

**CS Part 27. Blasting and Use of Explosives  
Compared With  
29 C.F.R. 1926 Subpart U – Blasting and the Use of Explosives**

**Summary:** The significant differences between CS Part 27. Blasting and Use of Explosives and 29 C.F.R. 1926 Subpart U – Blasting and the Use of Explosives are in:

- Employee responsibilities
- Employee qualifications
- Permit to handle, transport, and use explosives; requirements
- Blaster supervision of the storage, transportation, and use of explosives required; trainee supervision
- Storage of explosives
- Explosives generally
- Transport of explosives; vehicles
- Transport of explosives
- Vertical transport of explosives
- Extraneous currents; radio transmitters; warning signs
- Safety fuse
- Primers
- Pre-blast blaster responsibilities; stationing flagman during blasting
- Misfires
- Underwater blasting

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
<p><b>R 408.42727 Employer responsibilities.</b>  <b>Rule 2727.</b> (1) Before authorizing and issuing a permit to an employee to work with explosives, an employer shall train an employee in the proper method of handling, transporting, and using an explosive and shall instruct the employee in the applicable rules of this part. The employee shall be known as a blaster.</p> <p>(2) to (5)****</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p>
<p><b>R 408.42728 Employee responsibilities.</b>  <b>Rule 2728.</b> (1) An employee shall not handle, transport, or use an explosive unless the employee has received training in, and is authorized to work with, explosives or is under the supervision of the blaster.</p> <p>(2) to (3)****</p> <p>(4) An employee shall use the method or code of blasting signals prescribed in rule 2727(3) of this part.</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p>

MIOSHA	OSHA
<p><b>R 408.42731 Employee qualifications.</b>  <b>Rule 2731.(1) to (3)****</b></p> <p>(4) Before an employer allows an employee to handle, transport, or use an explosive, or to work as a trainee, the employee shall be trained in the hazards and safeguards of the employee's assigned job and shall be instructed in the requirements of this part.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p>
<p><b>R 408.42732 Permit to handle, transport, and use explosives; requirements.</b>  <b>Rule 2732.</b> (1) A blaster shall obtain a permit to handle, transport, and use explosives issued by the employer.  A permit shall contain, at a minimum, all of the following information:</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>_____ (Name of Employer)                      _____ (Title)</p> <p>_____ (Name of Employee)                      _____ (Employee Signature)</p> <p style="text-align: center;">"The above employee has received training in the handling, transportation, and use of explosives and applicable rules as required by the Michigan Construction Safety Standards Commission standard, Part 27. Blasting and Use of Explosives."</p> <p>RESTRICTIONS: (list)</p> <p>DATE ISSUED: _____</p> <p>EXPIRATION DATE: _____ (not to exceed 3 years)</p> </div>	<p><b>No comparable OSHA provisions</b></p>
<p>(2)****</p> <p>(3) Before the employer issues a permit, the employer of the blaster shall secure a permit from the department of state police as prescribed in section 3 of Act No. 202 of the Public Acts of 1970, being §29.43 of the Michigan Compiled Laws.</p> <p>(4) An employee shall be rechecked in the requirements of rule 2731 not less than every 3 years and be issued a new permit.</p> <p>(5) The permit shall be in the possession of the employee and shall be shown if requested by the director or a department representative.</p> <p>(6) The permit is valid only while working for the employer who issued the permit.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p>

MIOSHA	OSHA
<p><b>R 408.42733 Blaster supervision of the storage, transportation, and use of explosives required; trainee supervision.</b>  <b>Rule 2733. (1)****</b></p> <p>(2) A trainee in the use of an explosive shall work under the direct supervision of the blaster.</p> <p>(3) A blaster shall not be assigned more than 3 trainees at any one time.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision</b></p>
<p><b>R 408.42735 Storage of explosives.</b>  <b>Rule 2735. (1)</b> An explosive shall be stored as prescribed in the commerce in explosives, 27 C.F.R. part 181, April 1979, as adopted by reference in R 408.42799(1) or as prescribed in section F2603.0, storage of explosives, of the BOCA basic fire prevention code, 1984 edition, as adopted by reference in R 408.42799(4).</p> <p>(2) A storage magazine shall be constructed and maintained as prescribed in chapter 6, aboveground storage of explosive materials, of NFPA standard no. 495-1982, as adopted by reference in R 408.42799(5).</p> <p>(3) to (5)****</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p>
<p><b>R 408.42737 Explosives generally.</b>  <b>Rule 2737. (1) to (9)****</b></p> <p>(10) Only a nonsparking tool shall be used in the handling of an explosive, except that a slitter may be used to open fiberboard cases if the slitter does not contact the metal fasteners of the casing.</p> <p>(11) An unused detonator and explosive shall be removed from the work place and shall be returned to the magazine.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p>

MIOSHA	OSHA
<p><b>R 408.42741 Transport of explosives; vehicles.</b>  <b>Rule 2741.</b> (1) The storage compartment of a vehicle that is used for the transportation of more than 6,000 pounds of explosives shall be entirely enclosed and without windows. The doors of the storage compartment shall be equipped with strong hinges that are securely bolted on the inside and shall be provided with a padlock, which shall be kept locked when an explosive is carried in the vehicle. The entire vehicle body shall be constructed so that bolts, screws, nails, or any metal does not protrude on the inside of the vehicle.</p> <p>(2) to (6)****</p> <p>(7) An explosive shall not be transported in any form of trailer, except pursuant to the provisions of 49 C.F.R. §§100 to 177, as adopted by reference in R 408.42799(2).</p> <p>(8) A vehicle that carries an explosive shall be operated by an employee who is not less than 21 years of age.</p> <p>(9) to (10)****</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provision except:</b></p> <p>Equivalent</p>
<p><b>R 408.42742 Transport of explosives.</b>  <b>Rule 2742.</b> (1)****</p> <p>(2) Explosives shall be delivered directly to an approved magazine or blast area.</p> <p>(3) An explosive shall not be transported on a vehicle with a detonator or with other cargo, unless it is stored in a class D magazine or IME 22 cap box as specified in 49 C.F.R. §§100 to 177, as adopted by reference in rule 2799(2) of this part.</p> <p>(4)****</p> <p>(5) Metal, metal tools, carbides, oils, matches, electric storage batteries, inflammable substances, acids, and oxidizing or corrosive compounds shall not be transported in the bed or body of any vehicle or vessel containing explosives.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provision</b></p>

MIOSHA	OSHA
<p><b>R 408.42743 Vertical transport of explosives.</b>  <b>Rule 2743.</b> (1) When transporting an explosive vertically, all of the following provisions shall be complied with:</p> <ul style="list-style-type: none"> <li>(a) The explosive shall be hoisted and lowered in a closed original container or class D magazine on a cage or hoisting platform.</li> <li>(b) The container or magazine shall be placed on a wooden floor of the cage or platform.</li> <li>(c) Other materials shall not be permitted in the same cage or shaft conveyance.</li> <li>(d) An employee shall not be permitted in a shaft or hoistway, nor within 100 feet of the hoistway, during the time an explosive is being transported in the shaft or hoistway.</li> <li>(e) The hoist or crane operator shall be notified before the loading and unloading of explosives.</li> <li>(f) A hoist shall be in compliance with rules 1476 and 1477 of Part 14. Tunnels, Shafts, Caissons, and Cofferdams, being R 408.41476 and R 408.41477 of the Michigan Administrative Code, and the applicable subrules of rule 1001 of Part 10. Lifting and Digging Equipment, being R 408.41001 et seq. of the Michigan Administrative Code.</li> </ul> <p>(2) If a crane and platform is used, a voice communication system shall be established between the operator and the loading and unloading area.</p> <p>(3) Excluding a safety hook, the cage or platform shall be connected to the loadline by a positive closed swivel connector.</p>	<p><b>No comparable OSHA provision</b></p>
<p><b>R 408.42751 Loading explosives.</b>  <b>Rule 2751.</b> (1) Before an explosive is delivered to a blast area, all of the following provisions shall be complied with:</p> <ul style="list-style-type: none"> <li>(a)****</li> <li>(b) Electrically powered machines and equipment, except for a machine that is used to load a hole, shall be de-energized.</li> <li>(c)****</li> </ul> <p>(2) A drill hole shall conform to the following requirements:</p> <ul style="list-style-type: none"> <li>(a) to (c)****</li> <li>(d) A drill hole which has been sprung and which is not water-filled shall be cooled not less than 2 hours before an explosive is loaded.</li> </ul> <p>(3) to (10)****</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p>Equivalent</p> <p><b>1926.905 Loading of explosives or blasting agents.</b>  <b>(r)</b> Drill holes which have been sprung or chambered, and which are not water-filled, shall be allowed to cool before explosives are loaded.</p> <p>Equivalent</p>

MIOSHA	OSHA
<p><b>R 408.42752 Extraneous currents; radio transmitters; warning signs.</b>  <b>Rule 2752. (1) to (5)****</b></p> <p>(6) The sign shown in figure 3 shall be used at the end of the blast area either with or preceding an "End Construction Zone" sign.</p> <p>(7) Warning signs shall be prominently displayed during the loading and firing of the blast. Warning signs shall be covered or removed when an explosive is not in the area or when an explosive is secured in a magazine.  See Figure 3</p> <p>(8) to (10)****</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision</b></p> <p>Equivalent</p>
<p><b>R 408.42753. Wiring the charge.</b>  <b>Rule 2753. (1) to (10)****</b></p> <p>(11) The wires of an electrical firing device or fuse shall not be subjected to a harmful strain.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision</b></p>
<p><b>R 408.42755 Safety fuse.</b>  <b>Rule 2755 (1)****</b></p> <p>(2) When preparing a safety fuse, the blaster shall do all of the following:</p> <p>(a) to (c)****</p> <p>(d) Reject a damaged fuse and dispose of it as prescribed in rule 2737 of these rules.</p> <p>(e) Cut fuse squarely across with a clean sharp blade.</p> <p>(3) to (9)****</p> <p>(10) A safety fuse shall not be used for firing 2 or more charges which must detonate simultaneously</p>	<p>Equivalent</p> <p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provision</b></p>

MIOSHA	OSHA
<p><b>R 408.42756 Primers.</b>  <b>Rule 2756.</b> (1) A primer shall comply with the following requirements:</p> <ul style="list-style-type: none"> <li>(a) The blasting cap shall not be pulled out of the primer cartridge.</li> <li>(b) The blasting cap shall be in the safest and most effective position in the primer cartridge.</li> <li>(c) If necessary, the primer shall be water-resistant.</li> <li>(d) The whole primer assembly shall be loaded safely, easily, conveniently, and in the preferred position in the charge.</li> </ul> <p>(2) The blasting cap shall be inserted deep into the center of the primer cartridge and shall lie as close as possible along the cartridge's long axis.</p> <p>(3) A dynamite punch shall be used for punching holes through the primer cartridge for the insertion of a cap, wire, or detonating cord.</p> <p>(4) A dynamite primer assembly shall be made immediately before the start of the loading operation.</p>	<p><b>No comparable OSHA provisions except:</b></p>
<p><b>R 408.42759 Misfires.</b>  <b>Rule 2759.</b> (1) If a misfire is found, both of the following requirements shall be complied with:</p> <ul style="list-style-type: none"> <li>(a) The blaster shall immediately report this misfire to his or her supervisor and shall prevent all employees from entering the area, except for his or her helper.</li> <li>(b) A new primer shall be inserted and the hole shall be re-blasted. If this procedure might present a hazard, the explosive shall be washed out with water or blown out with oil-entrained air.</li> </ul> <p>(2) If a misfire occurs while using a fuse arrangement, all employees shall be prevented from entering the area for a period of not less than 3 hours. The blaster shall then enter the area for inspection purposes and shall follow the procedures set forth in subrule (1) of this rule, if necessary.</p> <p>(3)****</p>	<p><b>1926.911 Misfires. (d)</b> If there are any misfires while using cap and fuse, all employees shall remain away from the charge for at least 1 hour. Misfires shall be handled under the direction of the person in charge of the blasting. All wires shall be carefully traced and a search made for unexploded charges.</p> <p>Equivalent</p>
<p><b>R 408.42761 Underwater blasting.</b>  <b>Rule 2761.</b> (1) to (2)****</p> <p>(3) Swimmers, divers, and vessels shall not be less than 1500 feet away from a blast area when a blast is made, except that a vessel containing only the blaster and his or her crew members may remain at the outer edge of the blast area if they will not be placed in jeopardy by the blast. Those on board the vessel in the blast area shall be notified before the blast is fired. Blasting flags or coast guard-approved warning devices shall be displayed at a distance of not less than 1500 feet from the blast area.</p>	<p>Equivalent</p> <p><b>1926.912 Underwater blasting. (d)</b> No blast shall be fired while any vessel under way is closer than 1,500 feet to the blasting area. Those on board vessels or craft moored or anchored within 1,500 feet shall be notified before a blast is fired.</p>

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