same ten places. The difference in thickness in each of the ten places shall be computed. The wear of each rod shall be the average of these ten values. The average of the wear of the three rods shall be computed, and this value shall be used to determine conformance to the requirements specified in 3.3.

4.6.1.1 Cable abrasion test apparatus. The test apparatus is shown on figures 1 and 2, and may be constructed with the following features:

(a) A carriage on which the test panel is attached. The test panel shall be securely fastened to the carriage, and shall be moved in a reciprocating motion 225 mm (9 in) along its long axis at a frequency of 30 cycles per minute.

(b) A jig which holds the 300 mm (12 in) steel rod in contact with the test panel, with the axis of the rod horizontal at a right angle to the direction of motion of the reciprocating carriage. The clamps holding the rod shall not come into contact with the test panel, and shall not permit the rod to bend, twist, or rotate during the test. The jig shall be constructed so as to put the rod under a load of 13.6 +/- 0.1 kilograms (kg) (30 +/- 1/4 pounds) during the test.

4.6.2 Appearance of the dried coating. Separate samples of each coating component of the system shall be conditioned and then mixed at 24°C (75°F). Mixing shall be in accordance with the manufacturer's ASTM F 718 data sheet. After the manufacturer designated induction time for the temperature, the coating shall be applied in accordance with the ASTM F 718 instruction to a test plate. After curing, the appearance shall be in accordance with the requirements of 3.4. The appearance of the primer and each intermediate coat shall be observed before application of the subsequent coat.

4.6.3 Application properties. Two 250 by 150 by 3 mm (10 by 6 by 1/8 in) (nominal) primed steel panels (one panel for type IV coatings) shall be equilibrated at the temperature at which the application properties are to be determined. Separate samples of each individual coating of the non-skid coating system shall be conditioned, mixed and inducted for one-half of the specified pot life period for that temperature in accordance with the manufacturer's ASTM F 718 data sheet at 10, 24, and 32°C (50, 75 and 90°F), respectively. Coatings shall be applied to the panels at the matching temperatures in accordance with the manufacturer's ASTM F 718 instructions to metal surfaces at 10, 24, and 49°C (50, 75 and 120°F), respectively. Spraying, rolling or trowel properties shall be in accordance with 3.5, as appropriate. For this test, material from the pot life test specified in 4.6.14 shall not be used. Type I, II, or III coating shall be spread over the panel with a roller, and then rolled in one direction to produce the characteristic rolled appearance (see 3.5). The type I, II, or III coating shall be trowelled onto the second panel using a V-notched trowel the notches of which shall be 6.3 mm (1/4 in) deep and 12.6 mm (1/2 in) (nominal) across. Type IV material shall be sprayed in several passes to produce a uniform finish (see 3.5). During mixing and application, the coating shall be observed and evaluated for conformance with 3.5. These panels may be used for the drying time test in 4.6.8.

4.6.4 Coefficient of friction. Testing shall be conducted as follows:

4.6.4.1 Test panel preparation. Six 300 by 300 by 3 mm (12 by 12 by 1/8 inch (nominal) steel panels, prepared in accordance with 4.5.3 shall be coated with non-skid in accordance with the manufacturer's ASTM F 718 data sheet. The type I, II, and III non-skid coating shall be rolled parallel to the 250 mm (10 in) dimension. Three of the test panels shall be subjected to 500 cycles of wear in the cable abrasion tester in accordance with the requirements of 4.6.17.

4.6.4.2 Test apparatus. The Slipmeter is shown on figures 3 and 4 and shall be constructed with the following features (figures 8 through 16):

(a) A steel sled having a flat surface 100 by 125 mm +/- 2.5 mm on each dimension (4 by 5 in), and a thickness of 25 to 40 mm (1 to 1.5 in). One 100 mm (4 in) side of the sled shall have a screw eye in the center of the face to which the force gauge is attached. One 100 by 125 mm (4 by 5 in) face of the sled shall be covered with vulcanized neoprene rubber having a Type "A" Durometer hardness of 57 +/- 2 and a thickness over its entire surface of 3 mm (1/8 in) (nominal). The edges of the rubber shall be square, and not beveled. The total weight of the sled with the rubber facing shall be 2.7 +/- 0.2 kg (6.0 +/- 0.5 lb). The sled or the platform movement shall be parallel to the non-skid panel, and shall not tend to lift the sled from the panel.

(b) A force gauge shall be used which: (a) measures 0 to 4.5 kg (0 to 10 lbs) full scale, (b) reads out directly in kg (lbs) on an electronic display with an accuracy of +/- 4.5 g (+/- 0.01 lb), and (c) can be preset to lock onto the highest force encountered. A Chatillon Gauge Model DFG-10 has been found satisfactory for this purpose (see figures 3 and 4).

(c) A platform which moves across a minimum of a 100 mm (4 in) distance at a constant speed of 300 mm (12 in) per minute (nominal). The platform shall have provisions to hold the non-skid panel firmly during the test to prevent twisting or lifting of the panel without interfering with the motion of the sled.

4.6.4.3 Test procedures. The test shall be conducted on the three initial panels without wear and the three panels exhibiting wear as specified in 4.6.4.1. The test panels without wear shall be subjected to 50 cycles in the cable abrasion tester to remove the highest peaks and ridges. Each panel shall be subjected to this test procedure under the following three conditions:

(a) COF test shall first be run with the panel dry;

(b) after completion of the dry condition test, the panels shall be wetted with synthetic sea water in accordance with ASTM D 1141, and the tests shall be repeated; and

(c) after completion of the wet condition, the panels shall be rinsed in tap water to remove the synthetic sea water, dried at 120°C (248°F) for 1 hour, and cooled to standard conditions. The panel shall then be wetted with aircraft turboshaft engine oil in accordance with MIL-L-23699, and the test shall be repeated.

Each panel shall be secured on the moving platform and the sled of the Slipmeter shall be placed onto the panel. The hook on the sled shall be attached to the hook on the force gauge, and the force to be applied by the sled shall be along the axis of the force gauge. The gauge shall be set to zero, and set to display the highest force encountered. The platform shall be started in motion at a rate of 254 +/- 51 mm (10 +/- 2 in) per minute, and the panel allowed to travel a minimum of 100 mm (4 in). The highest force encountered by the sled shall be recorded during the test. The coefficient of friction shall be computed by dividing the reading on the gauge by the mass of the sled. Five replicate measurements shall be made; the panel shall then be turned 90 degrees and five additional measurements shall be made. The average of the ten readings for each panel (30 total) shall be computed. Since friction readings are a function of the surface condition of the steel sled rubber surface, a steel sled with a new vulcanized neoprene rubber shall be used for each product tested. In addition, sleds used for the different test conditions shall be used only for the same conditions. That is a sled used dry shall only be used to test dry friction specimens, sleds used with water shall be used only with water friction specimens, and sleds used to measure oily friction shall be used only for tests of friction on oily specimens. Sleds shall be calibrated against a flat steel block having machined cross hatched v-shaped grooves having a nominal depth of 1.27 mm (0.05 in) and a nominal groove peak to peak distance 0.25 mm (0.01 in). Sleds may continue to be used in testing the same product until repeat measurements on the calibration surface changes by more than five percent (plus or minus). All calibrations shall be performed on the same calibration block since the intent of the calibration blocks are only to determine reproducibility of readings by the rubber pad and thus rubber pad replacement criteria. Calibration of sleds on different calibration blocks during the determination of friction values on a test specimen is not permitted. Calibration shall be performed before and after test specimen friction determinations and the values obtained recorded and reported with the test value. Other methods to move the sled across the panel are acceptable. Some methods use a portable motor which moves the force gauge 100 mm (4 in) at a rate of about 300 mm (12 in) per minute; the force gauge is connected to the sled with a light chain.

4.6.5 Color. Mix the non-skid coating and color topping in accordance with the manufacturer's ASTM F 718 data sheet. Sieve out any gritty substances. Draw down the non-skid topcoat and the color topping on separate glass panels using a sufficient number of successive crosscoats (each having a wet film thickness (WFT) of 0.003" or 3 mils) so that additional coats produce no change in reflectance. Dry at ambient laboratory conditions for 24 hours after each coat. The color deviation (Δ E) and the color factors (Δ L, Δ a and Δ b) shall be determined in accordance with ASTM D 2244 using a D65 light source, 45 degree illumination angle and a 0 degree viewing angle. Check for compliance with 3.7 and 3.7.1.

4.6.6 Condition in container. The liquid one-part coating, or components of two-part coatings, shall be examined in accordance with method 3011.1 of FED-STD-141 for the defects specified in 3.8. The presence of ingredients which cannot be redispersed within 5 minutes by hand stirring with a paddle for a 4 L (1 gal) or smaller quantities or stirring (agitation) with a power mixer or mechanical shaker for 19 L (5 gal) quantities shall constitute a failure of this requirement. Condition in container shall be in accordance with the requirements of 3.8.

4.6.7 Coverage. For types I, II, and IV, a 914 by 914 by 3 mm (36 by 36 by 1/8 in) steel panel shall be prepared as specified in 4.5.2.1. Coverage shall meet the requirements in 3.9.1 and 3.9.2. For type III coatings, a 914 by 914 by 3 mm (36 by 36 by 1/8 in) fiberglass/wood panel shall be prepared as specified in 4.5.2.2. The primer, intermediate coats, and topcoat shall be separately applied and curing times observed in accordance with the directions provided in 3.25. Before applying the next coating to the system each coating shall be weight determined using the formula below.

Coverage = (Area x Mass/Unit Volume)/(Mass 2 - Mass 1)

Where:

Area = 914 by 914 (36 by 36)

Mass/unit volume = weight per kilogram/liter [kg/L] or pounds per gallon [lbs/gal] material (not including container weight, see table I)

Mass 1 = weight of panel before application
Mass 2 = weight of panel after application

4.6.8 Drying time. Three 152 by 152 by 3 mm (6 by 6 by 1/8 in) (nominal) panels shall be prepared in accordance with 4.6.3 each at one of the temperatures specified in 3.10 and maintained at that temperature. The drying time of the primer and intermediate coats shall be determined by applying the subsequent coat at the minimum allowable drying time for that temperature. Any softening or lifting of these coatings shall constitute failure. The finished panels shall be kept at the specified temperature for the allowable drying time. Immediately, 16 layers of Kaydry wipers or equivalent shall be placed on to the surface of the coating system and a 2.25 kg. (5-pound) cylindrical weight with a diameter of 66 mm (2.625 inches) placed on the tissue. After 15 minutes, the weight shall be removed and the paper examined. Staining or discoloration on the paper caused by the coating constitutes failure of this test. The appearance of these panels shall be evaluated as specified in 4.6.2 and shall be in accordance with the requirements of 3.4.

4.6.9 Fire resistance. The coating system shall be evaluated in accordance with the procedure specified in MIL-STD-1623. The average of three panels shall be used to determine conformance with the requirements of 3.11.

4.6.10 Flash point. The flash point shall be determined in accordance with ASTM D 3278 on each individual component of the non-skid coating system after each has been thoroughly-stirred. Flash point of each type shall be in accordance with the requirements of 3.12.

4.6.11 Flexibility (type III). The type III coating shall be mixed, applied, and cured to the test panel in accordance with the manufacturer's ASTM F 718 data sheet for the complete system. The type III coating system test panel shall be tested over a 127 mm (5 in) mandrel in accordance with ASTM F 137 except bending shall be at 20 degrees at uniform rate. The panel shall be examined for cracking, breaking or loss of adhesion immediately after bending.

The panels shall be prepared and tested in such a manner that the ridges in the profile run parallel to the axis of the bend. Flexibility shall be in accordance with the requirements of 3.13.

4.6.12 Immersion resistance. Sixteen 150 by 50 by 3 mm (6 by 2 by 1/8 in) (nominal) steel, reinforced plastic and wood (type III only) panels as specified in 4.5.2 shall be prepared as specified in 4.5.3 (prepared using the highest primer thickness specified). Eight panels shall be subjected to two impacts from a falling steel ball (see 4.6.13); the impacts shall be 100 mm +/- 6.4 mm (4 +/- 0.25 in) apart and equidistant from the edges and sides of the panels. Each of eight widemouth jars with tightly-fitting caps shall be filled to a depth of 75 mm (3 in) (nominal) with one of the following materials:

(a) Grease in accordance with DOD-G-24508.
(b) JP-5 jet fuel in accordance with MIL-T-5624.
(c) Hydraulic fluid in accordance with MIL-H-83282.
(d) Ethyl alcohol in accordance with O-E-760.
(e) Aircraft engine turboshaft lubricating oil in accordance with MIL-L-23699.
(f) Detergent in accordance with MIL-D-16791, 0.5 percent solution in synthetic sea water in accordance with ASTM D 1141.
(g) Aqueous fire fighting foam in accordance with MIL-F-24385, 10 percent solution in synthetic sea water in accordance with ASTM D 1141.
(h) Deicing-defrosting fluids in accordance with MIL-A-8243.

Two panels, one impacted and one unimpacted for each primer thickness, shall be placed in each jar, each panel resting on its 50 mm (2 in) side, with one-half immersed and one-half above the test material and in such a manner as to not touch each other. The jars shall be sealed tightly and kept at standard conditions for 4 weeks for all fluids except JP-5, ethyl alcohol and deicing-defrosting fluid, which shall be tested for 24 hours only. Upon removal from the immersion medium, the panels shall be probed with a sharp, 10 mm (1 in) wide blade, wood chisel and compared with the identical untested control panel to detect signs of softening, loss of adhesion, or separation between layers of coating, and otherwise examined for conformance to 3.14. The panels immersed in JP-5, ethyl alcohol and deicing-defrosting fluid shall be allowed a 6-hour recovery period before evaluation. All other panels shall be examined for conformance immediately after removal from the immersion medium. Results of the evaluation shall be in accordance with the requirements of 3.14.

4.6.13 Impact resistance. Four 150 by 150 by 5 or 6 mm (6 by 6 by 3/16 or 1/4 in) (nominal) test steel, reinforced plastic, and wood (type III only) panels as specified in 4.5.2 shall be prepared as specified in 4.5.3 (prepared using the highest primer thickness specified). Immediately before testing, two panels shall be subjected to each of the following treatments: (a) no treatment and (b) 15 days of immersion in room temperature seawater in accordance with ASTM D 1141.

4.6.13.1 Immediately upon removal from treatment, each panel shall be subjected to 25 impacts by a 0.9 +/- 0.05 kg (2 +/- 0.1 lb) solid steel ball (approximate diameter 60 mm (2.37 in)) dropped from a height of 2.5 to 2.55 meters (8 to 8.1 feet). Type IV coatings shall be subject to 1.6 meters (5 feet). The steel ball shall be held in a fixed position by an electromagnet provided with a

centering tip, such as that shown on figure 5, and shall fall freely without a guide directly onto the panel. The panel shall be placed on a steel base such as that shown on figure 6, which is at least 40 mm (1.5 inches) thick and is fitted with guides to position the panel for each impact. Successive points of impact shall form a 5 by 5 pattern, enclosed within an area of about 58 square centimeters (9 square inches), in which the impacts are equally spaced 20 +/- 1.5 mm (3/4 +/- 1/16 in) center-to-center from their nearest neighbors. The impacts on the panel shall be made in the sequence specified on figure 7. The falling steel ball may sometimes be deflected by a ridge of non-skid during impact such that adjacent impact pairs are spaced less than 3/4 in apart. Improperly spaced pairs shall not be included in the evaluation.

4.6.13.1.1 Upon completion of each impact test, the panel shall be probed by hand with a hand held, sharpened, 25.4 mm (1 in) (nominal) steel cold chisel in an area that received no impacts in order to judge the force needed to remove the coating. The panel shall then be probed in the impact area with the chisel, using a force less than that used in the non-impact area, and coating which has been loosened by the impact of the steel ball shall be removed from the panel.

4.6.13.1.2 The percentage of coating system remaining intact and tightly adhering to the panel shall be evaluated as follows: In the 5 by 5 pattern of impacts, there are 40 pairs of impacts separated by 20 mm (3/4 inch) center to center. In every case in which one or more layers of the coating system has been removed with the chisel, so as to connect one pair of impacts, the percentage of intact coating system is reduced by 2.5. Thus, a passing value of 90 percent indicates that no more than four pairs of adjacent impacts are connected. Results for duplicate panels tested under the same conditions shall be averaged. Failure of one of the two conditions constitutes failure of this test. Impact resistance for each type shall be in accordance with the requirements of 3.15.

4.6.14 Pot life. Separate samples of each individual coating of the non-skid coating system sufficient to fill a standard 1 L (1 qt) can to within 13 mm (1/2 in) of the top shall be conditioned and mixed in accordance with the manufacture's ASTM F 718 directions at 10, 24, and 32°C (50, 75 and 90°F), respectively. If an induction time is called for in the directions, the mixed components shall be kept at the mixing temperature during the induction time. The pot life shall be measured from the end of the induction time, if any, and the mixed coating shall be held at the temperature specified for the pot life. Minimum pot life for each type shall be in accordance with the requirements of 3.16. None of the mixed coating shall be removed for other tests during the determination of the pot life. At the end of the specified pot life, the coating shall meet all the requirements of 4.4.3. (For lot acceptance tests, only performance at the end of pot life shall be determined by application properties (see 4.6.3) when applied to primed 150 by 150 mm (6 by 6 in) (nominal) steel plates and impact testing (see 4.6.13) at 4 days cure.)

4.6.15 Resistance to accelerated aging by light and water. Three 150 by 75 by 3 mm (6 by 3 by 1/8 in) (nominal) steel test panels shall be prepared as specified in 4.5.3 except that the aggregate shall be removed by sieving before application of the topcoat. Two of the panels shall be subjected to two impacts from a falling steel ball (see 4.6.13); each impact shall be 25 mm (1 inch) from the edge (3 in dimension) and 40 mm (1.5 inches) from the sides of the panel (6 in dimension). The panels shall be tested as specified in ASTM G 53 for 200 hours in

an accelerated weathering tester (Q-U-V Cabinet, The Q Panel Corporation, Cleveland, OH; Atlas UVCON, The Atlas Electric Devices Company, Chicago, IL; or equal) which operates on alternate 4-hour periods of condensation at 40°C. The lamps shall be UV-B lamps number QFS-40 or equal. At the completion of the exposure period, the chalking shall be determined in accordance with ASTM D 659 and the panels shall be visually evaluated for compliance with 3.17. The panels shall be washed with mild soap and water, rinsed and allowed to dry overnight before calculating the color differences in accordance with ASTM D 2244. Results shall be as specified in 3.17.

4.6.16 Resistance to accelerated corrosion. Two 150 by 75 by 3 mm (6 by 3 by 1/8 in) (nominal) steel test panels shall be prepared as specified in 4.5.3, except that both sides and edges of these panels shall be primed. One panel shall receive two impacts from a falling steel ball as specified in 4.6.13. The impacts shall be 25 mm (1 in) (nominal) from the end and 40 mm (1.5 in) (nominal) from the sides of the panel. Both panels shall be tested for 1000 hours in a salt fog cabinet as specified in ASTM B 117. The coating system shall be examined for loss of adhesion and separation between coats. A portion of the coating shall be removed from each steel panel, and the underlying steel shall be observed for corrosion under the coating system. Loss of adhesion and allowed corrosion shall be in accordance with the requirements of 3.18.

4.6.17 Resistance to wear. Three steel panels 250 by 150 by 3 mm (10 by 6 by 1/8 in) (nominal) shall be prepared as specified in 4.5.3. The mass of each panel shall be measured to the nearest 0.5 g (0.001 lb) before application of the coating system. Each panel shall be abraded by the cable abrasion tester specified in 4.6.1 for 50 cycles and then its mass determined. The panel shall then be worn for an additional 450 cycles in the cable abrasion tester for types I, II, III coatings or an additional 300 cycles for type IV coatings. For abrasive coatings, the wire in the cable abrasion tester shall be replaced after the first 50 cycles and every 150 cycles thereafter. After completion of the wear, the final coating mass shall be taken. The percent of determined mass loss is calculated as follows:

$$\text{Percent mass loss} = 100 \times (M2 - M3)/(M2 - M1)$$

M1 = Mass of panel before coating
M2 = Mass at 50 cycles
M3 = Mass at end of test

The average percent of determined mass loss of the three panels shall be computed. Loss of mass shall conform to the requirements of 3.19.

4.6.18 Type III only - adhesion of the intermediate coat. The adhesion of the intermediate coat shall be determined in accordance with ASTM D 4541 for the primer and intermediate coat of the non-skid coating system. Adhesion of the intermediate coat shall be in accordance with 3.20.

4.6.19 Storage stability.

4.6.19.1 Long-term storage stability. Full, unopened containers constituting the components of the paint or kit (size of the container shall reflect the contract requirement [see 6.2]) of the coating system shall be kept undisturbed for 1 year at ambient laboratory conditions. After this period, the coating system shall comply with all of the requirements of this specification. Long-term storage stability shall be evaluated by running all the lot acceptance tests (see 4.4.3). Coating shall be in accordance with the requirements of the appropriate section 3 paragraphs.

4.6.19.2 Accelerated storage stability. Full, unopened container(s) constituting the components of the paint or kit (size of the container shall reflect the contract requirement [see 6.2]) of the coating system shall be kept undisturbed for a period of 4 weeks at a temperature of 49°C (120°F). Accelerated storage stability shall be evaluated by running all of the lot acceptance tests (see 4.4.3) after equilibrating the coating system at standard conditions. Coating shall be in accordance with the requirements of the appropriate section 3 paragraphs.

4.6.20 Thickness and weight. Three ordinary strength steel panels (in accordance with MIL-S-22698, grade A) each 150 by 250 by 3 mm (6 by 10 by 1/8 in), shall be as specified in 4.5.2. The tare weight of each panel shall be determined to the nearest 0.1 g (0.00002 lb), and the thickness of each panel shall be measured with a micrometer at 20 equally-distributed points. The areas of the test plates shall be determined to the nearest 0.1 cm^2 (0.04 in^2). The non-skid coating system shall be applied to each panel in accordance with the instructions provided in 3.5 so as to completely cover the steel plates, and the coating system shall be allowed to cure for 96 hours. After curing, any excess coating shall be cleaned from the edge of the panels. The thickness of each panel shall be measured with a micrometer at each of the 20 points measured previously. The difference in thickness of the uncoated and coated steel panels at each of the 20 points shall be calculated. The thickness of each panel shall be the average of the 20 measured thicknesses. The average thickness of the three panels shall be computed. The average thickness shall be in accordance with the requirements of 3.22. The weight of each panel shall be determined to the nearest 0.1 g (0.00002 lb), and the tare weight shall be subtracted to give the net weight of the coating. Average the areas of the three test plates. The three net weights shall be averaged and divided by the average test plate area to convert to grams per square centimeter. The weight of the coating will meet the requirements of 3.23.

4.7 Toxicity. To determine conformance to requirements of 3.24.2, the manufacturer of the material shall disclose the formulation of his product to the Navy Environmental Health Center, Code 34, 2510 Walmer Avenue, Norfolk, VA 23513-2617. The disclosure of proprietary information, which shall be held in confidence, shall include: the name, formula, and approximate percentage by weight and volume of each ingredient in the product; the results of any toxicological testing of the product; identification of its pyrolysis products; and any other information as may be needed to permit an accurate appraisal of any toxicity problem or issues associated with the handling, storage, removal, application, use, disposal, or combustion of the material. Information submitted shall be clearly marked or identified to show it is being provided in connection with qualification under MIL-C-24667. In addition, the manufacturer shall provide a current MSDS for each product, in addition to a current MSDS for each ingredient used in the formulation. Within 30 days prior to data submission, the

manufacturer shall contact the supplier of each ingredient, and confirm each MSDS submitted is current. In addition, maximum concentration of contaminants for toxicity shall be determined on the dried powderized coating of the non-skid coating system in accordance with the 40 Code of Federal Regulation (CFR) Ch 1, Part 261, Appendix II - Method 1311, Toxicity Characteristic Leaching Procedure (TCLP). The maximum concentration of contaminants for toxicity of each individual mixed and cured coating of the non-skid coating system shall be in accordance with the requirements of 3.24.2.

4.8 Volatile organic compounds (VOC). The VOC of each individual coating of the non-skid coating system, in ready-to-use condition, shall be determined by Method 24 of the U.S. Environmental Protection Agency, 40 CFR Ch. 1, Part 60, Appendix A, Determination of Volatile Matter Content, Density, Volume Solids and Weight Solids of Surface Coatings. VOC shall be in accordance with the requirements of 3.24.6.

4.9 Soluble and total metal content. Soluble and total metal content shall be determined on each individual coating of the dried powderized non-skid coating system in accordance with the California Administrative Code, Title 22, the waste extraction test, the soluble metal content, and the total metal content shall not exceed values which would cause the material to be classified as a hazardous waste (see tables VIII and IX). The soluble and total metal content of each individual mixed and cured coating of the non-skid coating system shall be in accordance with the requirements of 3.24.7.

4.10 Performance. When tested as specified in 4.6, the coating system shall meet all the requirements set forth herein as specified in table XIII.

TABLE XIII. Test references.

Title of test	Performance paragraph	Test paragraph
Abrasion of arresting cable	3.3	4.6.1
Appearance of the dried coating	3.4	4.6.2
Application properties	3.5	4.6.3
Coefficient of friction	3.6	4.6.4
Color	3.7	4.6.5
Condition in Container	3.8	4.6.6
Coverage	3.9	4.6.7
Drying time	3.10	4.6.8
Fire resistance	3.11	4.6.9
Flash point	3.12	4.6.10
Flexibility (type III)	3.13	4.6.11
Immersion resistance	3.14	4.6.12
Impact resistance	3.15	4.6.13
Pot life	3.16	4.6.14
Resistance to accelerated aging by light and water	3.17	4.6.15

TABLE XIII. Test references - Continued.

Title of test	Performance paragraph	Test paragraph
Resistance to accelerated corrosion	3.18	4.6.16
Resistance to wear	3.19	4.6.17
Adhesion of the intermediate coat (type III only)	3.20	4.6.18
Storage stability	3.21	4.6.19
Thickness	3.22	4.6.20
Weight	3.23	4.6.20
Toxicity	3.24.2	4.7
VOC	3.24.6	4.8
Soluble and total metal content	3.24.7	4.9

4.11 Performance in service. A service test of types I and II shall be conducted on a carrier flight deck in the landing area for composition L and in a non-landing area for composition G. The coating system shall be mixed and applied according to the instructions furnished by the manufacturer (see 3.25). The coating system shall be examined after the test interval specified in table IX for the appropriate type and evaluated for conformance to 3.26. Types III and IV non-skid systems shall be tested on a smaller ship as designated by NAVSEA.

5. PACKAGING

(The packaging requirements specified herein apply only for direct Government acquisition.)

5.1 General.

5.1.1 Performance oriented packaging (POP). Unless otherwise specified (see 6.2), in addition to the packaging requirements specified herein, all packaging shall comply with the United Nations POP requirements.

5.1.2 Navy fire-retardant requirements.

(a) Lumber and plywood. Unless otherwise specified (see 6.2), all lumber and plywood, including veneer materials, used in shipping container and pallet construction, members, blocking bracing and reinforcing shall be fire-retardant treated materials conforming to MIL-L-19140 as follows:

Level A and B - Type II (weather resistant)
Category I (general use)
Level C - Type I (non-weather resistant)
Category I (general Use)