

§ 108.487

46 CFR Ch. I (10-1-06 Edition)

§ 108.487 Helicopter deck fueling operations.

(a) Each helicopter landing deck on which fueling operations are conducted must have a fire protection system that discharges protein foam or aqueous film forming foam.

(b) a system that only discharges foam must—

(1) Have enough foam agent to discharge foam continuously for at least 5 minutes at maximum discharge rate;

(2) Have at least the amount of foam agent needed to cover an area equivalent to the swept rotor area of the largest helicopter for which the deck is designed with foam at—

(i) If protein foam is used, 6.52 liters per minute for each square meter (.16 gallons per minute for each square foot) of area covered for five minutes;

(ii) If aqueous film forming foam is used, 4.07 liters per minute for each square meter (.1 gallons per minute for each square foot) of area covered for five minutes; and

(3) Be capable of discharging from each hose at 7 kilograms per square centimeter (100 pounds per square inch) pressure—

(i) A single foam stream at a rate of at least 340 liters (90 gallons) per minute; and

(ii) A foam spray at a rate of at least 190 liters (50 gallons) per minute.

(c) Each system must have operating controls at each of its hose locations, be protected from icing and freezing, and be capable of operation within 10 seconds after activation of its controls.

(d) Each system must have at least one hose at each of the two access routes required by §108.235(f) of this part. Each hose must be reel mounted and long enough to cover any point on the helicopter deck. Each hose that discharges foam must have a nozzle that has foam stream, foam spray, and off positions.

§ 108.489 Helicopter fueling facilities.

(a) Each helicopter fueling facility must have a fire protection system that discharges one of the following agents in the amounts prescribed for the agents over the area of the fuel containment systems around marine portable tanks, fuel transfer pumps and fuel hose reels:

(1) Protein foam at the rate of 6.52 liters per minute for each square meter (.16 gallons per minute for each square foot) of area covered for five minutes.

(2) Aqueous film forming foam at the rate of 4.07 liters per minute for each square meter (.1 gallon per minute for each square foot) of area covered for five minutes.

(3) 22.5 kilograms (50 pounds) of dry chemical (B-V semi-portable) for each fueling facility of up to 27.87 square meters (300 square feet).

(b) If the fire protection system required by §108.487 of this subpart is arranged so that it covers both a helicopter fueling facility and a landing deck, the system must have the quantity of agents required by this section in addition to the quantity required by §108.487.

**HAND PORTABLE AND SEMI-PORTABLE
FIRE EXTINGUISHING SYSTEMS**

§ 108.491 General.

Each hand portable and semiportable fire extinguisher on a unit must be approved under Subpart 162.028 or 162.039 of this chapter.

§ 108.493 Location.

(a) Each unit must have the hand portable and semiportable fire extinguishers prescribed in Table 108.495(a) of this subpart and installed in the locations prescribed in the table.

(b) Each portable and semi-portable fire extinguisher must be visible and readily accessible.

(c) The location, size, and number of each portable and semiportable fire extinguisher on a unit must be acceptable to the appropriate OCM. The OCM may require extinguishers in addition to those prescribed in Table 108.495(a) if he considers them necessary for fire protection on the unit.

(d) Each hand portable and semiportable fire extinguisher that has a nameplate which states that it is to be protected from freezing, must be located where freezing temperatures do not occur.

§ 108.495 Spare charges.

(a) Each unit must have enough spare charges for 50 percent of the hand portable fire extinguishers required under

Table 108.495(a) of this subpart that are rechargeable by personnel on the unit. unit, it must also have at least one spare extinguisher for each classification and variety of those extinguishers.
 (b) If a unit has extinguishers that cannot be recharged by personnel on

TABLE 108.495(a)—HAND PORTABLE FIRE EXTINGUISHERS AND SEMI-PORTABLE FIRE-EXTINGUISHING SYSTEMS

Space	Classification (see table 108.495(b))	Quantity and location
SAFETY AREAS		
Wheelhouse and control room	C-I	2 in vicinity of exit.
Stairway and elevator enclosure .....	.....	None required.
Corridors	A-II	1 in each corridor not more than 150 ft (45 m) apart. (May be located in stairways.)
Lifeboat embarkation and lowering stations .....	.....	None required.
Radio room	C-I	2 in vicinity of exit.
ACCOMMODATIONS		
Staterooms, toilet spaces, public spaces, offices, lockers, small storerooms, and pantries, open decks, and similar spaces.	.....	None required.
SERVICE SPACES		
Galley	B-II or C-II	1 for each 2,500 ft ² (232 m ²) or fraction thereof suitable for hazards involved.
Paint and lamp rooms	B-II	1 outside each room in vicinity of exit.
Storerooms	A-II	1 for each 2,500 ft ² (232 m ²) or fraction thereof located in vicinity of exits, either inside or outside the spaces.
Work shop and similar spaces	C-II	1 outside each space in vicinity of an exit.
MACHINERY SPACES		
Oil-fired boilers: Spaces containing oil-fired boilers, either main or auxiliary, or their fuel oil units.	B-II	2 required in each space.
Internal combustion or gas turbine propelling machinery spaces.	B-II	1 required in each space.
.....	B-II	1 for each 1,000 brake horsepower but not less than 2 nor more than 6 in each space.
.....	B-III	1 required in each space. See note 1.
Motors or generators of electric propelling machinery that do not have an enclosed ventilating system.	C-II	1 for each motor or generator.
Motors and generators of electric propelling machinery that have enclosed ventilating systems.	.....	None required.
AUXILIARY SPACES		
Internal combustion engines or gas turbine	B-II	Outside the space containing engines or turbines in vicinity of exit.
Electric emergency motors or generators	C-II	1 outside the space containing motors or generators in vicinity of exit.
Steam driven auxiliary machinery .....	.....	None required.
Trunks to machinery spaces .....	.....	Do.
Fuel tanks .....	.....	Do.
MISCELLANEOUS AREAS		
Helicopter landing decks	B-V	1 at each access route.
Helicopter fueling facilities	B-IV	1 at each fuel transfer facility. See note 2.
Drill floor	C-II	2 required.
Cranes with internal combustion engines	B-II	1 required.

Notes: 1. Not required where a fixed gas extinguishing system is installed.
 2. Not required where a fixed foam system is installed in accordance with § 108.489 of this subpart.

TABLE 108.495(b)

	Classification: Type and size	Water liters (gallons)	Foam liters (gallons)	Carbon dioxide kilograms (pounds)	Dry chemical kilograms (pounds)	Halon 1211 kilograms (pounds)
A	II	9.5 (2½)	9.5 (2½) .....	.....	2.25 (5) ³ .....	.....
B	I .....	.....	4.7 (1¼)	1.8 (4)	0.9 (2)	1.1 (2½)
B	II .....	.....	9.5 (2½)	6.7 (15)	4.5 (10)	4.5 (10) ⁵

TABLE 108.495(b)—Continued

	Classification: Type and size	Water liters (gallons)	Foam liters (gallons)	Carbon dioxide kilograms (pounds)	Dry chemical kilograms (pounds)	Halon 1211 kilograms (pounds)
B	III		45.5 (12)	15.8 (35)	9.0 (20)	
B	IV		7.6 (20)	22.5 (50)	13.5 (30)	
B	V		152 (40)	45 (100) ⁴	22.5 (50) ⁴	
C	I			1.8 (4)	0.9 (2)	
C	II			6.7 (15)	4.5 (10)	
C	III			15.8 (35)	9.0 (20)	
C	IV			22.5 (50)	13.5 (30)	

NOTE: 1. Fire extinguishers are designed by type as follows: (a) "A" for fires in combustible materials such as wood. (b) "B" for fires in flammable liquids and greases. (c) "C" for fires in electrical equipment.
 2. Fire extinguishers are designated by size where size "I" is the smallest and size "V" is the largest. Sizes "I" and "II" are hand-portable extinguishers and sizes "III", "IV", and "V" are semiportable extinguishers.
 3. Must be specifically approved as a type A, B, or C extinguisher.
 4. For outside use, double the quantity of agent that must be carried.
 5. For outside use only.

§ 108.496 Semiportable fire extinguishers.

(a) The frame or support of each size III, IV, and V fire extinguisher required by Table 108.495(a), except a wheeled size V extinguisher provided for a helicopter landing deck, must be welded or otherwise permanently attached to a bulkhead or deck.

(b) If the following semiportable fire extinguishers have wheels, they must be securely stowed when not in use to prevent them from rolling out of control under heavy sea conditions:

- (1) Each size V extinguisher required for a helicopter landing deck.
- (2) Each size III, IV, and V extinguisher that is not required by Table 108.495(a).

[CGD 77-039, 44 FR 34133, June 14, 1979]

MISCELLANEOUS FIREFIGHTING EQUIPMENT

§ 108.497 Fireman's outfits.

Each unit must have at least 2 fireman's outfits. Each fireman's outfit on a unit must consist of—

(a) A pressure-demand, open-circuit, self-contained breathing apparatus, approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) and having at a minimum a 30-minute air supply, a full facepiece, and a spare charge; but a self-contained compressed-air breathing apparatus previously approved by MSHA and NIOSH under part 160, subpart 160.011, of this chapter may continue in use as required equipment if it

was part of the vessel's equipment on November 23, 1992, and as long as it is maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection;

(b) A Type II or Type III flashlight constructed and marked in accordance with ASTM F 1014 (incorporated by reference, see § 108.101).

(c) An oxygen and explosive meter with the Underwriter's Laboratories, Inc. label or the Factory Mutual label;

(d) A lifeline that—

- (1) Is attached to a belt or a suitable harness;
- (2) Is made of bronze wire rope, inherently corrosion resistant steel wire rope, or galvanized or tinned steel wire rope;
- (3) Is made up of enough 15.2 meters (50 foot) or greater lengths of wire rope to permit use of the outfit in any location on the unit;

(4) Has each end fitted with a hook with a 16 millimeters (5/8 inch) throat opening for the keeper; and

(5) Has a minimum breaking strength of 680 kilograms (1,500 pounds).

(e) Boots and gloves that are made of rubber or other electrically non-conductive material;

(f) A helmet that meets the requirements in ANSI standard Z-89.1-1969; and

(g) Clothing that protects the skin from scalding steam and the heat of fire and that has a water resistant outer surface.

[CGD 73-251, 43 FR 56808, Dec. 4, 1978, as amended by CGD 82-042, 53 FR 17705, May 18, 1988; CGD 86-036, 57 FR 48326, Oct. 23, 1992; USCG 1999-5151, 64 FR 67182, Dec. 1, 1999]