

# APPENDIX 105D

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

SIGNAL KIT, MK188 MOD 0 OR MK189 MOD 0,  
PACKED 9 PER WOODEN BOX, UNITIZED 12 BOXES  
PER 35" X 45-1/2" PALLET; APPROX BOX SIZE  
31" L X 22-9/16" W X 7-7/8" H

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

**DISTRIBUTION STATEMENT A.**

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U.S. ARMY MATERIEL COMMAND DRAWING					
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND  <i>David A. Perbach</i> AMSTA-AR-ESK	DRAFTSMAN BETTY J. KUNDERT  ENGINEER SANDRA M. SCHULTZ				
<i>William Y. Ernst</i> AMSMC-TM/J	SUPPLY ENGINEERING DIVISION <i>JM Sprague</i>	TRANSPORTATION ENGINEERING DIVISION <i>W. French</i>	VALIDATION ENGINEERING DIVISION <i>J. Wilson</i>		
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  <i>William Y. Ernst</i> U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	LOGISTICS ENGINEERING OFFICE <i>Thomas J. Michels</i> SEPTEMBER 1993				
	CLASS	DIVISION	DRAWING	FILE	
REVISION NO. 1	FEBRUARY 1995				
SEE THE REVISION LISTING ON PAGE 2		19	48	4116/ 105D	20PA 1002

DO NOT SCALE

PALLET UNIT DATA				
ITEMS INCLUDED		HAZARD CLASS AND DIVISION		APPROX WEIGHT LBS
NSN	DDIC	OD CLASS	COMP GROUP	
1370-				
01-366-0343	L563	1.4	G	982
01-366-0344	L564	1.4	G	1,066

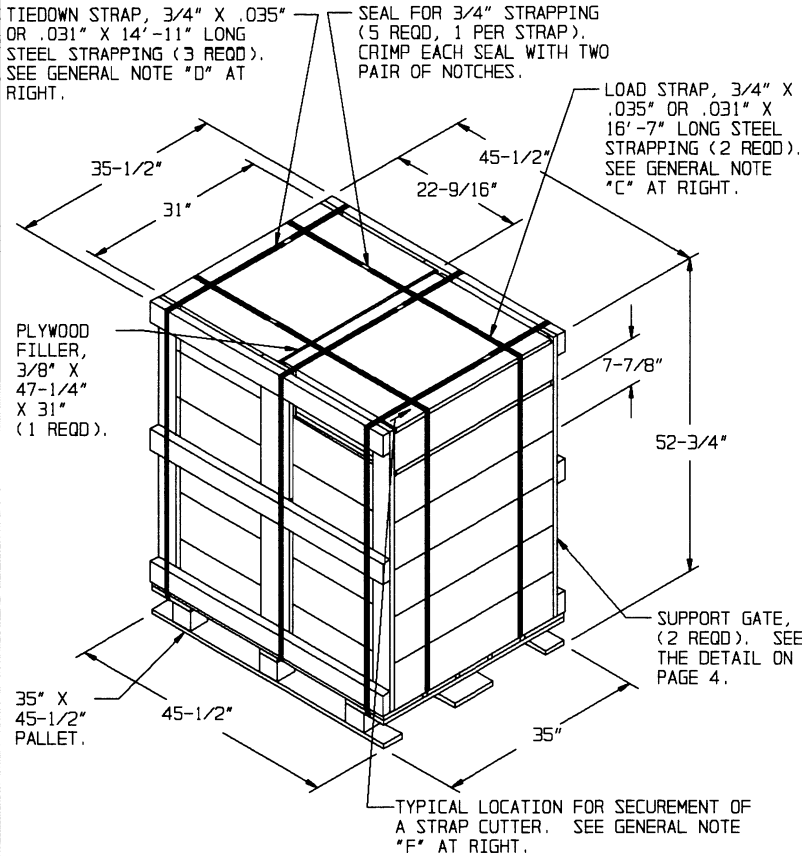
- HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

#### REVISION

REVISION NO. 1, DATED FEBRUARY 1995, CONSISTS OF:

1. CHANGING BOX SIZE
2. ADDING PAGES 3 AND 4 TO CONFORM TO NUMBER 1.

**GENERAL NOTES**



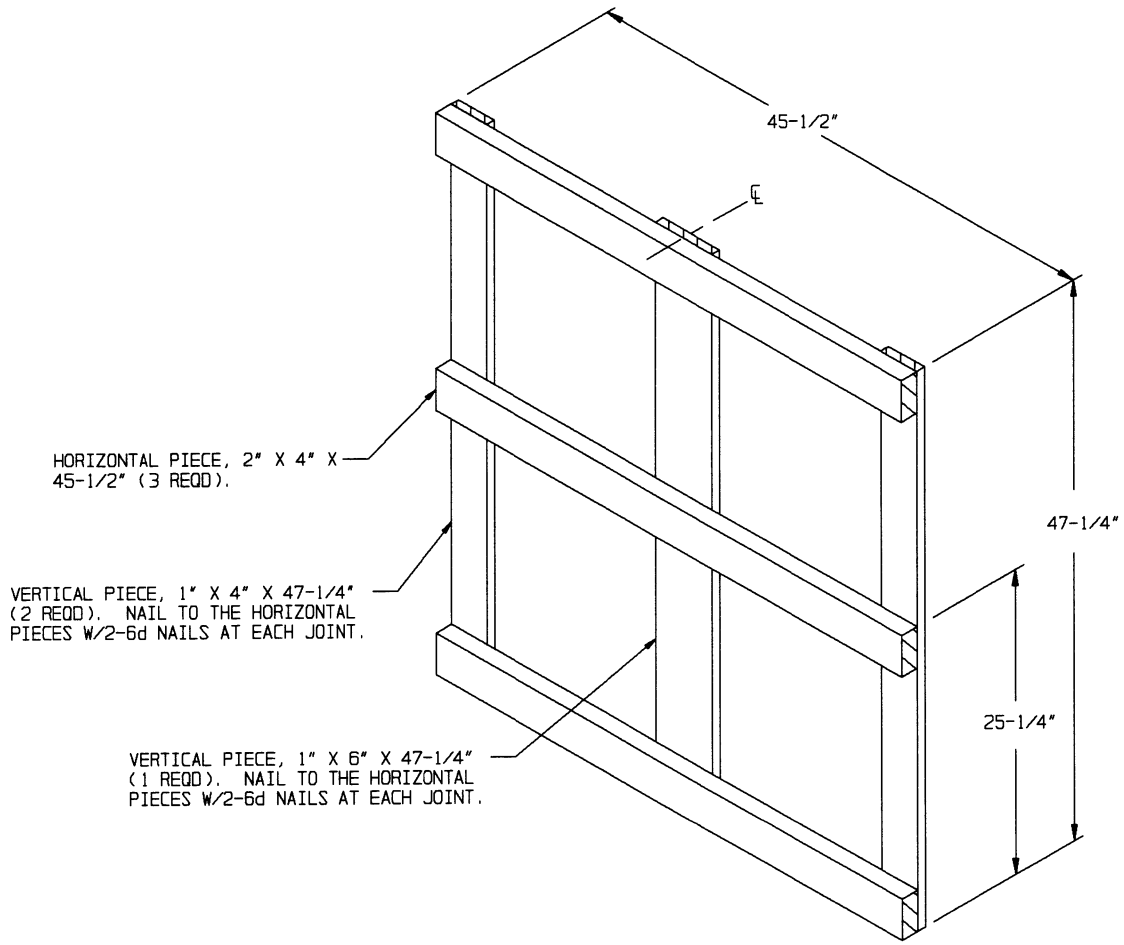
**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.  
 12 BOXES OF SIGNALS (9 PER BOX) AT 78 LBS - - - - 936 LBS (APPROX)  
 DUNNAGE - - - - - 65 LBS  
 PALLET - - - - - 65 LBS  
 -----  
 TOTAL WEIGHT - - - - - 1,066 LBS (APPROX)  
 CUBE - - - - - 49.3 CU FT (APPROX)

**BILL OF MATERIAL**

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	15.75	5.25
1" X 6"	7.88	3.94
2" X 4"	22.75	15.17
NAILS	NO. REOD	POUNDS
6d (2")	36	0.21
PALLET, 35" X 45-1/2" - - - 1 REOD - - - - 65 LBS		
STEEL STRAPPING, 3/4" - 77.92' REOD - - - - 5.57 LBS		
SEAL FOR 3/4" STRAPPING - - 5 REOD - - - - NIL		
PLYWOOD, 3/8" - - 10.17 SQ FT REOD - - - 10.49 LBS		

- 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. THE LOAD STRAPS MAY BE THREADED THROUGH THE STRAP SLOTS OF A PALLET OR PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. LOAD STRAPS MUST BE TENSIONED AND SEALED PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK/STRINGER BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
  - CARLOADING - - - - 19-48-4115-5PA1002
  - TRUCKLOADING - - - - 19-48-4117-11PA1003
  - STORAGE - - - - 19-48-4118-1-2-3-4-14-22PA1002
  - END OPENING ISO CONTAINER - - - - 19-48-4153-15PA1002
  - MILVAN - - - - 19-48-4166-15PA1003
  - SIDE OPENING ISO CONTAINER - - - - 19-48-4267-15PA1009
- F. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE AMC 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 SIGNALS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON PAGE 2, 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. 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 ITEMS COVERED BY THIS APPENDIX.
- K. ALL DUNNAGE SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH GENERAL NOTE "X" IN THE BASIC PROCEDURES.
- L. FOR DETAILS OF THE PPP-B-621, CLASS 2, STYLE 4, TYPE 1 WOODEN BOX REFER TO DRAWINGS 6869831 AND 6869829.



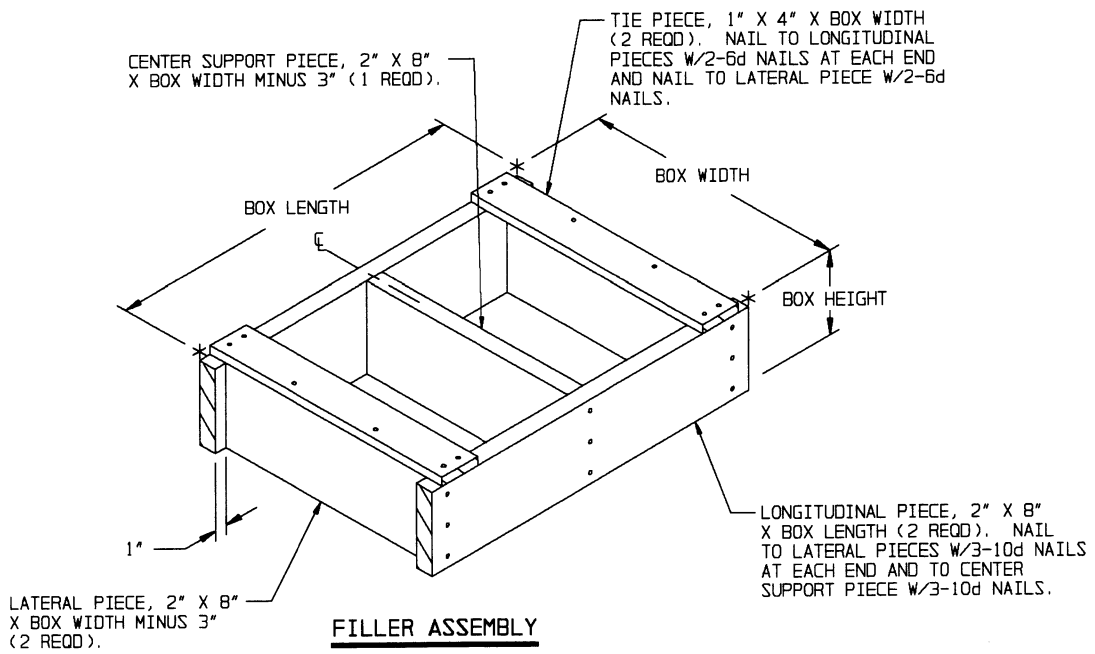
HORIZONTAL PIECE, 2" X 4" X 45-1/2" (3 REQD).

VERTICAL PIECE, 1" X 4" X 47-1/4" (2 REQD). NAIL TO THE HORIZONTAL PIECES W/2-6d NAILS AT EACH JOINT.

VERTICAL PIECE, 1" X 6" X 47-1/4" (1 REQD). NAIL TO THE HORIZONTAL PIECES W/2-6d NAILS AT EACH JOINT.

**SUPPORT GATE**

(2 REQD)



CENTER SUPPORT PIECE, 2" X 8" X BOX WIDTH MINUS 3" (1 REQD).

TIE PIECE, 1" X 4" X BOX WIDTH (2 REQD). NAIL TO LONGITUDINAL PIECES W/2-6d NAILS AT EACH END AND NAIL TO LATERAL PIECE W/2-6d NAILS.

BOX LENGTH

BOX WIDTH

BOX HEIGHT

1"

LATERAL PIECE, 2" X 8" X BOX WIDTH MINUS 3" (2 REQD).

LONGITUDINAL PIECE, 2" X 8" X BOX LENGTH (2 REQD). NAIL TO LATERAL PIECES W/3-10d NAILS AT EACH END AND TO CENTER SUPPORT PIECE W/3-10d NAILS.

**FILLER ASSEMBLY**

(FOR MINUS ONE BOX)

**DETAILS**