

SCHEDULE 9

Regulations 2(3), 5, 6, 7(2), 7(3), 7(4), 8, 9  
and 17

LIFEBUOYS AND ATTACHMENTS

PART I

LIFEBUOYS (SOLAS)

**Construction**

**1.**

**1.1.** A lifebuoy shall be constructed with proper workmanship and materials.

**1.2.** As applicable the materials of a lifebuoy shall be rot-proof, corrosion resistant, and not be unduly affected by sea-water, oil or fungal attack.

**1.3.** A lifebuoy shall be of a highly visible colour.

**1.4.** It shall be fitted with retro-reflective material where it will assist in detection and the dimensions and location of the material shall be to the satisfaction of the Secretary of State.

**1.5.** A lifebuoy shall have an outer diameter of not more than 800 mm and an inner diameter of not less than 400 mm.

**1.6.** A lifebuoy shall be constructed of inherently buoyant material. It shall not depend upon rushes, cork shavings or granulated cork, any other loose granulated material or any air compartment which depends on inflation for buoyancy.

**1.7.** It shall have a mass of not less than 2.5 kg provided that if intended to operate a quick release arrangement for a self-activating smoke signal and self-igniting light it shall have a mass sufficient to operate the quick release arrangement or 4 kg, whichever is the greater.

**1.8.** It shall be constructed to withstand a drop into water from the height at which it is stowed above the waterline in the lightest seagoing conditions or 30 metres, whichever is the greater, without impairing either its operating capability or that of its attached components.

**1.9.** It shall be fitted with a grabline not less than 9.5 mm in diameter and of length not less than 4 times the outside diameter of the lifebuoy. The grabline shall be secured at four equidistant points around the circumference of the lifebuoy to form four equal loops.

**Performance**

**2.**

**2.1.** A lifebuoy shall not be damaged in stowage throughout the air temperature range  $-30^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ .

**2.2.** It shall operate throughout a sea-water temperature range of  $-1^{\circ}\text{C}$  to  $+30^{\circ}\text{C}$ .

**2.3.** A lifebuoy shall be resistant to deterioration from exposure to sunlight.

**2.4.** It shall be capable of satisfactory operation in a seaway.

**2.5.** A lifebuoy shall be capable of supporting not less than 14.5 kg of iron in fresh water for period of 24 hours.

**2.6.** It shall not sustain burning or continue melting after being totally enveloped in a fire for a period of 2 seconds.

## **Marking**

### **3.**

**3.1.** A lifebuoy shall be marked in block capitals of the Roman alphabet with the name and the port of registry of the ship on which it is carried.

**3.2.** A lifebuoy constructed of synthetic materials shall be permanently marked with the manufacturer's trade mark or trade name of the lifebuoy and the words "DOT (UK) APPROVED".

**3.3.** A lifebuoy shall be permanently marked with the maximum height above the waterline at which it can be stowed if this exceeds 30 metres.

Regulations 2(3), 6, 7(2), 7(3), 7(4), 9 and 17

## **PART II**

### **LIFEBUOY SELF-IGNITING LIGHTS**

## **Construction**

### **1.**

**1.1.** A lifebuoy self-igniting light shall be constructed with proper workmanship and materials.

**1.2.** As applicable the materials of a lifebuoy self-igniting light shall be rot-proof, corrosion resistant, and not be unduly affected by sea-water, oil or fungal attack.

**1.3.** It shall be constructed to withstand a drop into the water from the height at which it is stowed above the waterline in the lightest seagoing condition or 30 metres, whichever is the greater, without impairing either its operating capability or that of the lifebuoy to which it is attached.

**1.4.** It shall be provided with means for being efficiently attached to a lifebuoy.

**1.5.** Components of electronic circuits shall comply with the quality control requirements of BS 9000 or an equivalent standard. Where components cannot be obtained under one of the above standards these components shall be covered by a Certificate of Conformance from the manufacturer of the components.

## **Performance**

### **2.**

**2.1.** A lifebuoy self-igniting light shall not be damaged in stowage throughout the air temperature range  $-30^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ .

**2.2.** It shall operate throughout a sea-water temperature range of  $-1^{\circ}\text{C}$  to  $+30^{\circ}\text{C}$ .

**2.3.** It shall be resistant to deterioration from exposure to sunlight.

**2.4.** It shall be capable of satisfactory operation in a seaway.

**2.5.** A lifebuoy self-igniting light shall be such that it cannot be extinguished by water.

**2.6.** It shall be capable of either burning continuously with a luminous intensity of not less than 2 candela in all directions of the upper hemisphere or flashing (discharge flashing) at a rate of not less than 50 flashes per minute with at least the corresponding effective luminous intensity and be provided with a source of energy which will give this performance for a period of at least 2 hours.

## **Marking**

3. A lifebuoy self-igniting light shall be marked indelibly with:
  - 3.1. the manufacturer's name or trade mark;
  - 3.2. the words "DOT (UK) APPROVED";
  - 3.3. clear and concise directions for use in English supported where necessary by illustrations;
  - 3.4. type of energy source;
  - 3.5. date of manufacture and expiry in the case of a light with a non-replaceable energy source;and
  - 3.6. maximum height above waterline at which it can be stowed.

## **Instructions and Information**

4.
    - 4.1. Instructions and information required for inclusion in the training manual specified in Part I of Schedule 11 and, if appropriate, in the instructions for on-board maintenance specified in Part II of Schedule 11 shall be in a form suitable for inclusion in such a training manual or instructions for on-board maintenance. Instructions and information shall be in English in a clear and concise form and shall include the following:
      - (4.1.1) the stowage of the light and attachment to lifebuoy;
      - (4.1.2) type of energy source and if replaceable, method and frequency of replacement;
      - (4.1.3) type of light source and whether replaceable;
      - (4.1.4) any maintenance requirements including the method and recommended frequency of checks of energy source, if energy source capable of checking; and
      - (4.1.5) operation of light and duration.
- Regulations 2(3), 5, 6, 7(4), 8, 9 and 17

## **PART III**

### **LIFEBUOY SELF-ACTIVATING SMOKE SIGNALS**

#### **Construction**

1.
  - 1.1. A lifebuoy self-activating smoke signal shall be constructed with proper workmanship and materials.
  - 1.2. As applicable the materials of a lifebuoy self-activating smoke signal shall be rot-proof, corrosion resistant, and not be unduly affected by sea-water, oil or fungal attack.
  - 1.3. It shall be constructed to withstand a drop into the water from the height at which it is stowed above the waterline in the lightest seagoing condition or 30 metres, whichever is the greater, without impairing either its operating capability or that of the lifebuoy to which it is attached.
  - 1.4. It shall be provided with means for being efficiently attached to a lifebuoy.
  - 1.5. A lifebuoy self-activating smoke signal may also be provided with a self-igniting light which shall comply with the requirements of Part II of this Schedule.

## Performance

### 2.

2.1. A lifebuoy self-activating smoke signal shall not be damaged in stowage throughout the air temperature range  $-30^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ .

2.2. It shall operate throughout a sea-water temperature range of  $-1^{\circ}\text{C}$  to  $+30^{\circ}\text{C}$ .

2.3. It shall be resistant to deterioration from exposure to sunlight.

2.4. It shall be capable of satisfactory operation in a seaway.

2.5. A lifebuoy self-activating smoke signal shall emit smoke of a highly visible colour at a uniform rate for a period of at least 15 minutes when floating in calm water.

2.6. It shall not ignite explosively or emit any flame during the entire smoke emission time of the signal.

2.7. It shall not be swamped in a seaway. 2.8 It shall continue to emit smoke when fully submerged for a period of at least 10 seconds.

2.9. It shall be capable of quick release from its stowed position.

2.10. It shall be safe to operate in waters covered by a low flashpoint liquid.

2.11. All components, composition and ingredients of the lifebuoy self-activating smoke signal, and the energy source of the self-igniting light if provided shall be of such character and quality as to enable them to maintain their serviceability under good average stowage conditions in the marine environment for a period of at least three years, unless in the case of a self-igniting light energy source it is possible to readily renew the energy source.

## Marking

3. A lifebuoy self-activating smoke signal shall be marked indelibly with:

3.1. the manufacturer's name or trade mark;

3.2. the lot number or other means of identifying the signal;

3.3. the words "DOT (UK) APPROVED";

3.4. clear and concise directions for use in English supported where necessary by illustrations;

3.5. the date of manufacture and date of expiry;

3.6. type of energy source in the case of a signal provided with a self-activating light; and

3.7. maximum height above the waterline at which it can be stowed.

## Instructions and Information

### 4.

4.1. Instructions and information required for inclusion in the training manual specified in Part I of Schedule 11 and, if appropriate, in the instructions for on-board maintenance specified in Part II of Schedule 11 shall be in a form suitable for inclusion in such a training manual or instructions for on-board maintenance. Instructions and information shall be in English in a clear and concise form and shall include the following:

(4.1.1) the stowage of signal and attachment to lifebuoy;

(4.1.2) type of energy source of self-igniting light if provided and if replaceable, method and frequency of replacement;

- (4.1.3) type of light source of self-igniting light if provided and whether replaceable;
  - (4.1.4) any maintenance requirements including the method, and recommended frequency of checks of energy source of self-igniting light, if provided; and
  - (4.1.5) operation of signal and duration.
- Regulations 2(3), 5, 6, 7(2), 7(3), 7(4), 8, 9 and 17

## PART IV

### LIFEBUOY BUOYANT LIFELINES

#### **Construction**

1.
  - 1.1. A lifebuoy buoyant lifeline shall be non-kinking.
  - 1.2. It shall have a diameter of not less than 8 mm.
  - 1.3. It shall have a breaking strength of not less than 5 kilonewtons.
  - 1.4. It shall be resistant to deterioration from exposure to sunlight.
  - 1.5. It shall have a length not less than twice the height at which it is stowed above the waterline in the lightest seagoing condition, or 30 metres, whichever is the greater. On ships of less than 12 metres in length the lifeline shall be at least 18 metres in length.