

NOTICE OF
CHANGE

NOT MEASUREMENT SENSITIVE

MIL-HDBK-773
NOTICE 1
24 May 1990

MILITARY HANDBOOK
ELECTROSTATIC DISCHARGE
PROTECTIVE PACKAGING

TO ALL HOLDERS OF MIL-HDBK-773:

1. THE FOLLOWING PAGES OF MIL-HDBK-773 HAVE BEEN REVISED AND
SUPERSEDE THE PAGES LISTED:

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
25	1 April 1988	25	REPRINTED WITHOUT CHANGE
26	24 May 1990	26	1 April 1988
27	24 May 1990	27	1 April 1988
28	24 May 1990	28	1 April 1988
29	24 May 1990	29	1 April 1988
30	24 May 1990	30	1 April 1988
30a	24 May 1990	NEW PAGE	24 May 1990
31	24 May 1990	31	1 April 1988
32	24 May 1990	32	1 April 1988

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-HDBK-773 will verify that page changes and additions indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the military handbook is completely revised or canceled.

AMSC N/A

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AREA PACK

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INSTRUCTIONS

CAUTION: Only trained personnel shall handle unprotected ESDS items. Disconnect all power before handling any item.

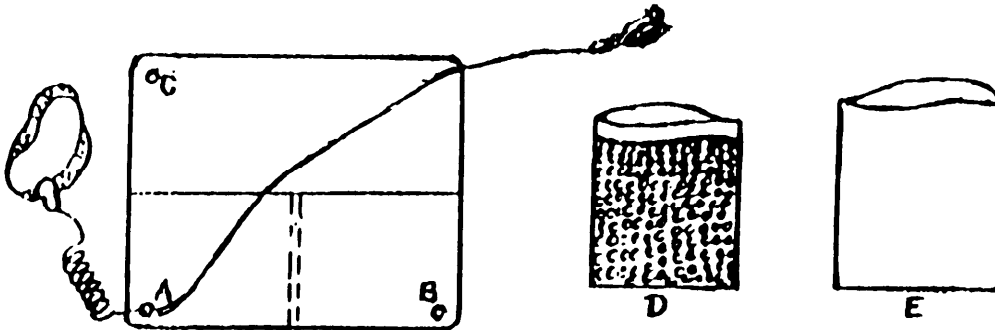
STEPS:

1. Place unfolded workmat on table or floor near work area or service location.

NOTE: Remove all material from pockets and away from mat.

2. Attach ground cord to mat fastener A, B, or C; attach bulldog clip to mainframe, chassis, or other bare metal surface near item to be replaced or removed. This surface must be a part of unit assembly containing item.

3. The wrist strap coil cord containing resistor, shall be attached to the same mat fastener as the ground connector A, B, or C; adjust wrist strap over wrist against bare skin.



4. Proceed now to remove, replace, or handle the ESDS item only on the mat surface. Keep all other tools or non-ESDS items off the mat.

5. ESDS items to be returned (e.g., condition code F) for repair or otherwise removed from the static dissipating mat shall be packaged to prevent any further deterioration (see 5.2). This procedure is the only technique where the reuse of ESD packaging material is encouraged. Place item in antistatic pouch D, made from material conforming to MIL-P-81997, type II. Fold over opening and place in shielding bag E, made from material conforming to MIL-B-81705, type I. Fold the opening, and place a rubber band over this shielding bag. Do not use adhesive tape. Item can now be handled as you would any other non-ESDS item. The above mentioned field service kit is included in appendix A.

NOTE: Do not disassemble the field service kit until all procedures have been completed.

FIGURE 8. ESD protective field service kit instructions.

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APPENDIX A

ESD workstation and field service kit equipment

Description	NSN
Wrist strap (36 inches in length with 250K resistor)	4240-01-063-4880
Static control work station components (contains 4- by 6-foot floor mat with 15-foot ground cord, table mat, wrist strap, with a 1 megohm resistor)	4940-01-087-3458
Work station, electrostatic control, static dissipative rigid table mat, common point ground system, wrist strap cuff, and wrist strap cord with current limiting resistor; to be used in clean rooms or laminar flow booths where particulate control is necessary, and ESD sensitive items are handled.	4940-01-250-4235
Work station, electrostatic control, static dissipative soft table mat, common point ground system, and wrist strap with current limiting resistor; to be used in all areas other than clean rooms or laminar flow booths where ESDS items are handled; includes an adjustable size wrist strap cuff	4940-01-250-4236
Work station kit, electrostatic control, static dissipative portable work surface, common point ground system, and wrist strap with current limiting resistor, situations where other static control used in work stations are not available, includes a small/medium and a large/extra large wrist strap cuff.	4940-01-250-4237

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APPENDIX A

ESD workstation and field service kit equipment - Continued

Description	NSN
Static floor runner, 4-by 6-foot, with 2 ea female snaps, 15-foot ground cord; ground cord includes 1 megohm resistor.	5975-01-209-5753
Field service kit contains 3 ea pouch, MIL-P-81997, type II; 3 ea barrier bag, MIL-B-81705, type I; 2 ea wrist strap; 1 ea ground cord; and 1 ea mat, static dissipating	5920-01-253-5368

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APPENDIX B

ESD protective materials

Description: MIL-B-81705, type I (opaque foil)

<u>NSN</u>	<u>SIZE</u>
8135-00-092-3220	3 ft x 600 ft

Description: MIL-B-81705, type II (transparent plastic)

<u>NSN</u>	<u>SIZE</u>
8135-01-158-7786	48 in X 48 in
8135-01-163-3486	24 in X 36 in

Description: PPP-C-1842, type III, style A (open-celled without top laminate)

<u>NSN</u>	<u>SIZE</u>
8135-01-057-3607	1/4 in X 48 in X 500 ft
8135-01-087-3599	1/4 in X 24 in X 500 in
8135-01-088-3845	1/8 in X 48 in X 625 in
8135-01-088-3846	1/8 in X 24 in X 625 in
8135-01-088-3847	1/8 in X 12 in X 625 in
8135-01-088-3848	1/8 in X 6 in X 625 in
8135-01-088-3849	1/4 in X 12 in X 500 in

Description: PPP-C-1842, type III, style B (open-celled with top laminate)

<u>NSN</u>	<u>SIZE</u>
8135-01-087-3602	1/4 in X 24 in X 375 in
8135-01-087-3603	1/4 in X 12 in X 375 in
8135-01-088-3850	1/4 in X 48 in X 375 in
8135-01-088-3851	1/4 in X 6 in X 375 in

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APPENDIX B

ESD protective materials - Continued

Description: MIL-P-81997 (pouch with open-celled material, surrounded by transparent barrier material, plastic, zipper clousure)

<u>NSN</u>	<u>SIZE</u>
8105-01-197-2965	12 in X 12 in
8105-01-197-2966	10 in X 10 in
8105-01-197-7846	10 in X 12 in
8105-01-215-0462	8 in X 8 in
8105-01-216-7804	8 in X 12 in
8105-01-233-2428	6 in X 8 in
8105-01-234-2782	4 in X 6 in

Description: Plastic, Single Wall Bags (fabricated from material referenced to MIL-B-81705, type II)

<u>NSN</u>	<u>SIZE</u>
8105-01-096-9527	5 in X 8 in
8105-01-096-9528	12 in X 18 in
8105-01-097-4507	8 in X 12 in
8105-01-119-8109	18 in X 18 in
8105-01-119-8110	10 in X 24 in
8105-01-119-8111	4 in X 24 in
8105-01-120-3370	15 in X 18 in
8105-01-120-3371	14 in X 18 in
8105-01-120-3372	12 in X 16 in
8105-01-120-3373	11 in X 15 in
8105-01-120-3374	10 in X 14 in
8105-01-120-3375	10 in X 12 in
8105-01-120-3376	8 in X 10 in
8105-01-120-3377	8 in X 8 in
8105-01-120-3378	6 in X 10 in
8105-01-120-3379	5 in X 10 in
8105-01-120-3380	4 in X 6 in
8105-01-120-3381	4 in X 4 in
8105-01-120-3382	3 in X 5 in

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APPENDIX B

ESD protective materials - Continued

Description: Plastic, Single Wall Bags With Zipper Closure
 (fabricated from material referenced to
 MIL-B-81705, type II)

<u>NSN</u>	<u>SIZE</u>
8105-01-162-2174	6 in X 10 in
8105-01-180-7919	10 in X 12 in
8105-01-181-5534	8 in X 10 in
8105-01-185-2632	24 in X 36 in
8105-01-185-2633	12 in X 18 in
8105-01-185-9680	10 in X 16 in
8105-01-217-3773	6 in X 8 in

Description: PPP-C-795, Class 2 (bubble)

<u>NSN</u>	<u>SIZE</u>
8135-01-126-6275	1/8 in X 12 in X 375 ft
8135-01-234-6649	3/16 in X 24 IN X 500 ft
8135-01-234-9676	1/2 in X 24 in X 250 ft
8135-01-235-9142	3/16 in X 48 in X 500 ft

Description: PPP-C-795, Class 2, (pouch, bubble with peel-
 seal lip)

<u>NSN</u>	<u>SIZE</u>
8135-01-235-0213	4 in X 5 1/2 in
8135-01-235-4156	8 1/2 in X 6 in
8135-01-235-4157	11 1/2 in X 8 in
8135-01-235-4158	15 1/2 in X 10 in
8135-01-235-4159	15 1\2 in X 12 1/2 in
8135-01-235-4160	17 1/2 in X 15 in

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APPENDIX B

ESD protective materials - Continued

Description: MIL-B-81705, Opaque, type I, Bags

<u>NSN</u>	<u>SIZE</u>
8105-01-235-2688	10 in X 12 in
8105-01-235-2689	12 in X 18 in
8105-01-235-5473	8 in X 6 in
8105-01-235-5474	6 in X 8 in
8105-01-235-5475	9 in X 15 in
8105-01-235-5476	13 in X 15 in
8105-01-235-5477	14 in X 16 in
8105-01-235-9829	18 in X 22 in
8105-01-236-0149	8 in X 12 in
8105-01-236-0150	10 in X 14 in
8105-01-236-5944	4 in X 6 in
8105-01-243-6628	20 in X 14 in
8105-01-243-6629	15 in X 25 in

Description: Fast Pack (PPP-B-1672, type II)

<u>NSN</u>	<u>SIZE</u>
8115-00-101-7638	9 in X 6 in X 3 1/2 in
8115-00-101-7647	9 in X 6 in X 2 1/2 in
8115-00-787-2142	6 in X 5 in X 2 1/2 in
8115-00-787-2146	12 in X 8 in X 2 1/2 in
8115-00-787-2147	6 in X 5 in X 3 1/2 in
8115-00-787-2148	12 in X 8 in X 3 1/2 in
8115-01-019-4084	18 in X 12 in X 3 1/2 in
8115-01-019-4085	18 in X 12 in X 2 1/2 in
8115-01-057-1243	13 in X 13 in X 3 1/2 in
8115-01-057-1244	10 in X 10 in X 3 1/2 in
8115-01-057-1245	16 in X 16 in X 3 1/2 in
8115-01-093-3730	24 in X 16 in X 3 1/2 in

PPP-B-1672, type II, style D, fast packs used for ESDS items have the word "antistatic" printed on both ends.

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APPENDIX C

TRAINING

Some available movies, video cassettes, training aids, and training courses for ESD-related programs are:

a. Dan C. Anderson on ESD Damage Prevention (produced by Richmond Technology, Inc.).

b. ESD video presentation (produced by Marketing Communications Department of Motorola, Inc.).

c. Static Safeguard Systems (produced by Static Control Systems Division of 3M).

(These video cassettes can be obtained from the above listed sources.)

d. Static Electricity (produced by the Bureau of Mines), available from Television Branch, U.S. Army Signal Center, Training Films (TF) 5924, Fort Gordon, Augusta, GA.

e. Movie: ZAP! STATIC AWARENESS, No. 35407DN (available from Navy film libraries to Government personnel in 16mm and 1.9cm video tape.).

f. ESD - The Invisible Threat, No. 803784-DN, Department of the Navy, Naval Sea Systems Command, NAVSEA 06Q25, Washington, D.C. 20362-5101

g. School of Military Packaging Technology course, titled, Packaging and Handling of Electrostatic Discharge Sensitive (ESD) Items, SMPT-6.

Dean
School of Military Packaging Technology
ATTN: AMXMC-SMPT-T
Aberdeen Proving Ground, MD 21005-5001

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Custodians:

Army -SM

Air Force - 69

Navy - SH

DLA - ES

Preparing Activity
Army - SM

(Project PACK-0927)

Review Activities:

Army - AM, AT, CR, MI

Air Force - 01, 11, 18, 19, 43, 70, 71, 80, 82, 84, 99

Navy - AS, CG, EC, MS, OS, SA, YD

Marine - MC

DLA - CS, GS, IS

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions -- Reverse Side)

1. DOCUMENT NUMBER
MIL-HDBK-773

2. DOCUMENT TITLE
Electrostatic Discharge Protective Packaging

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

VENDOR

USER

MANUFACTURER

OTHER (Specify): _____

b. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)

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NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. 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.

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