T-R-650
December 21, 1967
SUPERSEDING
Fed. Spec. T-R-592a
August 9, 1961,
Int. Fed. Spec. T-R-00675a.(Army - QMC)
April 16, 1967, and
Fed. Spec. T-R-675
March 8, 1954
(See 6.2)

FEDERAL SPECIFICATION

ROPE, YARN AND TWINE, BAST FIBER

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the requirements for rope, yarn, and twine manufacturered of bast fibers identified as jute and hemp.

1.2 Classification. The rope, yarn, and twine covered by this specification shall be of the following types and classes, as specified (see 6.1).

Type I - Rope, jute.

Class 1 - Natural.
Class 2 - Mildew-resistant treated.

Type II - Rope, hemp, tarred.

Class 1 - Ratline.
Class 2 - Seizing.

Type III - Twine, hemp, polished, stainless.

Type IV - Yarn, plied, hemp, tarred.

Class 1 - Marline.
Class 2 - Spun yarn.
Class 3 - Houseline.
Class 4 - Roundline.

2. APPLICABLE DOCUMENTS

2.1 The following specifications and standards, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

T-T-616 - Treatment: Mildew Resistant, For Rope and Cord.
CCC-T-191 - Textile Test Methods.

Federal Standard:

Fed. Std. No. 123 - Marking for Domestic Shipment (Civilian Agencies)

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under general information in the Index of Federal Specification and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Atlanta, Chicago, Kansas City, Mo., Fort Worth, Denver, San Francisco, Los Angeles, Seattle, and Washington, D. C.

(Federal Government activities may obtain copies of Federal Specifications, Standards and Handbooks and the Index of Federal Specifications and Standards from estabilished distribution points in their agencies.)

Military Specifications:

MIC-C-3131 - Cordage, Preparation for Delivery of.
MIL-T-16070 - Treatment, Mildew-Resistant, For Rope.

Military Standard:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 Material. The finished products of this specification shall be manufactured of the following fibers:

Type I - Jute (corchorus capsularis or corchorus olitorius).
Type II - Hemp (cannabis sativa)or flax (linum usitatissimum) or a combination of hemp and flax.
Type III - Hemp (cannabis sativa) or flax (linum usitatissimum) or a combination of hemp and flax.
Type IV - Hemp (cannabis sativa) or flax (linum usitatissimum) or a combination of hemp and flax.

3.2 Construction.

3.2.1 Type I, jute ropes. Jute ropes shall conform to the physical requirements of table I, when tested in accordance with 4.3. Unless otherwise specified, ropes of this type shall be 3-strand standard lay construction (see 6.1). However, when specified (see 6.1), ropes of 4-strand medium lay construction shall be furnished. The physical requirements for the latter type shall be identical to those of the former, with the exception of breaking strength and weight. For equivalent sizes, the breaking strength shall be, at least, 95 percent that of the 3-strand rope and the weight not more than 7 percent heavier.

3.2.1.1 Class 1, natural jute ropes. Natural jute ropes shall be treated with a water repellent lubricant. The lubricant content shall be not less than 10 nor more than 15 percent of the weight of the finished rope, when extracted, as specified in 4.3. No substance shall be added for the purpose of loading or weighting the rope.

3.2.1.2 Class 2, mildew-resistant treated ropes. Mildew resistant ropes shall be treated in accordance with the requirements of type I, II, or III treatment of MIL-T-16070, or the requirements of T-T-616, as specified (see 6.1).

3.2.1.2.1 Extractable matter. The extractable matter, consisting of a lubricant and the specified mildew-resistant compound (see 3.2.1.2) shall not exceed 20 percent of the weight of the finished type I, class 2 rope when tested as specified in 4.3.

3.2.1.3 Prohibited materials. The use of casein, glue, gum, starch, dextrin, water soluble materials, paint dryers, resin or vegetable oils, oxidizing oils, or resins modified with such oils is prohibited.

TABLE I. Type I, class 1 and 2, 3 strand jute rope-standard lay

Circumference Nominal	Circumference Tolerance Plus or minus	Approx. diameter	Length of coil (minimum)	Gross weight of coil (approx.)	Length per pound (minimum)	Breaking strength (minimum)	Load "P" 200 D^2	Turn X 10 2/ (maximum)
Inches	Inch	Inches	Feet	Pounds	Feet	Pounds	Pounds	Inches
5/8	1/16	3/16 (6 yarns) 1/	3,335	50	66.6	270	7	7-3/8
3/4	1/8	1/4 (6 yarns) 1/	2,500	50	50.0	360	12.5	8-3/16
1	1/8	5/16 (9 yarns) 1/	1,725	50	34.5	600	19.5	11-3/16
1-1/8	1/8	3/8 (12 yarns) 1/	1,220	50	24.4	810	28.2	12-5/8
1-1/4	1/8	7/16 (15 yarns) 1/	1,200	63	19.0	1,050	38.2	13-13/16
1-1/2	1/8	1/2 (21 yarns) 1/	1,200	90	13.3	1,590	50.0	16-1/8
1-3/4	1/8	9/16	1,200	125	9.61	2,070	63.3	18-3/8
2	3/16	5/8	1,200	160	7.50	2,640	78.1	20-1/2
2-1/4	3/16	3/4	1,200	200	6.00	3,240	112	22-13/16
2-1/2	3/16	13/16	1,200	234	5.13	3,900	132	24-7/8
2-3/4	3/16	7/8	1,200	270	4.45	4,620	153	27
3	1/4	1 inch	1,200	324	3.71	5,400	200	29-5/16
3-1/4	1/4	1-1/16	1,200	375	3.20	6,300	226	31-1/2
3-1/2	1/4	1-1/8	1,200	432	2.78	7,200	253	33-5/8
3-3/4	1/4	1-1/4	1,200	502	2.40	8,100	312	35-13/16
4	5/16	1-5/16	1,200	576	2.09	9,000	345	38
4-1/2	5/16	1-1/2	1,200	720	1.67	11,100	450	42-5/16
5	5/16	1-5/8	1,200	893	1.34	13,500	528	46-5/8
5-1/2	3/8	1-3/4	1,200	1,073	1.12	15,900	612	51
6	3/8	2	1,200	1,290	0.93	18,600	800	55-3/8

1/ Minimum number of yarns required in ropes of sizes 5/8 to 1-1/2 inch circumference.

2/ *Turn is the distance parallel to the axis of the rope on which a strand makes one complete spiral.* The maximum length of ten turns of 3-strand rope shall not exceed the maximum turn X 10, as specified.

3.2.2 Type II, tarred hemp ropes. Tarred hemp ropes shall be constructed as specified in 3.2.2.1 for class 1 ratlines, and 3.2.2.2 for class 2 seizing. In addition, these ropes shall be treated with pine tar, which shall be uniformly distributed throughout the yarns without imparting excessive stickiness to the rope. When extracted, as specified in 4.3, the pine tar content shall be not less than 10 nor more than 22 percent, etc.

3.2.2.1 Class 1, ratline. Ratline ropes shall conform to the material requirements of 3.1 and shall be of the 3-strand ZSZ twist construction conforming to the physical requirements of table II, when tested as specified in 4.3.

TABLE II. Type II, class 1, ratline

Number of yarns designation	Circumference	Circumference tolerance ±	Length per pound (minimum)	Breaking strength (minimum)	Load "P" (200 D^2)
	Inches	Inch	Feet	Pounds	Pounds
6	3/4	1/16	33.3	600	12
9	1	1/16	23.8	900	20
12	1-1/8	1/8	17.3	1,100	28
15	1-1/4	1/8	13.3	1,400	38
18	1-3/8	1/8	11.3	1,600	44
21	1-1/2	1/8	10.0	1,800	50

3.2.2.2 Class 2, seizing. Seizing ropes shall conform to the material requirements of 3.1 and shall meet the physical requirements of table III when tested as specified in 4.3. With the exception of the number 4 designation which shall consist of 2 strands, type II, class 2 shall be of the 3-strand ZSZ twist construction.

TABLE III. Type II, class 2 seizing

Number of yarns designation	Circumference	Circumference tolerance ±	Length per pound (minimum)	Breaking strength (minimum)	Load "P" ($200 D^2$)
	Inch	Inch	Feet	Per lb	Pounds
4	1/2	1/16	63.2	300	7
6	5/8	1/16	50.0	450	8
9	7/8	1/16	36.4	600	16
12	1	1/16	28.6	750	20

3.2.3 Type III, twine, hemp, polished, stainless. Hemp twine shall conform to the physical requirements of table IV, and shall be plied yarn, balanced twist construction with a polished finish, and shall be considered stainless, when tested as specified in 4.3.

TABLE IV. Type III, twine, hemp, polished, stainless

Commercial number designation	Length per pound (minimum)	Breaking strength (minimum)
	Feet	Pounds
12	1,710	31
18	950	49
24	855	67
36	570	105
48	427	145
60	290	190

3.2.4 Type IV, yarn, hemp, plied, tarred. The type IV tarred, plied yarn of hemp whose extractable matter shall be not less than 10 nor more than 22 percent of the weigth of the yarn when tested as specified in 4.3.

3.2.4.1 Class I, marline. Marline yarn shall be of a 2-ply ZS balanced twist construction, conforming to the physical requirements of table V, when tested as specified in 4.3.

TABLE V. Type IV, class 1, marline

Designation	Length per pound (minimum)	Breaking strength (minimum)
	Feet	Pounds
Navy	180	175
Common	220	160
Medium	360	95

3.2.4.2 Class 2, spun yarn. Spun yarn shall be of a plied ZS slack twist construction, conforming to the physical requirements of table VI, when tested as specified in 4.3.

TABLE VI. Type IV, class 2, spun yarn

Number of plies-designation	Length per pound (minimum)	Breaking strength (minimum
	Feet	Pounds
2	120	215
3	85	305

3.2.4.3 Class 3, houseline yarn. The houseline yarn shall be of 3-ply ZS balanced twist construction, conforming to the physical requirements of table VII, when tested as specified in 4.3.

TABLE VII. Type IV, class 3, houseline yarn

Designation	Length per pound (minimum)	Breaking strength (minimum)
	Feet	Pounds
Houseline	160	170
Navy	120	225

3.2.4.4 Class 4, roundline yarn. The roundline yarn shall be of a 3-ply ZS balanced twist construction having a minimum of 90 feet per pound and a minimum breaking strength of 300 pounds.

3.3 Identification markers. Type I jute ropes of sizes larger than 2-inches nominal circumference shall have a draft paper or water repellent cotton marker inserted within one strand and completely enveloped by the cover yarns of the strand. The type, class, size designation, year of manufacturer and the manufacturer's name shall be printed on the marker in bold, legible type. Italic or script type shall not be used. The printing shall not be affected by exposure to salt water or mineral oil.

3.4 Condition of rope ends. The rope ends of type I shall be securely served or whipped to prevent unlaying or fraying, and all fag ends shall be cut off squarely.

3.5 Put-up. Unless otherwise specified (see 6.1), the cordage shall be put-up in the minimum length or weight units specified in table VIII. A tolerance of plus or minus 10 percent will be permitted on any one holder provided that the average length or weight does not fall below the specified minimum. The average length or weight shall be determined by the measurement of a minimum of ten holders. All types of cordage put-up as specified, shall be continuous throughout and shall be wound so that each turn and layer is free from entanglement. No knots or splices shall be permitted with cordage of types I and II. One knot per package unit will be permitted with type III cordage, while in the case of type IV cordage, two knots per package unit will be permitted.

TABLE VIII. Put-up

Type	Package unit	Length (minimum)	Weight (minimum)	Tare (mimimum)
		Feet	Pounds	Percent
I	Coil	See table I	---	2
II	Coil	600	---	3
III	Ball	---	1	2
IV	Coil (Universal or tube wind)	---	20	3

3.6 Basis of purchase. The rope, yarn, and twine shall be purchased on a price per-pound basis, gross weight. Tare shall not exceed the maximum allowed in table VIII.

3.7 Identification ticket. Each package unit of types I, II, III, and IV shall have a ticket (identification tag) or label attached. The ticket shall be attached with cotton twine not finer than 5-ply or wire doubled to not less than 8 inches in length. The ticket shall be made of not less than 0.015 point paper stock, and the color shall be manila or white, and light in intensity to permit easy reading of printed, stamped, or typed markings. The ticket shall have clipped corners at the end where a reinforcing patch (with or without a metal eyelet) shall be firmly affixed for attaching the tying twine or wire. When a label is used, it shall be attached in such a manner as to remain in place and be clearly legible until all rope has been removed from the holder. The ticket or label shall be legibly printed, stamped or typed with water insoluble ink. Handwritten entries and the use of labels on coils shall be prohibited. The ticket or label shall contain the following information:

STOCK NUMBER
NOMENCLATURE
SPECIFICATION NUMBER
LENGTH OR WEIGHT
CONTRACT NUMBER AND DATE
DATE OF MANUFACTURE (MONTH AND YEAR)
SUPPLIER'S NAME

3.8 Workmanship. The finished rope, yarn, and twine shall conform to the quality and grade of product established by this specification. The occurrence of defects shall not exceed the applicable acceptable quality level (AQL) established by this specification.

4. QUALITY ASSURANCE PROVISIONS

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, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 prescribe requirements.

4.2 Quality conformance inspection. Sampling and inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

4.2.1 Examination of the end item for visual defects. The defects specified in table IX shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition, in which case only the more serious defect shall be counted. The sample unit for this examination shall be one ball or coil, as applicable. Ten percent of the gross length of each sample unit but not less than 100 feet shall be subjected to the visual examination. The AQL shall be 1.5 major defects and 4.0 total defects (major and minor combined) per 100 units. The inspection level shall be level I.

TABLE IX. Visual examination defects

Examine	Defect	Classification	
		Major	Minor
Appearance and workmanship	Cut, any	X	
	Chafed or damaged	X	
	Finish other than specified	X	
	Put-up other than specified	X	
Condition of the ends type I	Fag ends not cut off squarely		X
	Not securely served or otherwise treated to prevent fraying or untwisting		X
Condition of:			
a. Mildew-resistant finish - type I	Not uniformly penetrated		X
	Excessive stickiness, tackiness, greasiness		X
b. Tar finish - types II and IV	Not uniformly penetrated		X
	Excessive stickiness tackiness, greasiness		X
Type of cordage	Other than specified	X	
Class of cordage	Other than specified	X	
Identification marker	Omitted, illegible, incorrect, incomplete		X
Type I - 2 inches circumference and larger	Not completely enveloped by cover yarns		X
Identification ticket or label	Omitted, incorrect, illegible, insecurely attached		X
	Not as specified		X

4.2.2 Examination for length, weight winding and tare. The sample unit for this examination shall be one ball, tube, or coil as applicable. The inspection level shall be S-3 and the acceptable quality level shall be 4.0 percent defective. For lots consisting of 500 or fewer units, the sample size shall be 10 and the acceptance number 1. The lot size shall be the number of units in the inspection lot. Defects shall be as specified in 4.2.2.1, 4.2.2.2, and 4.2.2.3.

4.2.2.1 Defects with regard to length shall be considered to exist if any of the following are found during inspection:

(a) Length of unit less than the specified length.
(b) Length of unit less than marked on ticket.

4.2.2.2 Defects with regard to winding shall be considered to exist if any of the following are determined during inspection:

(a) Improperly or not firmly wound resulting in kinks, entangling or slippage during unwinding, or otherwise affecting free unhampered, unwinding of rope, yarn, or twine.
(b) Not in a continuous length.
(c) One or more knots or splices per package unit of types I and II.
(d) Two or more knots per package unit of type III.
(e) Three or more knots per package unit of type IV.

4.2.2.3 Tare. All bands, lashings, and coverings shall be removed from each unit in the sample and the aggregate accurately weighed.

4.2.2.3.1 Tare per individual unit. A defect shall be considered to exist if the tare of any individual unit exceeds the requirements specified in 3.6.

4.2.2.3.2 Average tare. A lot shall be unacceptable, if the average tare of the specimen exceeds the requirements specified in 3.6.

4.2.3 Examination of preparation for delivery requirements. An examination shall be made to determine that the packaging, packing, and marking requirements of section 5 of this specification are complied with. The examination shall be in accordance with the provisions of MIL-C-3131, except that the inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 units.

4.3 Testing of the end item. The methods of testing specified in CCC-T-191, wherever applicable, and as specified in table XI, shall be followed. The physical and chemical values specified in section 3 apply to the average of the determinations made on a unit of product for test purposes as specified in the applicable test methods. The sample size shall be in accordance with table X. The lot shall be unacceptable if one or more units fail to meet any requirement. The sample unit for testing shall be 100 feet. The lot size shall be expressed in coils, tubes or balls, as applicable.

TABLE X. Sampling for tests

No. of units in lot (coils, tubes, balls)	No. of samples	Acceptance No. for each test characteristic	Rejection No. for each test characteristic
15 and under	2	0	1
16 to 50	3	0	1
51 to 150	5	0	1
151 to 280	8	0	1
281 to 500	13	0	1
501 and over	20	0	1

TABLE XI. Test methods 1/

Characteristic	Specification reference	Test method	No. of determinations per sample unit	Results reported as:
Fiber identification:	3.1			
Type I		See note 2/	-	--
Types II, III, and IV		See note 2/	-	--
Turn:				
Type I only	3.2.1	4.3.1	1	Pass or fail
Stain:				
Type III only	3.2.3	4.3.10	1	Pass or fail
Circumference:				
Type I, classes 1 and 2	3.2.1	4.3.2	3	Average of 3 determinations to the nearest 1/16-inch.

TABLE XI - Test methods 1/ (Con't)

Characteristic	Specification reference	Test method	No. of determinations per sample unit	Results reported as:
Type II, classes 1 and 2	3.2.2	4.3.2	3	Average of 3 determinations to the nearest 1/16-inch.
Breaking strength:				
Type I, classes 1 and 2 (5/8 in., 3/4 in., and 1 in. circ.)	3.2.1	4102	3	Average of 3 determinations to nearest 10 pounds.
Type II, class 2 (Sizes 4 and 6)	3.2.2	4102	3	Average of 3 determinations to nearest 10 pounds.
Type III (All designations)	3.2.2	4102	3	Average of 3 determinations to nearest 10 pounds.
Type IV	3.2.4	4102	3	Average of 3 determinations to nearest 1 pound.
Type I (1-1/2 through 6 ins. circ.)	3.2.1	4106	3	Average of 3 determinations to nearest 10 pounds.
Type II, class 1 (All sizes)	3.2.2	4106	3	Average of 3 determinations to nearest 10 pounds.
Type II, class 2 (Sizes 9 and 12)	3.2.2	4106	3	Average of 3 determinations to nearest 10 pounds.
Length per pound:				
Type I, classes 1 and 2 (5/8 through 1-1/2 ins.)	3.2.1	4.3.3.1	2	Average of 2 determinations to the nearest 0.01 foot.
Type I, classes 1 and 2 (1- 3/4 through 6 ins.)	3.2.1	4.3.3.1	2	Average of 2 determinations to nearest 0.01 foot.
Type II, classes 1 and 2 (All sizes)	3.2.2	4.3.3.1	2	Average of 2 determinations to nearest 0.1 foot.
Type III (All designations)	3.2.3	4.3.3.2	2	Average of 2 determinations to nearest 1.0 foot.
Type IV	3.2.4	4.3.3.2	2	Average of 2 determinations to nearest 1.0 foot.
Extractable matter:				
All types, all classes	---	2611	2	Average of 2 determinations to nearest 0.1 percent.
Identification market	3.3	See note 2	---	---

1/ Tests to determine compliance with specification requirements, including quantity of delivery, may be made under prevailing atmospheric conditions, except in settlement of dispute, in which has the tests shall be made upon material which has reached equilibrium under conditions as defined in CCC-T-191.

2/ A supplier's verification of conformance thereto is required and will be accepted for the requirement.

4.3.1 Determination of turn. The selected coils shall be placed with the core vertical in such a way that the rope will uncoil down from the outside and the bands then removed. The outer end shall then be grasped firmly and carried around the coil until a length of more than 10 feet has been unwound. This length shall be laid straight on the floor and the end released. Starting not less than 10 feet from the end, the length of 10 complete spirals of one strand shall be measured. The turn is 1/10 of this measurement but for convenience, 10 times the turn is specified in table I.

4.3.2 Determination of circumference (types I and II only). The circumference of cordage of these types shall be measured, during the breading strength test, by passing a hard fiber snugly around the specimen while it is under a tension of load "P" specified in tables I, II, and III for the applicable types, classes, and sizes. After the required tension has been held for 1 minute, the hard fiber shall be cut where it overlaps, straightened and measured to the nearest 1/16-inch. This measurement shall be made, at least, 3 times in different positions along the length of the specimen. The average of these determinations shall be the circumference.

4.3.3 Determination of length per pound.

4.3.3.1 Types I and II cordage. Additional specimens of cordage of these types shall be subjected to the load "P" specified in tables I, II, and III for the applicable types, classes, and sizes. While under this tension a minimum length of 10 feet, for cordage less than 3 inches in circumference and 5 feet for cordages greater than 3 inches in circumference shall be marked off. After releasing the required tension, the minimum lengths for the applicable sizes shall be cut from the specimens, accurately weighed and the length per pound calculated, using the length measurement determined under load.

4.3.3.2 Types III and IV yarn. The test specimen for these types shall consist of an accurately measured length of 25 feet which has been subjected to a load equal to 1 percent of the minimum specified breaking strength. The specimen shall then be weighed and the length per pound calculated.

5. PREPARATION FOR DELIVERY

(Preparation for delivery requirements specified herein apply only to direct Government procurement. Preparation for delivery requirements between contractors and subcontractors shall be as specified in the individual order.)

5.1 Packaging and packing. Packaging and packing shall be as specified in MIL-C-3131. The level of protection shall be A, B, or C, as specified in the contract or order (see 6.1).

5.2 Marking.

5.2.1 Civil agencies. In addition to any special markings required by the contract or order, shipments for civil agencies shall be marked in accordance with Fed. Std. No. 123.

5.2.2 Military agencies. In addition to any special markings required (see 6.1), shipment shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

(a) Title, number, and date of this specification.
(b) Type, class, and size or designation required (see 1.2).
(c) Type of mildew-resistant treatment type I, class 2 rope (see 3.2.1.2).
(d) Strand construction and number of strands (see 3.2.1).
(e) Put-up, if other than specified (see 3.5).
(f) Level of packaging and packing requried (see 5.1).
(g) Special marking if required (see 5.2).
(h) That the purchaser will accept at original weight or length, any unit which has been shortened or cut for test specimens, if in compliance with this specification.

6.2 Supersession data. This specification supersedes T-R-592a, dated August 9, 1961 and T-R-675, dated March 8, 1954 as follows:

T-R-650	T-R-592a	T-R-675
Type I Class 1 Class 2	Type I Class 1 Class 2 Type II 1/ Class 1 Class 2	
Type II Class 1 Class 2 Type III		Type I Class 1 Class 2 Type II Type III 1/
Type IV Class 1 Class 2 Class 3 Class 4		Type IV Class 1 Class 2 Class 3 Class 4

1/ No requirements.

MILITARY INTEREST:

Custodians:
Army - GL
Navy - SH
Air Force - 69

Review activities:
Army - GL, MD, MU
Navy - SH, YD
Air Force - 69

User activities:
Army - CE, EL, ME, WC
Navy - AS, MC

CIVIL AGENCIES INTEREST:

GSA-FSS

Preparing activity:

Navy - SH

☆U. S. GOVERNMENT PRINTING OFFICE: 1968 O - 302-507 (517)

Orders for this publication are to be placed with General Services Administration acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 10 cents each.

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 *(as indicated on reverse hereof)*.

SPECIFICATION

Rope, Yarn and Twine, Bast Fiber; T-R-650

ORGANIZATION *(Of submitter)*	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

DD FORM 1 APR 63 1426 (NAVSHIPS OVPRT 12-66) REPLACES NAVSHIPS FORM 4863, WHICH IS OBSOLETE

S/N 0102-014-1426

FOLD

DEPARTMENT OF THE NAVY
NAVAL SHIP ENGINEERING CENTER
WASHINGTON, D. C. 20360

POSTAGE AND FEES PAID
NAVY DEPARTMENT

OFFICIAL BUSINESS

COMMANDER, NAVAL SHIP ENGINEERING CENTER
FEDERAL & MILITARY DOCUMENTS & DOD STANDARDIZATION BRANCH
DEPARTMENT OF THE NAVY
WASHINGTON, D. C. 20360

FOLD