

§ 1910.134 Respiratory protection.

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(i) * * *
(4) * * *
(i) Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 180);

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(9) The employer shall use only the respirator manufacturer's NIOSH-approved breathing-gas containers, marked and maintained in accordance with the Quality Assurance provisions of the NIOSH approval for the SCBA as issued in accordance with the NIOSH respirator-certification standard at 42 CFR part 84.

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(o) Appendices. Compliance with Appendix A, Appendix B-1, Appendix B-2, Appendix C, and Appendix D to this section are mandatory.

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APPENDIX C TO § 1910.134: * * *
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Part A. Section 2. * * *
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2. * * *
a. Seizures: Yes/No
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§ 1910.135 Head protection.

(a) General requirements. (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.
(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.
(b) Criteria for head protection. (1) Head protection must comply with any of the following consensus standards:
(i) ANSI Z89.1-2003, "American National Standard for Industrial Head

Protection," which is incorporated by reference in § 1910.6;
(ii) ANSI Z89.1-1997, "American National Standard for Industrial Head Protection," which is incorporated by reference in § 1910.6; or
(iii) ANSI Z89.1-1986, "American National Standard for Personnel Protection—Protective Headwear for Industrial Workers—Requirements," which is incorporated by reference in § 1910.6.

(2) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

[59 FR 16362, Apr. 6, 1994, as amended at 61 FR 9238, Mar. 7, 1996; 61 FR 19548, May 2, 1996; 74 FR 46356, Sept. 9, 2009]

§ 1910.136 Foot protection.

(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.

(b) Criteria for protective footwear. (1) Protective footwear must comply with any of the following consensus standards:

- (i) ASTM F-2412-2005, "Standard Test Methods for Foot Protection," and ASTM F-2413-2005, "Standard Specification for Performance Requirements for Protective Footwear," which are incorporated by reference in § 1910.6;
(ii) ANSI Z41-1999, "American National Standard for Personal Protection—Protective Footwear," which is incorporated by reference in § 1910.6; or
(iii) ANSI Z41-1991, "American National Standard for Personal Protection—Protective Footwear," which is incorporated by reference in § 1910.6.

(2) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be

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deemed to be in compliance with the requirements of this section.

[59 FR 16362, Apr. 6, 1994; 59 FR 33911, July 1, 1994, as amended at 61 FR 9238, Mar. 7, 1996; 61 FR 19548, May 2, 1996; 61 FR 21228, May 9, 1996; 74 FR 46356, Sept. 9, 2009]

§ 1910.137 Electrical protective equipment.

(a) *Design requirements.* Insulating blankets, matting, covers, line hose, gloves, and sleeves made of rubber shall meet the following requirements:

(1) *Manufacture and marking.* (i) Blankets, gloves, and sleeves shall be produced by a seamless process.

(ii) Each item shall be clearly marked as follows:

(A) Class 0 equipment shall be marked Class 0.

(B) Class 1 equipment shall be marked Class 1.

(C) Class 2 equipment shall be marked Class 2.

(D) Class 3 equipment shall be marked Class 3.

(E) Class 4 equipment shall be marked Class 4.

(F) Non-ozone-resistant equipment other than matting shall be marked Type I.

(G) Ozone-resistant equipment other than matting shall be marked Type II.

(H) Other relevant markings, such as the manufacturer's identification and the size of the equipment, may also be provided.

(iii) Markings shall be nonconducting and shall be applied in such a manner as not to impair the insulating qualities of the equipment.

(iv) Markings on gloves shall be confined to the cuff portion of the glove.

(2) *Electrical requirements.* (i) Equipment shall be capable of withstanding the a-c proof-test voltage specified in Table I-2 or the d-c proof-test voltage specified in Table I-3.

(A) The proof test shall reliably indicate that the equipment can withstand the voltage involved.

(B) The test voltage shall be applied continuously for 3 minutes for equipment other than matting and shall be applied continuously for 1 minute for matting.

(C) Gloves shall also be capable of withstanding the a-c proof-test voltage specified in Table I-2 after a 16-hour

water soak. (See the note following paragraph (a)(3)(ii)(B) of this section.)

(ii) When the a-c proof test is used on gloves, the 60-hertz proof-test current may not exceed the values specified in Table I-2 at any time during the test period.

(A) If the a-c proof test is made at a frequency other than 60 hertz, the permissible proof-test current shall be computed from the direct ratio of the frequencies.

(B) For the test, gloves (right side out) shall be filled with tap water and immersed in water to a depth that is in accordance with Table I-4. Water shall be added to or removed from the glove, as necessary, so that the water level is the same inside and outside the glove.

(C) After the 16-hour water soak specified in paragraph (a)(2)(i)(C) of this section, the 60-hertz proof-test current may exceed the values given in Table I-2 by not more than 2 milliamperes.

(iii) Equipment that has been subjected to a minimum breakdown voltage test may not be used for electrical protection. (See the note following paragraph (a)(3)(ii)(B) of this section.)

(iv) Material used for Type II insulating equipment shall be capable of withstanding an ozone test, with no visible effects. The ozone test shall reliably indicate that the material will resist ozone exposure in actual use. Any visible signs of ozone deterioration of the material, such as checking, cracking, breaks, or pitting, is evidence of failure to meet the requirements for ozone-resistant material. (See the note following paragraph (a)(3)(ii)(B) of this section.)

(3) *Workmanship and finish.* (i) Equipment shall be free of harmful physical irregularities that can be detected by the tests or inspections required under this section.

(ii) Surface irregularities that may be present on all rubber goods because of imperfections on forms or molds or because of inherent difficulties in the manufacturing process and that may appear as indentations, protuberances, or imbedded foreign material are acceptable under the following conditions:

(A) The indentation or protuberance blends into a smooth slope when the material is stretched.