

MIL-S-81824/I

20 August 1976

## MILITARY SPECIFICATION SHEET

SPLICE ELECTRIC PERMANENT CRIMP STYLE COPPER  
INSULATED ENVIRONMENT RESISTANT CLASS I

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

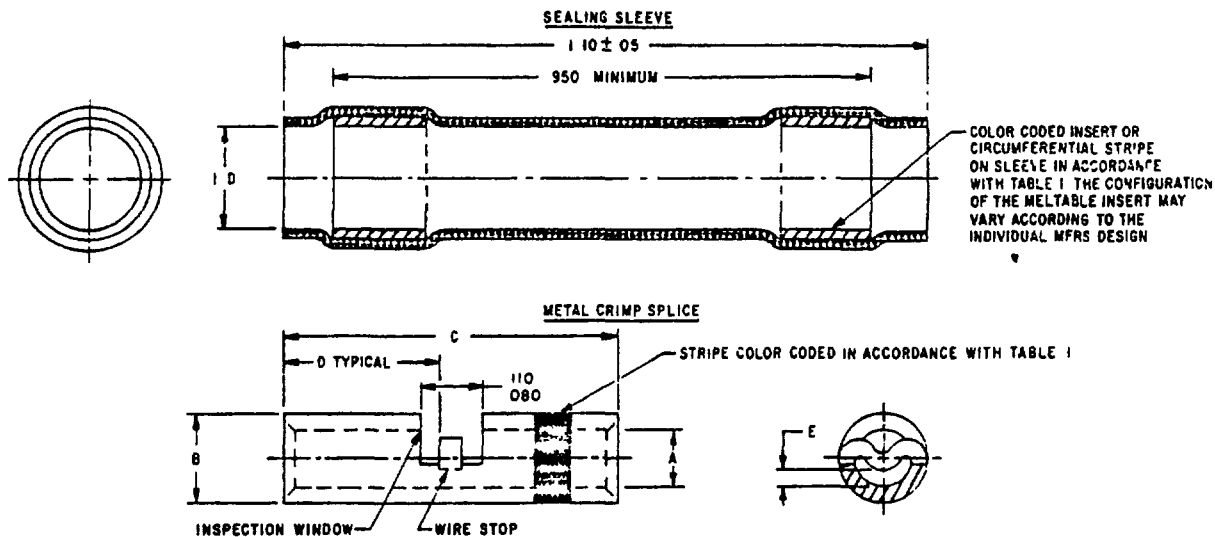
The complete requirements for procuring the splice described herein shall consist  
of this document and the latest issue of MIL-S-81824

TABLE I CONSTRUCTION DETAILS

PART NUMBER	WIRE RANGE	1.0 * a (MIN) b (MAX)	A	B	C	D	E MAX	COLOR CODE	WEIGHT LBS/MPC (MAX)
M81824/I-1	26-24-22-20	.085 .025	.053 .045	.080 .075	.510 .490	.245 .225	.015	RED	1.10
M81824/I-2	20-18-16	.110 .025	.070 .063	.107 .100	.585 .565	.280 .260	.020	BLUE	1.65
M81824/I-3	16-14-12	.170 .025	.105 .095	.155 .146	.585 .565	.280 .260	.050	YELLOW	2.75

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.015	38	.053	1.35	.085	2.16	.110	2.79	.245	6.22	.565	14.35
.020	51	.063	1.60	.095	2.41	.147	3.73	.260	6.60	.585	14.86
.025	64	.070	1.78	.101	2.57	.155	3.94	.280	7.11		
.045	1.14	.075	1.91	.105	2.67	.170	4.32	.490	12.45		
.050	1.27	.080	2.03	.107	2.72	.225	5.72	.510	12.95		

\* 1.0 a- "AS RECEIVED"

b- "AFTER UNRESTRICTED RECOVERY THROUGH MELTABLE MATERIAL"

**QUALIFICATION** FOR QUALIFICATION TESTING, ONLY SPLICE ASSEMBLIES MADE WITH WIRE CONFORMING TO W22759.11 SHALL BE TESTED WITH THE METAL SPLICE. THE SEALING AND INSULATING SLEEVE SHALL BE INSTALLED WITH THE APPLICABLE HEAT TOOL. FOR CRIMPING TOOLS SEE TABLE II.

**MATERIAL** COPPER PER WW-T-775 OR ASTM B75-68 OR QQ-C-502 OR QQ-C-576.  
INSULATION SLEEVE HEAT SHRINKABLE TRANSPARENT POLYVINYLIDENE FLUORIDE PER THE PERFORMANCE REQUIREMENTS OF MIL-I-23053.8.

**FINISH** SEALING MATERIAL MODIFIED THERMOPLASTIC. SEE PROCUREMENT SPECIFICATION.  
METAL, TIN-PLATED. SEE PROCUREMENT SPECIFICATION.

DIMENSIONS ARE IN INCHES

METRIC EQUIVALENTS (TO THE NEAREST .01 MM) ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 MM. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE .005 (13 MM) FOR THREE PLACE DECIMALS AND .01 (25 MM) FOR TWO PLACE DECIMALS. THE AVERAGE OF DIAMETER "A" AND "B" MUST BE WITHIN SPECIFICATION LIMITS.

"B" DIAMETER SHALL NOT INCLUDE COLOR STRIPE

CONTOUR MAY VARY FROM THAT SHOWN

NO ETCHING OR SOLVENT TREATING OF THE ASSOCIATED WIRE INSULATION SHALL BE PERMITTED

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TABLE II CRIMP TOOLS		
SPLICE PART NO	BASIC CRIMP TOOL NO	DIE NO
M81824 1-1 M81824 1-2	M22520 5-01 OR M22520 10-01	M22520 5-103 OR M22520 10-104
M81824, 1-3	M22520 5-01 OR M22520 10-01	M22520 5-102 OR M22520 10-103

Custodians  
Navy - AS  
Army - EL  
Air Force - 85

Review activities  
Navy  
Army - AV  
Air Force - 11, 80  
DSA-GS

User activities  
Navy - MC, EC  
Army - MU  
Air Force

Preparing Activity  
Navy - AS  
(Project No 5940-0772)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL		OMB Approval No 22-R255	
<p><b>INSTRUCTIONS:</b> The purpose of this form is to solicit beneficial comments which will help achieve procurement of suitable products at reasonable cost and minimum delay, or will otherwise enhance use of the document. DoD contractors, government activities, or manufacturers/vendors who are prospective suppliers of the product are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.</p>			
DOCUMENT IDENTIFIER AND TITLE		SPLICE, ELECTRIC, PERMANENT, CRIMP STYLE	
MIL-S-81824/1		COPPER, INSULATED, ENVIRONMENT RESISTANT	
NAME OF ORGANIZATION AND ADDRESS		CONTRACT NUMBER	CLASS 1
		MATERIAL PROCURED UNDER A	
		<input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT	
1 HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?			
A GIVE PARAGRAPH NUMBER AND WORDING			
B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES			
2 COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID			
3. IS THE DOCUMENT RESTRICTIVE?			
<input type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes", in what way?)			
4 REMARKS			
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		DATE	

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