

APPENDIX 85A

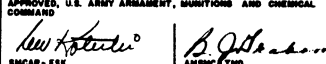
UNITIZATION PROCEDURES FOR BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS

IGNITER, ROCKET MKI25 MOD 5, PACKED 336 PER MKI MOD 0 METAL CONTAINER, MK8 MOD 0 METAL CONTAINER OR MK2 MOD 0 METAL CONTAINER, UNITIZED 30 MKI MOD 0 CONTAINERS PER 35" X 45½" PALLET (UNIT LOAD A), 36 MK8 MOD 0 CONTAINERS PER 40" X 48" PALLET (UNIT LOAD B) OR 27 MK2 MOD 0 CONTAINERS PER 35" X 45½" PALLET (UNIT LOAD C); APPROX MKI MOD 0 CONTAINER SIZE 18½" L X 9½" W X 15" H; APPROX MK8 MOD 0 CONTAINER SIZE 15½" L X 10¹³/₁₆" W X 14³/₄" H; APPROX MK2 MOD 0 CONTAINER SIZE 15¹/₈" L X 12¹/₈" W X 14³/₄" H

PALLET UNIT DATA								
ITEMS INCLUDED		HAZARD CLASSIFICATION [ⓐ]				WEIGHT (LBS)		
NSN	DODIC	DOT CLASS	CG CLASS	QD CLASS	COMP GROUP	UNIT A	UNIT B	UNIT C
1340-00-102-4260	H429	B	III	(04) 1.2	D	1,303	1,513	1,157

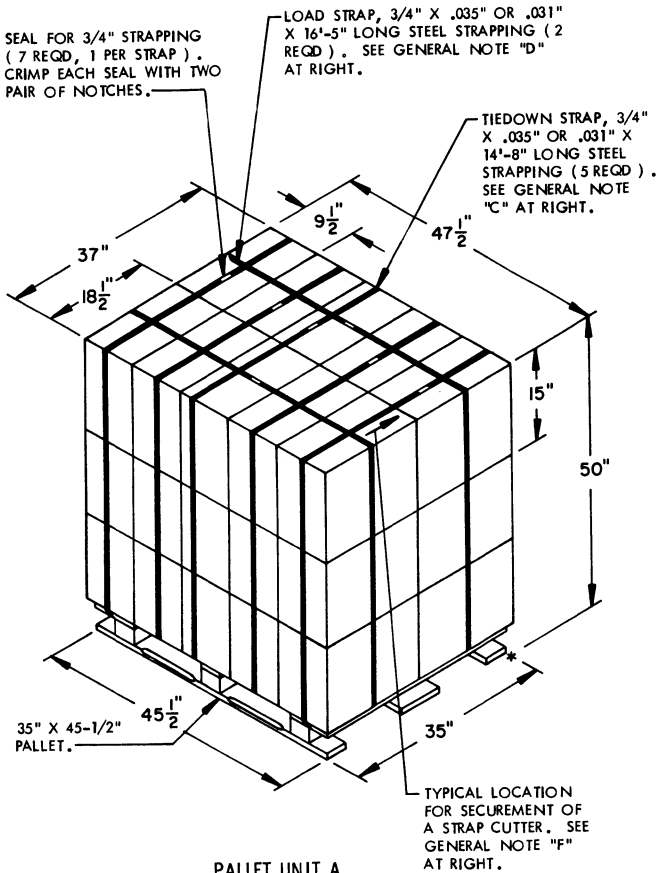
NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002.

[ⓐ] HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING (S).

REVISIONS				DRAFTSMAN RFB	PROJ ENG LAF/WRF
				CHKR GCS	LOG ENGRD OFFICE WJG/Chm
				APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND	
				 APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC) U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	
				U.S. ARMY AMC DRAWING	
				OCTOBER 1985	
				CLASS	DIVISION
				19	48
				DRAWING	FILE
				4116/ 85A	20PA 1002

DO NOT SCALE

GENERAL NOTES (UNIT A)



PALLET UNIT A

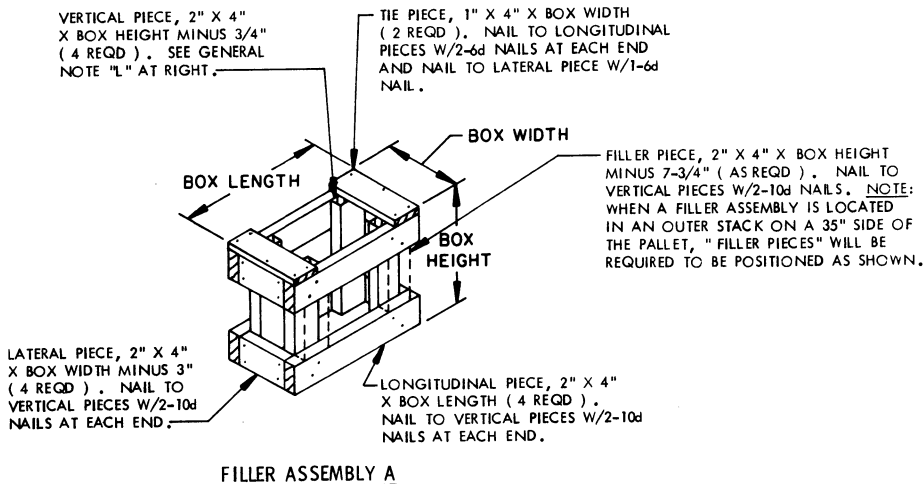
SEE GENERAL NOTE "B" AT RIGHT.

30 BOXES OF ROCKET IGNITERS (336 PER BOX) @ 41 LBS	-----	1,230 LBS (APPROX)
DUNNAGE	-----	8 LBS
PALLET	-----	65 LBS
TOTAL WEIGHT	-----	1,303 LBS (APPROX)
CUBE	-----	50.9 CU FT (APPROX)

BILL OF MATERIAL (UNIT A)

PALLET, 35" X 45-1/2"	-----	1 REQD	-----	65 LBS
STEEL STRAPPING, 3/4"	-----	106, 17' REQD	-----	7,58 LBS
SEAL FOR 3/4" STRAPPING	-----	7 REQD	-----	NIL

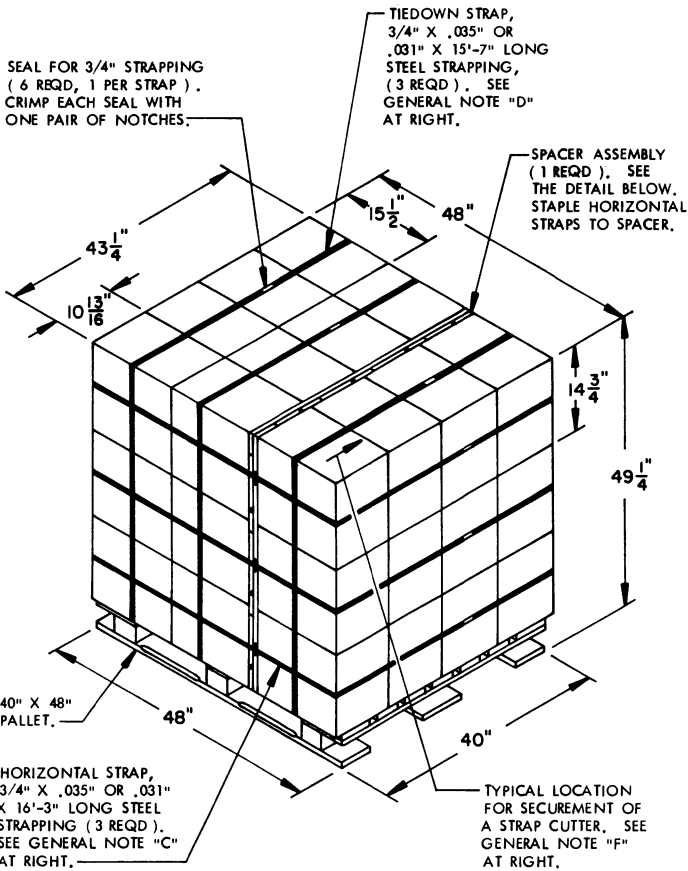
- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002. TO PRODUCE AN APPROVED UNIT LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED IN THIS APPENDIX.
- B. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK/STRINGER BOARDS OF THE PALLET AND BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL BE APPLIED BUT NOT TENSIONED UNTIL THE LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- D. THE LOAD STRAPS MAY BE THREADED THROUGH THE STRAP SLOTS OF THE PALLET OR PREPOSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. LOAD STRAPS WILL BE TENSIONED AND SEALED PRIOR TO TIEDOWN STRAPS.
- E. THE FOLLOWING AMC (DARCOM) DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 CARLOADING ----- DRAWING 19-48-4115-5PA1002
 TRUCKLOADING ----- DRAWING 19-48-4117-11PA1003
 STORAGE ----- DRAWING 19-48-4118-1-2-3-4-14-22PA1002
- F. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE DARCOM DRAWING 19-48-4127-20P1000.
- G. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- H. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING ROCKET IGNITERS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON THE TITLE PAGE, PROVIDED THE BOX PACK DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- J. WHEN THE UNIT LOAD DEPICTED AT LEFT IS TO BE USED FOR UNITIZING MARINE CORPS AMMUNITION, ONE LAYER OF BOXES MUST BE OMITTED, TIEDOWN STRAP LENGTHS MUST BE DECREASED TO 12'-3", AND LOAD STRAP LENGTHS MUST BE DECREASED TO 14'-0". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 35-1/4", A GROSS UNIT WEIGHT OF 892 POUNDS, AND A UNIT CUBE OF 35.9 CUBIC FEET. ADDITIONALLY, THE UNIT LOAD MAY BE MODIFIED AS DESCRIBED WHEN BEING SHIPPED BY MILVAN OR COMMERCIAL INTERMODAL FREIGHT CONTAINER, CONVENTIONAL VAN TRAILER OR CONVENTIONAL OR HIGH-CAPACITY BOXCAR. THE DETERMINATION TO REDUCE THE LOAD BY A LAYER FOR TRANSPORTATION WILL BE MADE BY THE RESPONSIBLE COMMAND AND WILL BE BASED UPON ECONOMICS OF TRANSPORTATION AND HANDLING.
- K. THE STYLE 1A PALLET DELINEATED IN THE DETAIL AT LEFT NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF THE ITEMS COVERED BY THIS APPENDIX. IF THE PALLET TO BE USED DOES NOT HAVE STRAP SLOTS, HOWEVER, THE LOAD STRAPS MUST BE PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING THE BOXES ON THE PALLET.
- L. WHEN A FILLER ASSEMBLY IS TO BE USED IN ANY LAYER EXCEPT THE TOP LAYER, THE ASSEMBLY HEIGHT DIMENSION AS SHOWN BELOW MUST BE REDUCED BY 1/4".



FILLER ASSEMBLY A

GENERAL NOTES (UNIT B)

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002. TO PRODUCE AN APPROVED UNIT LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED IN THIS APPENDIX.
- B. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. INSTALL EACH HORIZONTAL STRAP TO ENCIRCLE A LAYER OF BOXES AS SHOWN. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC (DARCOM) DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
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- J. WHEN THE UNIT LOAD DEPICTED AT LEFT IS TO BE USED FOR UNITIZING MARINE CORPS AMMUNITION, ONE (1) LAYER OF BOXES MUST BE OMITTED, TIEDOWN STRAP LENGTHS MUST BE DECREASED TO 13'-2"; ONE (1) HORIZONTAL STRAP MUST BE OMITTED AND THE SPACER ASSEMBLY MUST BE MODIFIED. SPACER ASSEMBLY MODIFICATIONS INCLUDE SHORTENING VERTICAL PIECES TO 29'-1/4" AND ELIMINATING THE TOP HORIZONTAL PIECE. THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 34'-3/4", A GROSS UNIT WEIGHT OF 1,037 POUNDS AND A UNIT CUBE OF 41.7 CUBIC FEET. ADDITIONALLY, THE UNIT LOAD MAY BE MODIFIED AS DESCRIBED WHEN BEING SHIPPED BY MILVAN OR COMMERCIAL CONTAINER, INTERMODAL FREIGHT CONTAINER, CONVENTIONAL VAN TRAILER OR CONVENTIONAL OR HIGH-CAPACITY BOXCAR. THE DETERMINATION TO REDUCE THE LOAD BY A LAYER OR LAYERS FOR TRANSPORTATION WILL BE MADE BY THE RESPONSIBLE COMMAND AND WILL BE BASED UPON ECONOMICS OF TRANSPORTATION AND HANDLING.
- K. THE STYLE I PALLET DELINEATED IN THE DETAIL AT LEFT NEED NOT HAVE CHAMFERS OR STRAPS SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF THE ITEMS COVERED BY THIS APPENDIX.
- L. WHEN A FILLER ASSEMBLY IS TO BE USED IN ANY LAYER EXCEPT THE TOP LAYER THE ASSEMBLY HEIGHT DIMENSION AS SHOWN BELOW MUST BE REDUCED BY 1/4".



PALLET UNIT B

SEE GENERAL NOTE "B" AT RIGHT.

36 BOXES OF ROCKET IGNITERS (336 PER BOX) @ 39 LBS -----	1,404 LBS (APPROX)
DUNNAGE -----	29 LBS
PALLET -----	80 LBS

TOTAL WEIGHT -----	1,513 LBS (APPROX)
CUBE -----	59.2 CU FT (APPROX)

BILL OF MATERIAL (UNIT B)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	32.65	10.88
NAILS	NO. REQD	POUNDS
6d (2")	40	0.24
PALLET, 40" X 48" -----	1 REQD -----	80 LBS
STEEL STRAPPING, 3/4" -----	95.50' REQD -----	6.82 LBS
SEAL FOR 3/4" STRAPPING -----	6 REQD -----	NIL
STAPLE -----	6 REQD -----	NIL

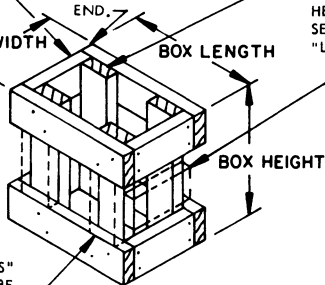
LATERAL PIECE, 2" X 4" X BOX WIDTH MINUS 3" (4 REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH END.

LONGITUDINAL PIECE, 2" X 4" X BOX LENGTH (4 REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH END.

VERTICAL PIECE, 2" X 4" X BOX HEIGHT (4 REQD). SEE GENERAL NOTE "L" AT RIGHT.

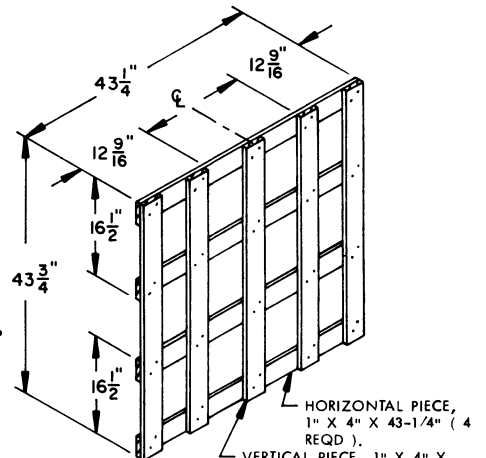
FILLER PIECE, 2" X 4" X BOX HEIGHT MINUS 7" (AS REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS.

NOTE: WHEN A FILLER ASSEMBLY IS LOCATED IN AN OUTER STACK ON A 48" SIDE OF THE PALLET, "FILLER PIECES" WILL BE REQUIRED TO BE POSITIONED AS SHOWN.



FILLER ASSEMBLY B

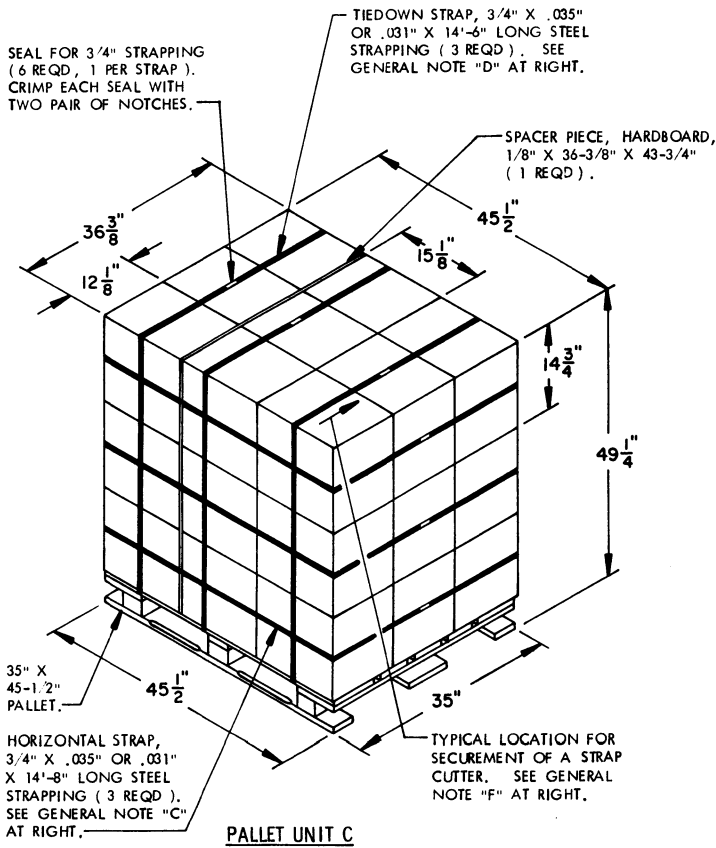
(FOR MINUS ONE BOX)



SPACER ASSEMBLY

(1 REQD)

GENERAL NOTES (UNIT C)



SEE GENERAL NOTE "B" AT RIGHT.

27 BOXES OF ROCKET IGNITERS (336 PER BOX) @ 40 LBS ----- 1,080 LBS (APPROX)
 DUNNAGE ----- 12 LBS
 PALLET ----- 65 LBS

TOTAL WEIGHT ----- 1,157 LBS (APPROX)
 CUBE ----- 47.2 CU FT (APPROX)

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- C. INSTALL EACH HORIZONTAL STRAP TO ENCIRCLE THE LAYER OF BOXES AS SHOWN. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK/STRINGER BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
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- L. WHEN A FILLER ASSEMBLY IS TO BE USED IN ANY LAYER EXCEPT THE TOP LAYER, THE ASSEMBLY HEIGHT DIMENSION AS SHOWN BELOW MUST BE REDUCED BY 1/4".

BILL OF MATERIAL (UNIT C)

PALLET, 35" X 45-1/2" -----	1 REQD -----	65 LBS
STEEL STRAPPING -----	87.50' REQD -----	6.25 LBS
SEAL FOR 3/4" STRAPPING -----	6 REQD -----	NIL
HARDBOARD, 1/8" -----	11.05 SQ FT REQD -----	4.84 LBS

