

**Subpart 111.77—Appliances and
Appliance Circuits**

§ 111.77-1 Overcurrent protection.

If a circuit supplies only one appliance or device, the rating or setting of the branch circuit overcurrent device must not be more than 150 percent of the rating of the appliance or device, or 15 amperes, whichever is greater.

§ 111.77-3 Appliances.

All electrical appliances, including, but not limited to, cooking equipment, dishwashers, refrigerators, and refrigerated drinking water coolers, must meet UL safety and construction standards or equivalent standards under §110.20-1 of this chapter. Also, this equipment must be suitably installed for the location and service intended.

[CGD 94-108, 61 FR 28283, June 4, 1996; 61 FR 33045, June 26, 1996]

Subpart 111.79—Receptacles

§ 111.79-1 Receptacle outlets; general.

(a) There must be a sufficient number of receptacle outlets in the crew accommodations for an adequate level of habitability.

(b) There must be a sufficient number of receptacle outlets throughout the machinery space so that any location can be reached by a portable power cord having a length not greater than 24 meters (75 feet).

(c) Each receptacle outlet must be compatible with the voltage and current of the circuit in which it is installed.

(d) Each receptacle outlet must be suitable for the environment in which it is installed and constructed to the appropriate NEMA or IEC protection standard as referenced in §111.01-9. Special attention must be given to outlets in hazardous locations.

(e) A receptacle outlet must not have any exposed live parts with the plug opening uncovered.

[CGD 94-108, 61 FR 28283, June 4, 1996]

§ 111.79-3 Grounding pole.

Each receptacle outlet that operates at 100 volts or more must have a grounding pole.

§ 111.79-9 Transmitting power between receptacles.

(a) If it is necessary to transmit current in one direction between two receptacle outlets by a flexible cable with a plug on each end, such as a battery charging lead between a receptacle outlet on a ship and a receptacle outlet in a lifeboat, the plug that may be energized when not in the receptacle outlet must be female.

(b) If a receptacle outlet may be used as a source of power and as a receiver of power, such as the receptacles on barges that may have to supply power to adjoining barges in some makeup and receive power from the towboat or adjoining barge in other makeups, the receptacles must be male and reverse service. Plugs of flexible cable must be female and must be at both ends of the flexible lead. The female plug must meet §111.79-7.

§ 111.79-11 Lifeboat receptacles.

Each receptacle outlet on a lifeboat for connection to a vessel's electrical system must allow the plug to pull free when the lifeboat is lowered.

§ 111.79-13 Different voltages and power types.

If receptacle outlets on a vessel are supplied by different voltages (e.g., 110 volts and 220 volts) or by different types of power (e.g., AC and DC), each receptacle outlet must preclude the plugging of a portable device into a receptacle outlet of an incompatible voltage or type of power.

[CGD 94-108, 61 FR 28283, June 4, 1996]

§ 111.79-15 Receptacles for refrigerated containers.

Receptacles for refrigerated containers must meet one of the following:

(a) Each receptacle for refrigerated containers must have a switch interlocked in such a way that the receptacle's contacts are deenergized before the making or breaking of the connection between the plug and receptacle contacts.

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(b) Each group of receptacles for refrigerated containers must have:

(1) A switch near the receptacles that disconnects all power to those receptacles; and

(2) A sign stating that the switch should be opened before cables are disconnected from the receptacles or refrigerated containers.

(c) Each receptacle for refrigerated containers must be designed for circuit breaking service.

Subpart 111.81—Outlet Boxes and Junction Boxes

§ 111.81-1 Outlet boxes and junction boxes; general.

(a) The requirements of this subpart apply to each outlet box used with a lighting fixture, wiring device, or similar item, including each separately installed connection and junction box.

(b) An outlet box must be at each outlet, switch, receptacle, or junction point.

(c) Each outlet or junction box must have a cover unless a fixture canopy, switch cover, receptacle cover, or other cover is used.

(d) As appropriate, each outlet-box or junction-box installation must meet the following standards, all of which are incorporated by reference (see 46 CFR 110.10-1): Article 314 of NFPA NEC 2002; UL 50; UL 514A, UL 514B, and UL 514C; IEC 60092-101; IEC 92-201; IEC 92-306; IEC 60092-352; IEC 92-401; and IEC 60092-502.

(e) Each outlet or junction box must be securely attached to its mounting and be affixed so as to maintain its designated degree of protection.

(f) Each outlet and junction box must be suitable for the environment in which it is installed and be constructed to the appropriate NEMA or IEC standard.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996; USCG-2003-16630, 73 FR 65199, Oct. 31, 2008]

§ 111.81-3 Cables entering boxes.

Each cable entering a box or fitting must be protected from abrasion and must meet the following:

(a) Each opening through which a conductor enters must be closed.

(b) Cable armor must be secured to the box or fitting.

(c) Each cable entrance in a damp or wet location must be made watertight by a terminal or stuffing tube.

Subpart 111.83—Shore Connection Boxes

§ 111.83-1 General.

Each shore connection box must be of a size that accommodates the connections of the flexible and fixed cables.

§ 111.83-5 Bottom entrance and protected enclosures.

Each shore connection box must have a bottom entrance for the shore connection cable. The box must provide protection to the shore connection when the connection is in use.

Subpart 111.85—Electric Oil Immersion Heaters

§ 111.85-1 Electric oil immersion heaters.

Each oil immersion heater must have the following:

(a) An operating thermostat.

(b) Heating elements that have no electrical contact with the oil.

(c) A high temperature limiting device that:

(1) Opens all conductors to the heater;

(2) Is manually reset; and

(3) Actuates at a temperature below the flashpoint of the oil.

(d) Either—

(1) A low-fluid-level device that opens all conductors to the heater if the operating level drops below the manufacturer's recommended minimum safe level; or

(2) A flow device that opens all conductors to the heater if there is inadequate flow.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996]

Subpart 111.87—Electric Air Heating Equipment

§ 111.87-1 Applicability.

This subpart applies to electrically energized units or panels for heating a