brim. (2) A class C helmet or any metallic head device shall not be furnished by an employer or used by an employee for head protection, except where it has been determined that the use of other types of protective helmets or safety hats or caps is impractical, such as where chemical reaction will cause the deterioration of other types of head protection. (3) A protective helmet furnished by an employer shall be identified on the inside of the shell with the name of the manufacturer. (4) When used in conjunction with protective helmets, face shields, welding helmets, and goggles shall be in compliance with the requirements set forth in R 408.13311 to R 408.13369 and Michigan department of consumer and industry services, division of occupational health standards for hearing protection being R 325.60101. (5) Winter liners and chin straps used in conjunction with class B helmets for high-voltage protection shall not contain any metallic parts or other conductive materials. Winter liners and chin straps used in areas where there is a danger of ignition from heat, flame, or chemical reaction shall be made of materials that are nonburning or flame retardant.	**No comparable OSHA provision.**

MIOSHA	OSHA
(6) Bump hats or caps or other limited-protection devices shall not be used as a substitute for protective helmets for the hazards described in R 408.13370. (7) Protective helmets designed to reduce electrical shock hazard shall be worn by an employee who is near exposed electrical conductors that could come in contact with the employee's head.	**No comparable OSHA provisions**
R 408.13376. Hoods. Rule 3376. (1) A hood shall be made of materials that combine mechanical strength and lightness of weight to a high degree, shall be nonirritating to the skin when subjected to perspiration and shall be capable of withstanding frequent cleaning and disinfection. Materials used in the manufacture of hoods shall also be suitable to withstand the hazards to which the user may be exposed. (2) A hood shall bear a permanent and legible marking by which the manufacturer may be readily identified. (3) A hood shall be designed to provide adequate ventilation for the wearer. Where air lines are used they shall be installed and used in accordance with Michigan department of consumer and industry services, division of occupational health standards. (4) A protective helmet shall be used in conjunction with a hood where there is a head injury hazard and the hood shall be designed to accommodate such helmet.	**No comparable OSHA provision.**
R 408.13378. Hair enclosures. Rule 3378. A hat, cap, or net shall be used by a person where there is a danger of hair entanglement in moving machinery or equipment, or where there is exposure to means of ignition. It shall be designed to be reasonably comfortable to the wearer, completely enclose all loose hair, and be adjustable to accommodate all head sizes. Material used for a hair enclosure shall be fast dyed, nonirritating to the skin when subjected to perspiration, and capable of withstanding frequent cleaning. It shall not be reissued from one employee to another unless it has been thoroughly sanitized.	**No comparable OSHA provision.**
R 408.13384. Toe protection. Rule 3384. Where toe protection other than safety toe footwear is worn, the toe protection shall have an impact value of not less than that required for the safety toe footwear.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13385. Foot protection generally. Rule 3385. (1) An employer shall ensure that each affected employee shall wear protective footwear when working in areas where an employee's feet are exposed to electrical hazards or where there is a danger of foot injuries due to falling or rolling objects or a danger of objects piercing the sole of the shoe. The payment for protective footwear shall be determined between the employer and the employee or shall be as determined by a collective bargaining agreement. (2) Safety shoes and boots which are not worn over shoes and which are worn by more than 1 employee shall be maintained, cleaned, and sanitized inside and out before being issued to another employee.	**1910.136(a) General requirements.** The employer shall ensure that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards**.**
R 408.13386. Foot protection; specific requirements. Rule 3386. Where a hazard is created from a process, environment, chemical, or mechanical irritant which would cause an injury or impairment to the feet by absorption or physical contact, other than from impact, footwear, such as boots, overshoes, rubbers, wooden-soled shoes, or their equivalent, shall be used.	**No comparable OSHA provision.**
ELECTRICAL PROTECTIVE EQUIPMENT	
R 408.13387. Electrical protective equipment; design; certification; use; storage. Rule 3387. (1)to (9)(k)**** (9)(l)****…The marking of equipment and entering the results of the tests and the dates of testing onto logs are acceptable means of equipment identification. (10) Material other than rubber that offers protection equivalent to or greater than rubber may be used if the material is certified to meet the appropriate ANSI-ASTM standard tests. (11) An insulated blanket, glove, or sleeve shall be capable of withstanding the voltage to which it may be subjected. (12) Exposed conductors or equipment, or both, except for conductors or equipment being directly worked on, which is energized from 750 volts to 28,000 volts phase to ground and which an employee may reach into or touch shall be isolated or covered with at least 1 of the following: (a) An insulating blanket. (b) An insulating hood. (c) An insulating line hose. (d) An insulating barrier.	Equivalent **No comparable OSHA provision.**

MIOSHA	OSHA
(13) An employee shall use insulating gloves and sleeves capable of withstanding the imposed voltage when performing any of the following activities: (a) Working directly on, or within reaching distance of, a conductor or equipment at a nominal 750 volts or more phase to ground, except when using barehanded techniques or a hot stick. Sleeves are not required for an employee who performs routine switching operations in a substation or powerhouse. An employee who uses gloves and sleeves and works directly on or within reaching distance of a conductor or equipment energized at more than 5,000 volts phase to ground shall do so from an insulated platform or board or an aerial device that has an insulated basket. (b) Connecting or disconnecting primary neutrals, pole ground wires, or other conductors normally connected to static wires or energized equipment, except that gloves and sleeves need not be worn while connecting and disconnecting a service neutral or secondary neutral. (c) Working on a de-energized conductor that extends into an area in which contact may be made with an energized conductor or exposed parts of energized equipment, unless the conductor is grounded or isolated. Insulating sleeves are optional at voltages of less than 750 volts phase to ground. (14) An employee shall use insulating gloves capable of withstanding the imposed voltage when performing either of the following activities: (a) When working with a powered or manual hole digger while using booms or using winch lines to install or remove poles or equipment where the hole digger may contact conductors or equipment energized at a voltage of 300 volts or more phase to ground. An employee need not use the gloves while in the enclosed cab of the equipment. (b) When working directly on a conductor or equipment energized at a voltage of more than 240 volts phase to ground. This does not include the use of test equipment.	**No comparable OSHA provisions**

MIOSHA	OSHA
SAFETY BELTS, HARNESSES, LIFELINES, AND LANYARDS	
R 408.13390. General requirements; safety belts, safety harnesses, lifelines, and lanyards generally. Rule 3390. (1) Unless a safety net is used as prescribed in construction safety standard, Part 45. Fall Protection, being R 408.44501 et seq. of the Michigan Administrative Code, or an employee is protected by a perimeter guardrail or is working on a portable ladder, the employee shall be safeguarded by a safety belt or safety harness secured to a lifeline or structure capable of sustaining the imposed load, if the employee's work station is more than 25 feet above the ground, floor, water, or other surface. The safety belt and harness and any lifeline or lanyard shall be used only for safeguarding the employee. A safety belt, safety harness, lifeline, or lanyard subjected to in-service loading, rather than static loading, shall be removed from service and shall not be used again for employee safeguarding.	**1926.104(a)** Lifelines, safety belts, and lanyards shall be used only for employee safeguarding. Any lifeline, safety belt, or lanyard actually subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding. **1926.104(e)** All safety belt and lanyard hardware shall be drop forged or pressed steel, cadmium plated in accordance with type 1, Class B plating specified in Federal Specification QQ-P-416. Surface shall be smooth and free of sharp edges.
(2) to (5)****	Equivalent
(6) A safety belt, safety strap, safety harness, lanyard, or lifeline, including the hardware, shall be inspected before using each day. (7) A safety belt, safety harness, lifeline, or lanyard shall be stored in a clean dry area away from excessive heat or other deteriorating conditions. (8) A lifeline or lanyard made of synthetic fibers shall not be kinked, run over sharp corners, used when frozen, left in freezing temperatures when wet, or exposed to sources of ignition or flame.	**No comparable OSHA provisions**
HAND PROTECTION	
R 408.13392. Hand protection generally. Rule 3392.(1) to (2)****	Equivalent
(3) Hand protection interiors shall be kept free of corrosive or irritating contaminants. If more than 1 employee wears a pair of gloves, the gloves shall be sanitized before reissuance.	**No comparable OSHA provision.**

MIOSHA	OSHA
R 408.13394. Body protection. Rule 3394. (1) An employer shall assure that an employee who is required to work so that his or her clothing becomes wet due to a condition other than the weather or perspiration shall use such aprons, coats, jackets, sleeves, or other garments that will keep his or her clothing dry. The material shall be unaffected by the wetting agent. The provision of dry, clean, acid-resistant clothing, in addition to rubber shoes or short boots and an apron, shall be considered a satisfactory substitute where small parts are cleaned, plated, or acid-dipped in an open tank. (2) When abrasive blasting is not protected by an enclosure, the operator shall use heavy canvas or leather gloves and aprons or equivalent protection to provide protection from the impact of abrasives.	**No comparable OSHA provision.**