

MIL-C-10369D

10 May 1968

SUPERSEDING

MIL-C-10369C

9 December 1958

MILITARY SPECIFICATION

CABLE, TELEPHONE, FIELD, FOR RAPID PAYOUT (MX-306A/G)

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

1. SCOPE

1.1 This specification covers the materials and processes necessary to prepare Wire WD-1/TT and Wire WD-14/TT for rapid dispensing.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

SPECIFICATIONS

FEDERAL

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|-----------|---|
| CCC-C-419 | - Cloth, Cotton, Duck, Unbleached, Plied-Yarns (Army and Numbered). |
| CCC-D-950 | - Dyeing and After Treating Processes for Cotton Cloths. |

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| MIL-R-3065 | - Rubber, Fabricated Parts. |
| MIL-T-3530 | - Thread and Twine, Mildew Resistant or Water Repellant Treated. |

FSC 6145

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- MIL-F-8261 - Fungus Resistance Tests. Aeronautical and Associated Materials, General Specification For.
- MIL-M-13231 - Marking of Electronic Items.
- MIL-C-13294 - Cable Telephone (Wire WD-1/TT and WD-14/TT).
- MIL-F-14072 - Finishes for Ground Signal Equipment.
- MIL-C-145662 - Calibration System Requirements.

STANDARDS

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- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-170 - Moisture Resistance Test Cycle for Ground Signal Equipment.

DRAWINGS

SIGNAL CORPS

- DL-SC-A-105703 - Wire Dispenser MX-306A/G.
- SC-D-29838 - Wire Dispenser MX-306A/G Assembly.
- SC-D-29839 - Side Panel.
- SC-D-29840 - Wire Dispenser MX-306A/G Operation.

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

AMERICAN SOCIETY OF TESTING MATERIALS

- D297-61T - Chemical Analysis of Rubber Products.
- D531-56 - Indentation of Rubber by means of the Pusey and Jones Plastometer.
- D573-53 - Accelerated Aging of Vulcanized Rubber by the Oven Method.
- D746-64T - Brittle Temperature of Plastics and Elastomers by Impact.

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.)

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3. REQUIREMENTS

3.1 Construction. Construction of Wire Dispenser MX-306A/G shall be in accordance with drawing DL-SC-A-105703 and this specification. Construction shall be such that the completed dispenser will withstand the tests specified in section 4.

3.1.1 Grommet. The grommet shall be constructed in accordance with drawing SC-D-29839 and shall conform to this specification.

3.1.2 Wire coil. Each Wire Dispenser MX-306A/G shall contain a minimum of 2,500 feet, maximum of 2,775 feet, of either Wire WD-1/TT or Wire WD-14/TT. Wire WD-1/TT and Wire WD-14/TT shall comply with MIL-C-13294 before packaging in Wire Dispenser MX-306A/G.

3.1.2.1 Winding of coil. The wire coil shall be wound over a 4-inch diameter mandrel as specified in 3.1.2.1.1 through 3.1.2.1.7.

3.1.2.1.1 Positioning. The canvas side walls shall be secured to two rigid supports positioned on the mandrel 5 inches apart. The side walls shall be located in respect to each other so that tabs at 4 points 90° apart overlap at final assembly and all other tabs interlay. Since both side walls are identical, slight rotation of one in respect to the other will accomplish the desired relationship of the tabs at final assembly.

3.1.2.1.2 Guide and pitch control. The wire shall be guided to the point of contact with the coil during winding and wound with a linear pitch per turn of the mandrel of 3/16-inch. The guide and pitch control mechanism shall accurately position the wire and not allow any turn to cross adjacent turns in the same layer.

3.1.2.1.3 Tension control. The winding mechanism shall cause a uniform tension to be applied to the wire being wound into the coil. This tension shall not vary because of removal of the wire from the supply reel or any other functional action of the equipment. The exact tension for a particular coil winding machine shall be determined before the manufacture of the production samples. The amount of tension established for a given machine shall be furnished the inspector. The tension shall be in the range from 4 to 7 pounds and should vary not more than plus or minus 1/2 pound from the established value.

3.1.2.1.4 Adhesive application. As the wire is being wound into the coil, the adhesive specified in 3.2.2 shall be continuously applied to the wire in sufficient amount to meet the tests of 4.4.

3.1.2.1.5 Wire lay control. The wire shall be pretwisted 360° for each revolution of the coil winding mandrel in the direction of lay.

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3.1.2.1.6 Wire ends. The "standing" and "payout" ends of the wire shall be prepared as indicated on drawing SC-D-29838.

3.1.2.1.7 Outside diameter. The normal diameter of the coil, before applying the finish taping operation, shall be approximately 13-1/2 inches. There will be a slight variation due to number of feet of wire in the coil and wire tension. Excessive variation indicates that either an incorrect length of wire has been wound or that the proper tension was not maintained during winding.

3.1.3 Finishing operations. When the required footage of wire has been wound into the coil, the length of wire necessary to comply with 3.1.2.1.6 shall be led into the center of the coil. The following sequence of operations, shown on drawing SC-D-29840 (step 2 to 7) shall complete the packaging of the wire Dispenser MX-306A/G:

Sequence	Operation
1	Apply one layer, 50 percent overlap; of double coated tape.
2	Turn tabs of one side wall across the outside of the coil and firmly attach to the adhesive tape. On three tabs located 90° apart, assemble the D-ring locating the ring approximately in the center of the coil width.
3	Apply a second layer, 50 percent overlap; of double coated tape.
4	Turn the tabs of the second side panel across the outside of the coil and firmly attach to the adhesive tape. Pass the tabs opposite the D-ring through the ring.
5	Apply a single layer, 50 percent overlap, of single coated tape, completely across the width of the coil. The D-ring may be allowed to project by cutting of the tape around the D-ring or the D-ring may be laid flat against the coil surface and the tape applied over the D-ring, without cutting, when the D-ring is taped. The D-ring shall not be completely covered by the tape.

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Sequence (Cont'd)

Operation (Cont'd)

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When a finished unit is removed from the winding mandrel, unless restraining action is taken, the 5-inch width which is the distance between the side walls during winding, will increase. Action shall be taken to confine the coil until the adhesive has set. The length of time required must be determined for the particular adhesive used by the contractor. After restraining action is removed, the dispenser should be not more than 5-3/4 inches wide, measured over the canvas sidewalls. No tests or excessive handling of the dispenser should occur until after the adhesive has set.

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After all tests are completed, arrange the two free ends of the wire (which are secured in a small compact coil) inside the coil in the open center core. Apply the closure material over the 4-inch diameter opening in each side wall.

3.2 Materials.

3.2.1 Grommet. The material used in grommets shall be of a high modulus, low brittle point synthetic rubber compound which has a good resistance to tear, abrasion, sunlight, ozone, humidity, heat and impact, plus good adhesion to canvas, in the temperature range of -67°F. to +185°F., in order to meet the service conditions of the grommet and equipment (see 6.5). The compound shall contain no natural rubber hydro carbon. (See 4.13.)

3.2.1.1 Antideterioration agents. The manufacturer shall furnish a certificate of compliance that the rubber compound contains the following minimum amount and type of chemical antideterioration agents, added among the last ingredients to the rubber batch, in parts by weight per hundred parts by weight of rubber polymer. Any specific chemical used to satisfy the requirements of one subparagraph shall not be used to meet the requirements of any other subparagraph except (e). (See 6.7.)

- (a) 3.0 part of a sunproofing wax blend.
- (b) 0.35 part N, N,-diphenyl-p-phenylene-diamine plus 0.65 part general purpose antioxidant (s).
- (c) 1.0 part of a p, p'-diamine-diaryllalkane, p, p'-aryldiamine or p-aryldiamine, or N,N' derivatives thereof, or mixtures of these.
- (d) 1.0 part of an alkyl-dihydroquinoline or alkyl-phenol, or mixture of these.

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- (e) If the canvas used with the rubber grommet has been treated or dyed with a copper-, iron-, or manganese-bearing chemical, the antideterioration chemical(s) meeting the requirements of subparagraphs (b), (c) and/or (d) above, or an additional 1.0 part chemical(s), shall be of the "copper-inhibitor" type.

3.2.2 Adhesive. Adhesive, used as a restraining agent, shall not be water soluble and shall not lose its adhesive qualities during or after immersion of the dispenser. It shall have no damaging action on the insulation of Wire WD-1/TT or Wire WD-14/TT and shall not deteriorate at temperatures within the range of -65° to +140°F. and at relative humidities within the range of 15 to 95 percent. A suitable adhesive is Firestone Loxite No. 4006 or Loxite No. 4102, or equal.

3.2.3 Fabric.

3.2.3.1 Duck. Duck fabric shall be in accordance with CCC-C-419.

3.2.3.2 Color. The color of the fabric, immediately after tropicalization treatment (see 3.2.3.3), shall be olive drab No. 7 (see 6.6).

3.2.3.3 Treatment of duck. Duck shall be given class B after-treatment, water-repellent and mildew-resistant, conforming to CCC-D-950.

3.2.3.4 Treatment of tape. The single backed tape shall be given a tropicalization treatment of either the type specified in paragraph 3.2.3.3 or in accordance with MIL-T-3530, class II treatment for thread. The double backed tape shall be treated with 1.50 \pm .25 percent of dihydroxydichlorodiphenyl methane or equal or total weight of finished tape.

3.3 Performance requirements.

3.3.1 Grommet.

3.3.1.1 Tensile strength. The tensile strength, original, shall be not less than 1,900 pounds per square inch (p.s.i.) when tested in accordance with 4.13.1.

3.3.1.2 Elongation. The ultimate elongation, original, shall be not less than 300 percent when tested in accordance with 4.13.2.

3.3.1.3 Hardness. The original plastometer indentation hardness when tested as specified in 4.13.3 shall be not greater than 1.05 millimeters.

3.3.1.4 Accelerated aging. Specimens shall be aged in accordance with the tests as specified in 4.13.4 for compliance with 3.3.1.5 and 3.3.1.6.

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3.3.1.5 Aged tensile strength. The change in tensile strength after aging when tested as specified in 4.13.4.1 shall be not greater than 25 percent.

3.3.1.6 Aged elongation. The change in ultimate elongation after aging when tested as specified in 4.13.4.2, shall be not greater than 35 percent.

3.3.1.7 Low temperature impact resistance. When tested as specified in 4.13.5 there shall be no evidence of chipping or cracking.

3.3.1.8 Free sulphur. Free elemental sulphur in the rubber test specimens and molded rubber grommets on the dispensers shall be not greater than 0.05 percent when tested in accordance with 4.13.6.

3.3.2 Finished package.

3.3.2.1 Continuity and shorts. The wire contained in the dispenser shall have no open conductors or shorts between conductors when tested per 4.6.

3.3.2.2 Dielectric strength and insulation resistance. When tested as specified in 4.7 the insulation resistance to ground (water) shall be not less than 10,000 megohms per 1,000 feet of single conductor.

3.3.2.3 D.C. resistance of wire in the dispenser. When tested as specified in 4.8, the direct current resistance of the wire in the dispenser shall not exceed 46 ohms per 1,000 loop-feet.

3.3.2.4 Handling. Dispensers shall withstand the handling test specified in 4.9. The dispenser may be distorted or the canvas side walls may split or pull out slightly from under the tape and not be cause for rejection. If the rubber grommet is pulled apart, the dispenser shall be rejected. The cover over the center hole shall be in place when the test is conducted; however, if it is torn or loosened by the first impact, it shall not be replaced for the second impact.

3.3.2.5 Payout. Dispensers shall withstand the payout test as specified in 4.10 and 4.12. The payout of the wire shall be considered satisfactory provided any single entanglement does not contain more than 50 feet of wire and the total footage in a series of entanglements does not exceed 100 feet of wire. An entanglement is the simultaneous removal of a number of feet of wire from the dispenser in a snarled mass. To determine the number of feet of wire involved in an entanglement, select and mark two points of the wire, one on each side of the entanglement and separated by a known number of feet. Untangle the wire and when straightened, measure the number of feet between the markers. The difference between the two measurements represents the number of feet of wire involved in the entanglement. Removal of the last

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layers of wire in the dispenser shall not cause collapse of the canvas container or pull out particles of the binding tape. Collapse of the container or removal by the wire of pieces of tape shall not be cause for rejection but the tension with which the tape is applied will be checked to insure that it is the minimum required to cause bonding of the overlap of the tape. Breakage of the wire during payout shall be considered unsatisfactory payout. After payout, the wire shall be tested for open conductors or shorts between conductors in the manner specified in 4.6. An open or shorted conductor shall be considered a failure of the payout test. Any contractor may offer for approval of the contracting officer a machine or method which will remove the wire from the dispenser in a manner equivalent to payout from a vehicle and if approved, substitute the machine or method for road payout. Communication must be possible over the wire after payment using standard field telephones. Failure to completely pay out or furnish communication shall be considered cause for rejection.

3.4 Splices. Splices shall be in accordance with MIL-C-13294 for Wire WD-1/TT or WD-14/TT. Not more than 6 percent of the total number of dispensers shall contain splices. Only 1 splice per conductor length in the dispenser shall be allowed and the splices of the twisted pair shall be staggered at least 3 feet. All dispensers containing a splice or splices shall carry identification indicating the presence of a splice.

3.5 Tape. The single and double faced tape shall show no evidence of loosening of the adhesive bond or deterioration when tested as specified in 4.14.

3.6 Temperature and humidity. The dispensers when tested as specified in 4.11 shall show no evidence of loosening of the tape, rusting of the D-rings and meet the insulation resistance specified in 3.3.2.2.

3.7 Finish, protective. The D-ring shall be given a protective finish in accordance with MIL-F-14072. (See 4.3.)

3.8 Marking. The dispenser shall be marked for identification in accordance with MIL-M-13231. (See 4.3.)

3.9 Workmanship. The wire dispenser shall be constructed in a thoroughly workmanlike manner in accordance with accepted high-grade production techniques, and shall be free from defects which will adversely affect the serviceability of the product. (See 4.5.)

4. QUALITY ASSURANCE PROVISIONS

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4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.1.1 Test equipment and inspection facility. Inspection equipment and test facilities shall be established and maintained in accordance with MIL-C-45662.

4.2 Classification of inspection. Inspection shall be classified as follows:

(a) Inspection covered by subsidiary documents. (See 4.3.)

(b) Quality conformance inspection.

(1) Inspection of product for delivery. (See 4.4.)

(2) Inspection of preparation for delivery. (See 4.15.)

4.3 Inspection covered by subsidiary documents. The following shall be inspected under the applicable subsidiary documents as part of the inspection of product for delivery: (See 4.4.)

<u>Item</u>	<u>Where Required</u>
Finish	3.7
Marking	3.8

4.4 Inspection of product for delivery. The contractor, to demonstrate compliance with specified requirements, shall perform the inspection specified in 4.3 and 4.4.1 through 4.4.4. This does not relieve the contractor of his responsibility for performing any additional inspection which is necessary to control the quality of the product and to assure compliance with all specification requirements. The Government will review and evaluate the contractor's inspection procedures and examine the contractor's inspection records. In addition, the Government--at its discretion--may perform all or any part of the specified inspection, to verify the contractor's compliance with specified requirements. (See 6.4.) Test equipment for Government verification inspection shall be made available by the contractor.

4.4.1 Group A inspection. This inspection, including sampling, shall conform to Table I and the ordinary inspection procedures of MIL-STD-105. Group A inspection shall be performed in any order which is satisfactory to the Government.

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Table I. Group A inspection.

Inspection	Requirement paragraph	Inspection paragraph	AQL	
			Major	Minor
Visual and mechanical	3.9	4.5, 4.5.1	1.0%	4.0%
Electrical				
Continuity and shorts	3.3.2.1	4.6	1.0% for the group	*
Dielectric & insulation resistance	3.3.2.2	4.7, 4.7.1, 4.7.2		
DC resistance	3.3.2.3	4.8		

*All electrical defects are considered major.

4.4.2 Group B inspection. This inspection, including sampling, shall conform to Table II and MIL-STD-105, Level S-4, for normal, tightened and reduced inspection. Group B inspection shall normally be performed on inspection lots that have passed group A inspection and on samples selected from units that have been subjected to and met the group A inspection. The Acceptable Quality Level (AQL) shall be 6.5%.

4.4.2.1 Order of inspection within group B. Group B inspection shall be inspected in the order listed in table II.

Table II. Group B inspection.

Inspection	Requirement paragraph	Inspection paragraph	Sampling plan
Handling - - - - -	3.3.2.4	4.9	See 4.4.2
Payout - - - - -	3.3.2.5	4.10	

4.4.3 Group C inspection. This inspection shall consist of Group C-1 and C-2 tests specified in Table III and IV, and shall be performed on samples that have been subjected to and met group A and group B inspection. Samples shall be selected at random without regard to their quality except that the samples selected at the start of the contract shall be selected from the first units produced.

4.4.3.1 Group C-1 inspection. This inspection shall consist of the tests specified in Table III and shall be performed every six months on specimens as required.

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Table III. Group C-1 inspection.

Inspection	Requirement paragraph	Inspection paragraph
Grommet	3.3.1	4.13
Tensile strength	3.3.1.1	4.13.1
Elongation	3.3.1.2	4.13.2
Hardness	3.3.1.3	4.13.3
Accelerated aging	3.3.1.4	4.13.4
Aged tensile strength	3.3.1.5	4.13.4.1
Aged elongation	3.3.1.6	4.13.4.2
Low temperature impact resistance	3.3.1.7	4.13.5
Free sulphur	3.3.1.8	4.13.6
Tape	3.5	4.14

4.4.3.2 Group C-2 inspection. This inspection shall consist of the tests specified in Table IV and shall be performed one time only at the beginning of production on four each dispensers, two for each test.

Table IV. Group C-2 inspection

Inspection	Requirement paragraph	Inspection paragraph
Airplay (payout)	3.3.2.5	4.12
Temperature and humidity	3.6	4.11

4.4.3.3 Noncompliance. The contractor shall immediately report, in writing, each group C failure occurrence, including details of the failure and characteristics affected. The contractor shall immediately investigate the cause of failure and further report the results of investigation and details of the proposed corrective action on (i) the process and materials, as applicable, and (ii) all units of product which were manufactured under the same conditions and which the Government considers subject to the same failure. Reports shall be forwarded to the responsible technical activity designated in the contract through the Quality Assurance Representative. After corrective action has been taken, additional sample units shall be subjected to group C inspection (all inspections, or the inspections which the sample failed, at the option of the Government) and groups A and B inspection may be reinstituted; however, final acceptance and shipment will be withheld until the group C reinspection results have shown that the corrective action was effective. (See 6.3.)

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4.4.4 Reinspection of conforming group B and group C sample units. Unless otherwise specified, sample units which have been subjected to and passed group B or group C inspection, or both, may be accepted on contract, provided that they are resubjected to and pass group A inspection after repair of all visible damage.

4.5 Examination of product. Each sample shall be examined to determine conformance to this specification. (See 3.9.)

4.5.1 Visual inspection. A visual examination shall be made of each sample for conformance with the requirements of this specification. If the adhesive (3.1.2.1.4) cannot be observed by the visual inspection of the wire through the 4-inch center hole, its presence may be determined by pulling several turns of wire out of the payout side of the dispenser. The adhesive will create a definite restraint to the freeing of the turns of wire. Any turns loosened by this inspection shall be carefully coiled and replaced inside the center of the dispenser. Visual observation of application of adhesive may be made during payout of the wire. Lack of evidence of proper adhesive shall be cause for rejection of that particular dispenser.

4.6 Continuity and shorts. The wire in each dispenser shall be tested for continuity and shorts between conductors using a volt ohmmeter or other suitable low potential testing device. The test for shorts will be made with one end of the wires open and for continuity with this same end shorted. The samples shall meet the requirements of 3.3.2.1.

4.7 Dielectric strength test and insulation resistance. The dispensers shall be immersed in water for 1 hour with both ends of the wire remaining dry. A potential of 1,000 volts r.m.s., 60 cycles, shall be applied for 5 seconds or a potential of 500 volts d.c. shall be applied for 1 minute and any evidence of breakdown shall be noted. Measure insulation resistance using a potential of not less than 100 volts d.c. for 1 minute. The insulation resistance shall meet the requirements of 3.3.2.2. The dispensers shall then be dried at room temperature for 24 hours before proceeding with the remaining tests. Accelerated drying may be used providing the dispenser is not subjected to a temperature above +140°F.

4.7.1 When a 100 percent test of an entire lot is required, it is permissible to terminate the insulation resistance test in less than 1 minute if the galvanometer has ceased to fluctuate, and the reading indicates the minimum insulation resistance has been obtained. However, test results on 5 percent of the lengths after 1 minute electrification shall be recorded to permit a continuous check on quality.

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4.7.2 Drying following test. The sample dispensers may be tested and defective units removed from the lot. Satisfactory dispensers shall be dried before packing for shipment. The drying may be done at room temperature or by accelerated means providing the dispensers are not subjected to a temperature above plus 140°F. Dispensers showing no evidence of moisture by visual inspection or found damp to touch (feeling) shall be considered acceptable. Comparison with units which have not been immersed in water may be used as a guide or standard by the inspector.

4.8 D.C. resistance test. The wire in the dispenser shall be tested for d.c. resistance at or corrected to 68°F and shall meet the requirements of 3.3.2.3.

4.9 Handling. The dispensers shall be tested in the following manner: The dispenser containing wire shall be dropped 2 times from a height of 10 feet onto concrete surface so that the dispenser strikes on the 5-inch-wide circumferential surface. An alternate method is the dropping of a 26-pound weight from a height of 10 feet onto the dispenser, which is standing on the 5-inch-wide circumferential surface, on the concrete floor. The weight should have a flat surface larger than the width of the dispenser so as not to cause a cutting action and should be guided so that the weight strikes the dispenser squarely. The dispenser shall be rotated 90° between the first and second impact to avoid striking twice in the same place. (See 3.3.2.4.)

4.10 Payout. The sample dispensers shall be tested in the following manner: The wire in the dispenser shall be completely payed out at an average speed of 40 miles per hour. With the starting end of the wire anchored, a vehicle used as a means of transportation of the dispenser, shall attain a speed of 38 to 42 miles per hour within 500 feet from start and maintain the speed within this range for the distance required to pay out all the wire in the dispenser. (See 3.3.2.5.)

4.11. Temperature and humidity. The sample dispensers shall be subjected to 5 continuous 48-hour cycles as shown in MIL-STD-170. During this period, the dispenser shall be tested for insulation resistance using a d.c. source of potential of not less than 100 volts applied for not less than 1 minute during periods indicated on the drawing. The measurement shall be made between conductors (one end open) and without removal of the dispenser from the test chamber for measurement. After removal from the test chamber, the dispenser shall be examined visually for loosening of the tape or rusting of the D-ring, either condition or failure to comply with the insulation resistance requirement of 3.3.2.2 shall be cause for rejection. (See 3.6.) Satisfactory dispensers shall then be inspected in accordance with 4.9 and 4.10.

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4.12 Air lay. Dispenser shall be payed out from the air using a liaison type airplane. For a payout, the wire in two dispensers shall be connected for tandem payout. The entire mile of wire (two dispensers in tandem) shall pay out and meet the requirements of 3.3.2.5. This test will be performed by the Government.

4.13 Grommet material. Test pieces taken from grommets on finished canvas side walls after payout test, as specified in 4.10 or 4.12, shall be tested as described in 4.13.1 through 4.13.6 and shall meet the requirements of 3.2.1 and 3.2.1.1.

4.13.1 Tensile strength. The specimens shall be tested for tensile strength as described in MIL-R-3065 and shall meet the requirements of 3.3.1.1.

4.13.2 Elongation. The specimens shall be tested for elongation as described in MIL-R-3065 and shall meet the requirements of 3.3.1.2.

4.13.3 Hardness. The specimens shall be tested for original plastometer indentation hardness as described in American Society for Testing Material Specification D531-56 and shall meet the requirements of 3.3.1.3.

4.13.4 Accelerated aging. Specimens shall be aged as described in American Society for Testing Materials Specification D573-53, using a circulating air oven, for a period of 70 hours $\pm 1/2$ hour at a temperature specified in 4.13.4.1 and 4.13.4.2. The specimens shall meet the requirements of 3.3.1.4.

4.13.4.1 Aged tensile strength. The specimens shall be aged for 70 hours at a temperature of 212°F . and the change in tensile strength shall not exceed the requirements of 3.3.1.5.

4.13.4.2 Aged elongation. The specimens shall be aged for 70 hours at a temperature of 212°F . and the change in ultimate elongation shall not exceed the requirements of 3.3.1.6.

4.13.5 Low temperature impact resistance. The specimens shall be tested using apparatus for testing resistance to impact at low temperature as described in American Society for Testing Materials Specification D746-64T, using at least 3 specimens as received and 3 specimens previously aged at 212°F . for 70 hours, placed in a cold chamber and conditioned at $-80 \pm 5^{\circ}\text{F}$. for 14 days. The specimens shall meet the requirements of 3.3.1.7.

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4.13.6 Free sulphur. Specimens shall be tested for free elemental sulphur as described in American Society for Testing Materials Specification D297-61T, paragraph 30. The specimens shall meet the requirements of 3.3.1.8.

4.14 Tape. Samples of single backed and double backed tape in an overlap condition equivalent to that in a finished dispenser (or a finished dispenser containing wire) shall be immersed in tap water for 72 hours. Samples of single backed tape shall be tested for tropicalization treatment in accordance with paragraph 3.2.3.4 or in accordance with MIL-T-3530, class II, for thread. Samples shall meet the requirements of 3.5. Samples of double backed tape shall be tested in accordance with MIL-F-8261 for paper.

4.15 Inspection of preparation for delivery. Preparation for delivery shall be inspected in accordance with MIL-C-13294 to determine conformance to the requirements of Section 5.

5. PREPARATION FOR DELIVERY.

5.1 Preservation, packaging, packing and marking shall be in accordance with MIL-C-13294.

6. NOTES

6.1 Intended use and description.

6.1.1 Intended use. Wire WD-1/TT or Wire WD-14/TT as contained in Wire Dispenser MX-306A/G permits rapid payout of coiled twisted pair field wire to provide a metallic circuit for the operation of wire communication equipment. Communication may be maintained over the wire while it is being laid. To pay out or lay the wire the dispenser may be carried by a man, a vehicle, or an airplane.

6.1.2 Description. Wire Dispenser MX-306A/G weighs about 26 pounds and is a cylindrical, expendable, canvas and tape package, approximately 13-1/2 inches in diameter and 5-3/4 inches (maximum) thick containing approximately 1/2 mile of either Wire WD-1/TT or Wire WD-14/TT. The canvas and tape container is designed to withstand the rough handling and conditions of field use.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification and any amendment thereto.
- (b) Type required.
- (c) Levels of preservation, packaging, packing, and marking. (See section 5.)
- (d) Marking and shipping of samples.
- (e) Place of final inspection.

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6.3 Group C inspection. Approval to ship may be withheld, at the discretion of the Government, pending the decision from the contracting officer on the adequacy of corrective action. (See 4.4.3.3.)

6.4 Verification inspection. Verification by the Government will be limited to the amount deemed necessary to determine compliance with the contract and will be limited in severity to the definitive quality assurance provisions established in this specification and the contract. The amount of verification inspection by the Government will be adjusted to make maximum utilization of the contractor's quality control system and the quality history of the product.

6.5 The following Rubber Recipe (in parts by weight) is given as a guide: (See 3.2.1.)

GR-S-1505.....	100.
Sulphur (maximum).....	1.0
HAF Black.....	70.0
Indonex 637-1/2.....	10.0
Sunproofing wax.....	3.0
Flexamine.....	1.0
Tonox.....	1.0
Agerite Resin D.....	1.0
Peptizers, activators, vulcanizants as needed.	

6.6 A sample swatch of fabric, colored Olive Drab No. 7, may be obtained from the Defense Personnel Support Center, Attention: Small Loan Unit, 17th Street and Johnston Avenue, Philadelphia, Pennsylvania 19101. (See 3.2.3.2.)

6.7 The following are some of the trade names for the chemicals and chemical mixtures meeting the requirements of paragraph 3.2.1.1.

Subparagraph (b)-Age Rite HP, Akroflex CD, Flexamine, Santoflex 35, or equal.

Subparagraph (c)-Agerite White, Stabilite, Tenamene II, Tonox, or equal.

Subparagraph (d)-Age Rite Resin D, Flectol H, Santoflex B, Wingstay S, or equal.

Subparagraph (e)-Flexamine, Age Rite White, or equal.

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6.8 The provisions of this specification are the subject of international standardization agreement ABC-ARMY-STD-62. When amendment, revision or cancellation of this specification is proposed which will effect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required.

Custodians:

Army - EL
Navy - None
Air Force - 80

Preparing Activity:

Army - EL

Code "C"

Review Activities:

Army - None
Navy - None
Air Force - None
NSA
DSA - IS

Project 6145-0543

User Activities:

Army - MI, ME
Navy - MC
Air Force - 17

International (see 6.8)

FOLD

DEPARTMENT OF THE ARMY
HEADQUARTERS
U.S. ARMY ELECTRONICS COMMAND
FORT MONMOUTH, NEW JERSEY 07703

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SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 119-R004

INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity.

SPECIFICATION MIL-C-10369D Cable, Telephone, Field, For Rapid Payout (MX-306A/G)

ORGANIZATION

CITY AND STATE

CONTRACT NO.

QUANTITY OF ITEMS PROCURED

DOLLAR AMOUNT

\$

MATERIAL PROCURED UNDER A

☐

DIRECT GOVERNMENT CONTRACT

☐

SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

☐

YES

☐

NO

IF "YES", IN WHAT WAY?

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity)

DATE

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