

8 July 1974

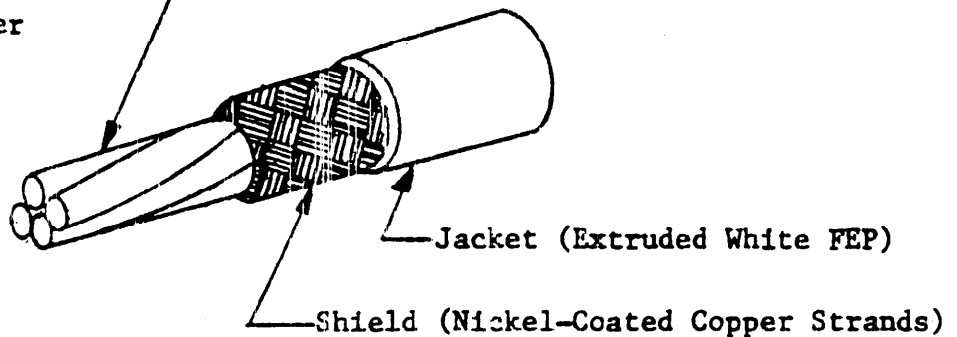
MILITARY SPECIFICATION SHEET

CABLE, ELECTRIC, AEROSPACE VEHICLE, MIL-W-22759/12 BASIC WIRES,
COPPER SHIELD, FEP JACKET, 600-VOLT, 200°C

This specification has been approved by the Naval Air
Systems Command, Department of the Navy.

The complete requirements for procuring the cable described herein shall consist of this document and the issues in effect of Specification MIL-C-7078 and Specification Sheet MIL-W-22759/12.

MIL-W-22759/12 Basic Wires
(Nickel-Coated Copper
Conductor, Extruded
TFE Insulation)



FEP - Fluorinated Ethylene Propylene
TFE - Polytetrafluoroethylene

SHIELDED JACKETED CABLE

REQUIREMENTS:

CONSTRUCTION DETAILS: See above Figure and Table I

VOLTAGE RATING: 600 Volts (rms) at sea level

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

COLD BEND: Required

WET DIELECTRIC TEST AFTER COLD BEND: 1000 volts (rms)

THERMAL SHOCK TEST: 230 +2°C (446 +3.6°F)

HEAT RESISTANCE: Required. Test temperature, 230 +2°C (446 +3.6°C)

Supplementary wet dielectric test not required

JACKET FLAWS (SPARK TEST): 1500 volts (rms)

DRY DIELECTRIC: 2000 volts (rms)

PART NUMBER: Part numbers in this specification sheet are coded as in the following example:

| | | | | |
|-----------------|---|----------------|---|------------------------|
| <u>M7078/30</u> | - | <u>22</u> | - | <u>1</u> |
| specification | | size number | | quantity of conductors |
| sheet number | | of basic wires | | (basic wires) in cable |

MIL-C-7078/30(AS)

TABLE I

| Cable part no. | Gage of shield strands (AWG) | Jacket thickness (inch) (min) | Major diameter of finished cable (inch) | | Weight of finished cable (lb/1000 ft) | |
|----------------|------------------------------|-------------------------------|---|-------|---------------------------------------|-------|
| | | | (nom) <u>1</u> / | (max) | (nom) <u>1</u> / | (max) |
| M7078/30-28-1 | 38 | .007 | .069 | .075 | 5.4 | 5.9 |
| M7078/30-28-2 | 36 | .007 | .106 | .114 | 10.5 | 11.5 |
| M7078/30-28-3 | ▲ | .007 | .111 | .119 | 12.1 | 13.2 |
| M7078/30-28-4 | ↕ | .007 | .120 | .128 | 13.9 | 15.2 |
| M7078/30-28-5 | ▼ | .007 | .129 | .139 | 16.5 | 18.1 |
| M7078/30-28-6 | 36 | .010 | .145 | .155 | 19.9 | 21.8 |
| M7078/30-28-7 | 36 | .010 | .145 | .155 | 21.2 | 23.1 |
| M7078/30-26-1 | 38 | .007 | .074 | .080 | 6.2 | 6.8 |
| M7078/30-26-2 | 36 | .007 | .116 | .124 | 12.0 | 13.1 |
| M7078/30-26-3 | ▲ | .007 | .122 | .130 | 14.8 | 16.1 |
| M7078/30-26-4 | ↕ | .007 | .132 | .140 | 17.5 | 19.0 |
| M7078/30-26-5 | ▼ | .010 | .149 | .158 | 21.4 | 23.5 |
| M7080/30-26-6 | 36 | .010 | .160 | .170 | 24.9 | 27.0 |
| M7078/30-26-7 | 36 | .010 | .160 | .170 | 26.6 | 28.9 |
| M7078/30-24-1 | 38 | .007 | .079 | .085 | 7.3 | 7.9 |
| M7078/30-24-2 | 36 | .007 | .126 | .134 | 14.8 | 16.1 |
| M7078/30-24-3 | ▲ | .007 | .132 | .141 | 17.7 | 19.1 |
| M7078/30-24-4 | ↕ | .010 | .150 | .158 | 22.4 | 24.2 |
| M7078/30-24-5 | ▼ | .010 | .162 | .172 | 26.6 | 28.6 |
| M7078/30-24-6 | 36 | .010 | .175 | .185 | 30.1 | 32.3 |
| M7078/30-24-7 | 36 | .010 | .175 | .185 | 32.6 | 35.0 |
| M7078/30-22-1 | 38 | .007 | .085 | .091 | 9.0 | 9.8 |
| M7078/30-22-2 | 36 | .007 | .138 | .146 | 17.9 | 19.2 |
| M7078/30-22-3 | ▲ | .010 | .151 | .160 | 23.7 | 25.3 |
| M7078/30-22-4 | ↕ | .010 | .164 | .173 | 28.7 | 30.6 |
| M7078/30-22-5 | ▼ | .010 | .178 | .188 | 33.5 | 35.8 |
| M7078/30-22-6 | 36 | .010 | .193 | .203 | 38.9 | 41.3 |
| M7078/30-22-7 | 36 | .010 | .193 | .203 | 42.6 | 45.2 |
| M7078/30-20-1 | 38 | .007 | .094 | .100 | 11.1 | 12.0 |
| M7078/30-20-2 | 36 | .010 | .162 | .170 | 24.4 | 26.0 |
| M7078/30-20-3 | ▲ | .010 | .171 | .179 | 30.7 | 32.6 |
| M7078/30-20-4 | ↕ | .010 | .186 | .195 | 37.3 | 39.6 |
| M7078/30-20-5 | ▼ | .010 | .203 | .212 | 44.3 | 46.9 |
| M7078/30-20-6 | 36 | .010 | .220 | .230 | 52.0 | 54.8 |
| M7078/30-20-7 | 36 | .010 | .220 | .230 | 57.4 | 60.4 |

TABLE I (Continued)

| Cable part no. | Gage of shield strands (AWG) | Jacket thickness (inch) (min) | Major diameter of finished cable (inch) | | Weight of finished cable (lb/1000 ft) | |
|----------------|------------------------------|-------------------------------|---|-------|---------------------------------------|-------|
| | | | (nom) <u>1/</u> | (max) | (nom) <u>1/</u> | (max) |
| M7078/30-18-1 | 38 | .007 | .104 | .110 | 14.6 | 15.5 |
| M7078/30-18-2 | 36 | .010 | .182 | .190 | 31.5 | 33.3 |
| M7078/30-18-3 | ↑ | .010 | .192 | .201 | 41.1 | 43.1 |
| M7078/30-18-4 | ↑ | .010 | .210 | .219 | 50.6 | 53.1 |
| M7078/30-18-5 | ↓ | .012 | .234 | .243 | 62.8 | 65.6 |
| M7078/30-18-6 | ↓ | .012 | .254 | .264 | 72.9 | 76.1 |
| M7078/30-18-7 | 36 | .012 | .254 | .264 | 81.0 | 84.5 |
| M7078/30-16-1 | 38 | .007 | .111 | .117 | 17.1 | 18.0 |
| M7078/30-16-2 | 36 | .010 | .196 | .204 | 36.7 | 38.6 |
| M7078/30-16-3 | ↑ | .010 | .207 | .216 | 48.0 | 50.3 |
| M7078/30-16-4 | ↑ | .012 | .231 | .240 | 60.8 | 64.6 |
| M7078/30-16-5 | ↓ | .012 | .253 | .262 | 74.0 | 77.4 |
| M7078/30-16-6 | ↓ | .012 | .275 | .285 | 86.8 | 90.8 |
| M7078/30-16-7 | 36 | .012 | .275 | .285 | 96.8 | 101.1 |

1/ Nominal values are given for information only. Nominal values are not requirements.

Preparing activity:

Navy - AS

(Project No. 6145-N245)

SPECIFICATION ANALYSIS SHEET

Form Approved
Dudget Bureau No. 22-R255

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. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

SPECIFICATION

MIL-C-7078/30(AS)

CABLE, ELECTRIC, AEROSPACE VEHICLE, MIL-W-22759/12 BASIC WIRES,
COPPER SHIELD, FEP JACKET, 600-VOLT, 200°C

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

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 - Optional)

DATE