

INCH-POUND

MIL-PRF-81542C

21 September 2011

SUPERSEDING

MIL-PRF-81542B

05 February 2007

PERFORMANCE SPECIFICATION

LIFE RAFT, INFLATABLE, SINGLE-PLACE

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for an inflatable one-man, single-place life raft.

1.2 Classification. The life rafts are of the following types as specified (see 6.2).

1.2.1 Types. The types of single-place life rafts are as follows:

Type I - Navy Aircraft

Type II - Army Helicopter

Type III - Navy Aircrew Common Ejection Seat (NACES)

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Comments, suggestions, or questions on this document should be addressed to: Commander, Naval Air Warfare Center Aircraft Division, Code 4L8000B120-3, Highway 547, Lakehurst, NJ 08733-5100 or emailed to michael.sikora@navy.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.daps.dla.mil>.

MIL-PRF-81542C

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL STANDARD

- | | | |
|-------------------|---|--------------------------|
| FED-STD-595/12197 | - | Orange, Gloss |
| FED-STD-595/35042 | - | Blue, Flat or Lusterless |

DEPARTMENT OF DEFENSE SPECIFICATIONS

- | | | |
|-------------|---|--|
| MIL-A-3339 | - | Anchors, Sea, Life Raft. (Inactive for New Design) |
| MIL-C-83489 | - | Cloth, Coated, Nylon, Polyurethane Coated |

DEPARTMENT OF DEFENSE STANDARD

- | | | |
|-------------|---|---|
| MIL-STD-810 | - | Environmental Engineering Considerations and Laboratory Tests |
|-------------|---|---|

(Copies of these documents are available online at <https://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

NAVAL AIR SYSTEMS COMMAND

- | | | |
|-------------------|---|---|
| NAVAIR 13-1-6.3-1 | - | Aviation Crew Systems Manual Seat Survival Kits |
| NAVAIR 13-1-6.3-2 | - | Aviation Crew Systems Manual Seat Survival Kits |

(Copies of these documents can be obtained from the contracting activity or as directed by the contracting officer.)

MIL-PRF-81542C

2.3 Non-Government publication. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR QUALITY (ASQ)

ANSI/ASQ-Z1.4 - Sampling Procedures and Tables for Inspection by Attributes.
(DoD adopted)

(Copies of this document are available from www.asq.org or the American Society for Quality, 600 North Plankinton Ave., Milwaukee, WI 53203.)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The life raft shall be manufactured and designed to incorporate a cost effective life cycle with respect to maintenance, shelf life, repack, and/or replacement. The life raft shall meet all the requirements specified herein.

3.2 Qualification. The life raft furnished under this specification shall be a product that is authorized by the qualifying activity for listing on the applicable qualified products list before contract award (see 4.2 and 6.3).

3.3 First article. When required (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.3.

3.4 Materials. The material of the raft main buoyancy tube shall conform to MIL-C-83489, type I. The latest technology materials and processes shall be utilized. The use of ozone depleting substances (ODS) shall be limited. Unless otherwise specified, the materials and components, except for the metallic parts, used in the construction of the life raft shall not have been manufactured more than 12 months prior to the delivery of the life raft (see 6.2).

3.5 Inflation system. The inflation system shall not leak during the manufacturer's established raft repack/recertification cycle.

3.5.1 Secondary inflation. A means readily accessible to the life raft occupant shall be provided to complete inflation (top-off) and provide emergency inflation to maintain operating pressure. The means shall be properly located, reinforced, and protected against any possible leakage or damage that may occur due to reduced volume packing.

MIL-PRF-81542C

3.6 Canopy. The life raft design shall incorporate an inflatable canopy system to provide aircrew protection from sea spray and extreme weather conditions. The canopy shall provide adequate headroom based on the anthropometric data in table I and shall be made weathertight. A clear visor or other means shall be incorporated to allow the aircrewman vision when the canopy is made weathertight. Raft buoyancy shall not be affected by the integrity of the canopy system. The canopy shall be in a stowed position (tied down) during inflation and shall be untied by the aircrewman after boarding.

3.7 Sea anchor. A sea anchor shall be incorporated into the raft design to maintain the raft in a sea environment. The sea anchor shall conform to MIL-A-3339, type I or equivalent. The sea anchor shall be stowed (held in place) for the aircrewman to deploy after boarding.

3.8 Stowage pockets. Stowage pockets shall be incorporated into the life raft to hold the strobe light and the radio beacon. The strobe light pocket shall be located on the outside of the raft for signaling purposes. Stowage pocket dimensions (in inches) shall be as follows: 5 x 3.5 x 1 depth for the strobe light and 8 x 4 x 2 depth for the radio beacon.

3.9 Equipment container attachment. A means shall be provided to secure the survival equipment container to the inside of the raft.

3.10 Capsize resistance. The life raft shall have ballast bags or other means to provide stability and capsize resistance.

3.11 Righting aid. A means shall be provided to right the life raft if it inflates in an inverted position. The means provided for righting the raft shall be such that it can be activated by one person in the water.

3.12 Life raft equipment. All lines shall be stowed and secured to prevent entanglement during launching/inflation of the life raft.

3.13 Color. The color of the life raft surfaces, including the canopy surface, shall match FED-STD-595, color 35042 (lusterless blue). High-visibility orange matching FED-STD-595 color 12197 shall be used on the inside of the canopy for rescue operations.

3.14 Capacity. The life raft shall have adequate capacity for an aircrewman wearing standard aviation life support equipment including a flight suit, survival vest, inflated life preserver, and flight boots. Anthropometric characteristics are presented in Table I.

MIL-PRF-81542C

TABLE I. Anthropometric characteristics.

Measurements (in inches)	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7
	Overall Small	Short Sitting Heights with Long Limbs		Large Sitting Height with Short Limbs	Overall Large	Longest Limbs	Shortest Torso
Thumb Tip Reach	27.0	27.6	33.9	29.7	35.6	36.0	26.1
Buttock-knee Length	21.3	21.3	26.5	22.7	27.4	27.9	20.8
Knee-height Sitting	18.7	19.1	23.3	20.6	24.7	24.8	18.1
Sitting Height	32.8	35.5	34.9	38.5	40.0	38.0	31.0
Eye-height Sitting	28.0	30.7	30.2	33.4	35.0	32.9	26.8
Shoulder-height Sitting	20.6	22.7	22.6	25.2	26.9	25.0	19.5
Shoulder Breadth Range	14.7- 18.1	16.4- 20.6	16.2- 21.2	16.8- 21.7	16.9- 22.6	16.8- 22.5	14.2- 18.0
Chest Depth Range	7.4- 10.9	6.9- 10.6	7.2- 11.3	7.1- 11.0	7.3- 12.1	7.4- 12.2	7.2- 10.2
Thigh Circumference Range	18.5- 25.0	17.1- 25.0	20.2- 27.6	17.6- 26.3	18.6- 29.2	19.1- 29.7	17.8- 25.2
Nude Body Weight Range	103 pounds to 245 pounds						

3.15 Buoyancy. The life raft shall provide a freeboard of not less than 2 inches at its lowest point immediately after boarding with a fully equipped aircrewman in accordance with Table I.

3.16 Weight. The weight of the packaged life raft including the inflation assembly shall be not greater than 10 lb.

3.17 Stowage.

3.17.1 Type I - Navy Aircraft. The Type I life raft, when folded, shall be packed in Navy seat kits and a Navy helicopter backpack. Available volume for the life raft is in accordance with applicable NAVAIR seat kit and helicopter backpack manuals.

MIL-PRF-81542C

3.17.2 Type II – Army Helicopter. The Type II life raft shall be sealed in reduced volume packaging. The seal shall provide protection and preservation for the raft in an aircraft environment. The life raft shall be sealed in such a way as to guarantee verification of airtight packaging by visual methods.

The Type II life raft shall be packed in the helicopter aircrewman's Air Warrior Over-Water Gear Carrier (OWGC). The inflation cord attachment shall be located such that the lanyard exits the pack at the upper left corner to allow activation over the left shoulder of the aircrewman. The packed configuration shall be in accordance with figure 1.

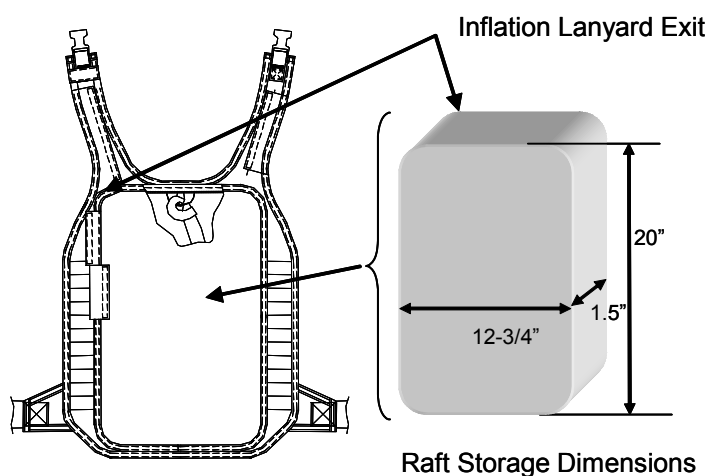


FIGURE 1. Type II - Army Helicopter.

3.17.3 Type III – NACES ejection seats. The Type III life rafts, when folded, shall be packed in Navy NACES ejection seats only. Available volume for the life raft is in accordance with applicable NAVAIR seat kit manual chapters.

3.18 Actuation. All life raft types shall actuate manually by pulling an inflation lanyard. The pull force required for lanyard actuation shall be not greater than 30 lb when tested in accordance with 4.9. Type I and III life rafts shall also actuate automatically by gravity drop on kit actuation when jump tested in accordance with 4.10.

3.19 Raft pressure.

3.19.1 Pressure. The pressure in the raft flotation tube shall be not less than 95 percent of 2 times the manufacturer's specified operating pressure when tested in accordance with 4.11.1.

3.19.2 Leakage. The pressure in the raft flotation tube shall be not less than 80 percent of the manufacturer's specified operating pressure when tested in accordance with 4.11.2.

MIL-PRF-81542C

3.20 Function/operation. The life raft shall inflate at the required pull force to its design shape in not more than 60 seconds when tested as specified in 4.12. During the inflation, the life raft shall be observed for impediment or blockage of the flow of gas, loss of gas to the ambient air, or restriction by any component or accessory. There shall be no evidence of structural or material failure in any respect. All the sealed areas, seams, seam tapes, and attachments shall remain intact and shall show no indication of separation. The floor shall not be distorted and there shall be no difference in the rise between the sides of the raft. The erected canopy shall withstand 35-knot winds and 52-knot gusts in open water. The life raft shall demonstrate seaworthiness and stability in an open sea condition of 17 to 27 knot winds and waves of 6 to 10 feet. The raft shall be easily boarded by a subject wearing standard aviation life support equipment including a flight suit, survival vest, inflated life preserver, and flight boots. See Table I for anthropometric data.

3.21 Environmental.3.21.1 Temperature extremes.

3.21.1.1 Low temperature. The life raft shall inflate into a boardable shape within 5 minutes at 0° F (-18° C) when tested as specified in 4.13.1.1. There shall be no hindrance to the flow of gas or restriction by any component or accessory during inflation. All the seams, seam tapes, sealed areas and attachments shall remain perfectly intact and shall show no evidence of separation. There shall be no evidence of construction or material failure in any respect.

3.21.1.2 High temperature. The life raft shall inflate to design shape within 60 seconds at 160° F (71° C) when tested as specified in 4.13.1.2. Inflation shall be without any hindrance to the flow of gas or restriction by any component or accessory. All the seams, seam tapes, sealed areas and attachments shall remain perfectly intact and shall show no evidence of separation. There shall be no evidence of construction or material failure in any respect.

3.21.2 Low pressure (altitude). The packed life raft shall withstand a low pressure environment and rapid pressure changes when tested as specified in 4.13.2. The life raft shall show no leakage of gases and no rupture or failure of sealed packaging.

3.21.3 Vibration. The packed life raft shall resist the effects of aircraft vibration when tested as specified in 4.13.3. The life raft shall show no leakage of gases and no rupture or failure of sealed packaging.

3.21.4 Accelerated aging/life cycling. The packed life raft shall withstand the effects of accelerated aging/life cycling when tested as specified in 4.13.4. The life raft shall inflate to design shape within 60 seconds when actuated as specified in 4.13.4. Inflation shall be without any hindrance to the flow of gas or restriction by any component or accessory. All the seams, seam tapes, sealed areas and attachments shall remain perfectly intact and shall show no evidence of separation. There shall be no evidence of construction or material failure in any

MIL-PRF-81542C

respect. Immediately following this test, the raft shall be visually examined as specified in 4.6, and pressure/leakage tested as specified in 4.11.

3.22 Markings.

3.22.1 Operational marking. The life raft shall be marked in contrasting washproof ink, which is not detrimental to the fabric, to denote the use and location of the inflation systems (including instructions on manual actuation), raft equipment, boarding aids and righting aids. The letters used for such markings shall be not less than 1 inch high except that details and miscellaneous instructions may be of smaller lettering. Applicable markings shall take into account aircrewmembers boarding or righting the raft from the water.

3.22.2 Raft identification. Each life raft shall be identified by name of manufacturer, contract number, date of manufacturer, and serial number. The serial number shall be assigned by the manufacturer and shall be by a block of consecutive numbers to cover the entire acquisition quantity. All markings shall be legible, durable, permanent, and thoroughly dry prior to packing and packaging.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. Qualification inspection (see 4.2).
- b. First article inspection (see 4.3).
- c. Conformance inspection (see 4.4).

4.2 Qualification inspection. The qualification inspection of the life rafts shall consist of all the examinations and tests specified in Table II.

4.2.1 Qualification samples. The qualification samples shall consist of three of each type to be qualified. Samples shall be forwarded as specified in the correspondence authorizing submission of samples for qualification testing (see Table II and 6.2). Additionally, each sample shall be plainly identified by securely attached tags containing the following information:

Qualification Inspection Sample
 Raft Type
 Manufacturer's Designation
 Manufacturer's name and CAGE
 Serial Number

MIL-PRF-81542C

TABLE II. Qualification examinations and tests.

Inspection	Requirement	Test Method
Weight	3.16	4.7
Stowage	3.17	4.8
Actuation pull force test	3.18	4.9
Jump test	3.18	4.10
Pressure	3.19.1	4.11.1
Leakage	3.19.2	4.11.2
Operational test	3.14, 3.15, 3.20	4.12
Visual examination	3.4-3.13, 3.22	4.6
Temperature extremes test	3.21.1	4.13.1
Low pressure (altitude) test	3.21.2	4.13.2
Vibration	3.21.3	4.13.3
Accelerated aging/life cycle	3.21.4	4.13.4

4.3 First article inspection. First article inspection, when required, shall be accomplished as specified herein. The first article inspection shall consist of the tests and examinations specified in table III (see 6.2).

TABLE III. First article examinations and tests.

Inspection	Requirement	Test Method
Weight	3.16	4.7
Stowage	3.17	4.8
Actuation pull force test	3.18	4.9
Pressure	3.19.1	4.11.1
Leakage	3.19.2	4.11.2
Visual examination	3.4-3.13, 3.22	4.6

4.4 Conformance inspection. The conformance inspection shall consist of the tests and examinations specified in Table IV (see 6.2). Unless otherwise specified, the sampling plan shall be in accordance with ANSI/ASQ-Z1.4, Table I - Sample Size Code Letters, Special Inspection Level S-3. Each lot shall be inspected for conformance.

MIL-PRF-81542C

TABLE IV. Conformance examinations and tests.

Inspection	Requirement	Test Method
Weight	3.16	4.7
Stowage	3.17	4.8
Actuation pull force test	3.18	4.9
Pressure	3.19.1	4.11.1
Leakage	3.19.2	4.11.2
Visual examination	3.4-3.13, 3.22	4.6

4.5 Inspection conditions for leakage testing.

4.5.1 Atmospheric conditions. Unless otherwise specified in the contract, all pressure/leakage tests required by this specification shall be conducted at a barometric pressure of 28 to 32 inches of mercury and at a temperature of $77 \pm 18^{\circ}$ F ($25 \pm 10^{\circ}$ C). If the final values of the ambient temperature or barometric pressure at the end of the four-hour leakage inspection are different from the initial values recorded at the start of the inspection, the following corrections should be made to the final pressure readings in psig (see 4.5.2 and 4.5.3).

4.5.2 Temperature correction. For each degree Fahrenheit rise in temperature, 0.031 psig shall be subtracted from the final pressure reading. For each degree Fahrenheit drop in temperature, 0.031 psig shall be added to the final pressure reading. The corresponding correction per degree Celsius is 0.056 psig.

4.5.3 Barometric pressure correction. For each 0.1 inch of mercury rise in barometric pressure, 0.049 psig shall be added to the final temperature-corrected pressure reading. For each 0.1 inch of mercury drop in barometric pressure, 0.049 psig shall be subtracted from the final temperature-corrected pressure reading.

4.6 Visual examination. The visual examination shall be performed to verify conformance to the requirements specified in section 3. Table V classifies and enumerates the defects.

4.7 Weight. The weight of the life raft shall meet the requirements of 3.16.

4.8 Packaging for stowage. The raft in its packed configuration for stowage shall meet the requirements of 3.17.

MIL-PRF-81542C

TABLE V. Classification of defects for visual examination of the life rafts.

Critical	Minor
<p>1. Any hole, cut, tear, patch, or burn</p> <p>2. Any fabric damaged, bruised, abraded, containing imperfections, or otherwise defective. <u>1/</u></p> <p>3. Excessive bias in fabric resulting in twisting of primary buoyancy tube. <u>2/</u></p> <p>4. Any stitching in the inflatable section of the life raft.</p> <p>5. Attachment of the floor or canopy to the inflatable tube not reinforced or not attached.</p> <p>6. Inflation assembly or manifold stem assembly not in accordance with requirements, or inoperable.</p> <p>7. Any pillowing of the sealed packed raft by inflation system leakage or loss of integrity of sealed vacuum packaging.</p> <p>8. An inflatable section seam separation or construction which does not meet the specified minimum requirements.</p> <p>9. Any channels or voids in any seam on the inflatable section.</p> <p>10. Topping-off valve damaged or in open position.</p> <p>11. Any metal component improperly finished or containing nicks, burrs, dents, sharp edges, or rough surfaces. <u>1/</u></p> <p>12. Any component, component part, or required operation omitted; or any operation improperly performed, not herein classified. <u>1/</u></p> <p>13. Any component not as specified, or any defect of a component or assembly not herein classified. <u>1/</u></p>	<p>201. Any spot or stain. <u>1/</u></p> <p>202. Any cut edge of uncoated nonfibrous material containing sharp edges.</p> <p>203. Any slide fastener improperly installed or inoperable.</p> <p>204. Stitching damaged or defective.</p> <p>205. Any pile or hook tape damaged or defective.</p> <p>206. Topping-off inflation assembly or components not as specified; topping-off valve not locked in the closed position.</p> <p>207. Any required markings, illegible, incomplete, incorrect, or improperly located.</p> <p>208. Color of any component not as specified.</p> <p>209. Accessory or other container not closed.</p> <p>210. Life raft improperly folded.</p> <p>211. Any wrinkles, channels, or voids in any seam, patch or attachment on the inflatable section. <u>1/</u></p> <p>212. Cement on the cloth surfaces around patches or attachments.</p> <p>213. Any clot or mass of adhesive.</p> <p>214. Overlap of any seam tape in excess of requirements.</p> <p>215. Any seam tape, patch or attachment separating. <u>1/</u></p>

MIL-PRF-81542C

- 1/ The defect is classified Critical when it affects serviceability or function; otherwise, it is classified Minor.
- 2/ If excessive twisting of the primary buoyancy tube is evident, the life raft shall be examined as follows: With the primary buoyancy tube inflated to its specified operating pressure and with the floor and the canopy (if applicable) deflated, the life raft shall be placed on a horizontal surface. A 3-inch block shall be placed under the life raft at two diagonally opposite locations. A gap between the bottom of the primary buoyancy tube and the 3-inch high block is evidence of excessive bias in the fabric and shall be classified as a critical failure.

4.9 Actuation pull force. Actuation of the life raft shall be tested both for manual and automatic actuation (kit release). The actuation shall meet the requirements of 3.18.

4.10 Jump test. Type I and III life rafts shall be evaluated for automatic actuation (kit release) by performing a jump test. Each applicable packed configuration shall meet the requirements of 3.18. A test subject shall be fully dressed in aviation life support gear with a seat kit attached. The test subject shall simulate parachute descent on a slide tower and perform test kit release. The slide tower must be approved by the qualifying activity.

4.11 Raft pressure.

4.11.1 Pressure. The completely deflated life raft shall be placed in a horizontal position on the floor or table of the inspection area. All the pressure readings shall be taken with the raft in this position. The flotation tube shall be inflated, with air, to 2 times the manufacturer's specified operating pressure. The air supply shall be securely shut off and after a minimum of 10 minutes, the pressure in the raft flotation tube shall be checked and readjusted, if necessary, to the original pressure. At the end of a minimum of 10 minutes after the readjustment period, the pressure in the tube shall be not less than 95 percent of 2 times the manufacturer's specified operating pressure. While inflated, the raft shall be visually examined (see 4.6) and meet the requirements of 3.19.1. Upon completion of the testing and examination, the raft flotation tube shall be completely deflated and the raft shall then be subjected to the leakage inspection.

4.11.2 Leakage. The completely deflated life raft shall be placed in a horizontal position on the floor or table of an inspection area. The temperature and pressure readings shall be taken with the raft in this position and in the vicinity of the raft. The inflatable tube shall be inflated, with air, to the manufacturer's specified operating pressure. The air supply shall be securely shut off and after a minimum of 15 minutes, the pressure in the tube shall be checked and readjusted, if necessary. At the end of a minimum of 4 hours, after the readjustment period, the pressure

MIL-PRF-81542C

shall be measured and corrected for any change in the temperature or barometric pressure (see 4.5). The corrected pressure in the raft flotation tube shall be not less than 80 percent of the operating pressure. The raft shall meet the requirements of 3.19.2.

4.12 Operational tests. In either a controlled pool, fresh water, or at sea, the life raft operation shall be demonstrated as follows: Capacity and buoyancy shall be verified for conformance with the requirements of 3.14 and 3.15. Function/operation of the life raft shall be evaluated for its conformance to 3.20. The life raft's components and features shall meet the requirements specified in section 3.

4.13 Environmental tests.

4.13.1 Temperature extremes test.

4.13.1.1 Low temperature test. The life raft shall be conditioned at $0 \pm 2^\circ \text{F}$ ($-18 \pm 1^\circ \text{C}$) for not less than 48 hours. The raft shall then be removed to the inspection area and placed on a table or on the floor. The inflation equipment shall be immediately actuated. The life raft shall meet the requirements of 3.21.1.1.

4.13.1.2 High temperature test. The test procedures set forth in 4.13.1.1 shall be repeated, except the raft shall be conditioned at $160 \pm 2^\circ \text{F}$ ($71 \pm 1^\circ \text{C}$) instead of 0°F , for not less than 48 hours. The raft shall meet the requirements of 3.21.1.2.

4.13.2 Low pressure (altitude) test. The packed life raft shall be tested in a low pressure environment in accordance with MIL-STD-810, Method 500, Procedure III. At the completion of the test, the raft shall be removed from the low pressure environment. The raft shall meet the requirements of 3.21.2.

4.13.3 Vibration test. The packed life raft shall be tested for its ability to withstand aircraft vibration in accordance with MIL-STD-810, Method 514. The vibration levels shall be tailored to represent specific aircraft in accordance with the applicable specification sheets. At the completion of the vibration test, the life raft shall meet the requirements of 3.21.3.

4.13.4 Accelerated aging/life cycling test. The accelerated aging/life cycle test shall include altitude cycling between 0 and 12,000 ft. at a constant accelerated temperature between 158°F to 170°F (70°C to 77°C). Based on 200 flights per year, the performance of 1,000 altitude cycles during the temperature soak should provide a five-year life. The number of cycles shall be contingent upon the manufacturer's proposed life cycle. An altitude rate of change of 2,000 ft. per minute and a one-minute dwell at 12,000 ft. altitude shall be performed. The raft shall then be removed to the inspection area and placed on a table or on the floor. The inflation equipment shall be immediately actuated. The life raft shall meet the requirements of 3.21.4.

MIL-PRF-81542C

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD personnel or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military services system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature which may be helpful, but is not mandatory.)

6.1 Intended use. The life rafts are intended for use as emergency equipment by military aircrews forced down at sea. Commercial life rafts do not meet the stringent protection and packaging requirements necessary for military aircraft use.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type of raft (see 1.2.1).
- c. Whether first article inspection is required (see 4.3).
- d. Certificate of compliance for the age of the materials and components (see 3.4).
- e. Qualification samples (see 4.2.1).
- f. Name and address of the conformance verification inspection facility (see 4.4); and the name and address of the Government activity responsible for conducting the conformance verification inspection program (see 4.4).
- g. Packaging requirements (see 5.1).

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List QPL-81542 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for

MIL-PRF-81542C

qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from Commander, Naval Air Warfare Center Aircraft Division, Code 4.6.7.4, 48110 Shaw Road, Bldg. 2187, Patuxent River, MD 20670.

6.4 Subject term (key word) listing.

Canopy
Seals
Survival

6.5 Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

CONCLUDING MATERIAL

Custodians:
Army - AV
Navy - AS

Preparing activity:
Navy - AS

(Project 4220-2011-001)

NOTE: The activities above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.