

APPENDIX 107D

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

SIGNAL, SMOKE AND ILLUMINATING, PACKED
108 PER WIREBOUND BOX, UNITIZED 20 BOXES
PER 42" X 53" PALLET; APPROX BOX SIZE
26½" L X 19" W X 9" H

PALLET UNIT DATA						
ITEMS INCLUDED		HAZARD CLASSIFICATION ^①				WEIGHT
NSN	DODIC	DOT CLASS	CG CLASS	QD CLASS	COMP GROUP	(LBS)
1370-00-115-3432	L275	C	II-C	1.4	G	2,224

① 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).

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

DO NOT SCALE

REVISIONS				DRAFTSMAN <i>[Signature]</i>	PROJ ENG <i>[Signature]</i>
				CHECKED <i>[Signature]</i>	LOG ISSUES OFFICE <i>[Signature]</i>
				APPROVED, U. S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND	
				<i>[Signature]</i> DRSBC - TMD	<i>[Signature]</i> DRSBC - TMD
				APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIAL DEVELOPMENT AND READINESS COMMAND (DARCOM)	
				<i>[Signature]</i> U. S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	
U. S. ARMY DARCOM DRAWING					
NOVEMBER 1983					
CLASS	DIVISION	DRAWING	FILE		
19	48	4116/ 107D	20PA 1002		

LOAD STRAP, 3/4" X .035" OR .031" X 17'-5" LONG STEEL STRAPPING (2 REQD.). SEE GENERAL NOTE "C" AT RIGHT.

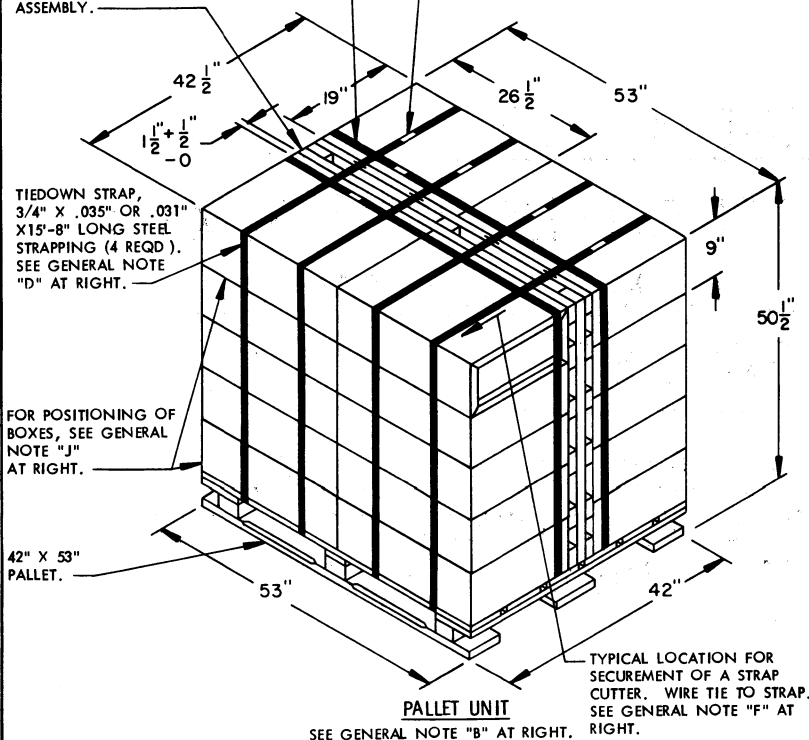
SPACER ASSEMBLY (1 REQD.). SEE THE DETAIL BELOW. STAPLE TIEDOWN STRAPS TO SPACER ASSEMBLY.

TIEDOWN STRAP, 3/4" X .035" OR .031" X 15'-8" LONG STEEL STRAPPING (4 REQD.). SEE GENERAL NOTE "D" AT RIGHT.

FOR POSITIONING OF BOXES, SEE GENERAL NOTE "J" AT RIGHT.

42" X 53" PALLET.

SEAL FOR 3/4" STRAPPING (6 REQD., 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.



20 BOXES OF SIGNALS (108 PER BOX) @ 102 LBS	-----	2,040 LBS (APPROX)
DUNNAGE	-----	94 LBS
PALLET	-----	90 LBS
TOTAL WEIGHT	-----	2,224 LBS (APPROX)
CUBE	-----	65.8 CU FT (APPROX)

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	64.25	42.83
NAILS	NO. REQD	POUNDS
10d (3")	72	1.11

PALLET, 42" X 53"	1 REQD	90 LBS
STEEL STRAPPING, 3/4"	97.50' REQD	6.96 LBS
SEAL FOR 3/4" STRAPPING	6 REQD	NIL
STAPLE	4 REQD	NIL

END SUPPORT PIECE, 2" X 4" X BOX WIDTH MINUS 6" (4 REQD).

VERTICAL PIECE, 2" X 4" X BOX HEIGHT (4 REQD).

BOX WIDTH

BOX LENGTH

BOX HEIGHT

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

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

FILL PIECE, 2" X 4" (RIPPED TO FIT) X BOX LENGTH MINUS 3" (1 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH END. NOTE: FILLER ASSEMBLY MUST BE POSITIONED WITH THE FILL PIECE ON THE OUTBOARD SIDE OF THE PALLET UNIT.

FILLER ASSEMBLY

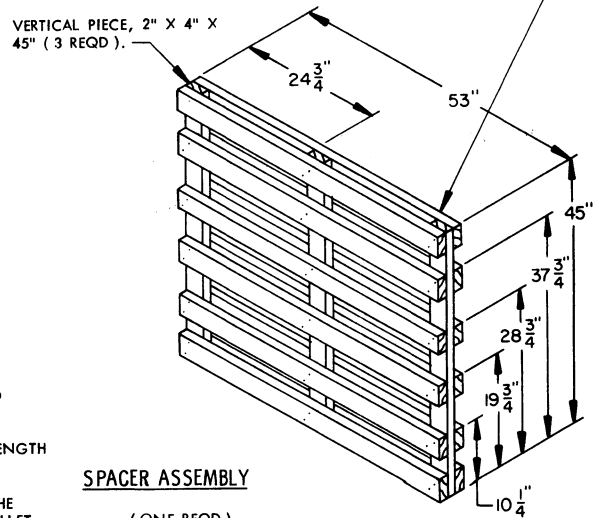
(FOR MINUS ONE BOX)

GENERAL NOTES

- 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 MUST BE PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. NOTE THAT THE STRAPS WILL BE LOCATED AS DIMENSIONED. LOAD 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 LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING 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 SIGNALS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCKS 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. POSITION THE TWO OUTBOARD BOXES ON EACH END OF THE BOTTOM LAYER OF THE UNIT WITH THE TOP DOWNWARD, AND THE TWO OUTBOARD BOXES ON EACH END OF THE TOP LAYER OF THE UNIT WITH THE TOP UPWARD.
- K. 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 14'-2", LOAD STRAP LENGTHS MUST BE DECREASED TO 15'-11", AND THE SPACER ASSEMBLY MUST BE MODIFIED. SPACER ASSEMBLY MODIFICATIONS INCLUDE CHANGING VERTICAL PIECE LENGTH TO 36", ELIMINATING THE HORIZONTAL PIECES LOCATED AT 37'-3/4" HIGH, AND LOCATING THE UPPER HORIZONTAL PIECES EVEN WITH THE TOP OF THE VERTICAL PIECES. THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 41'-1/2", A GROSS UNIT WEIGHT OF 1,800 POUNDS, AND A UNIT CUBE OF 54.1 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.

HORIZONTAL PIECE, 2" X 4" X 53" (12 REQD). NAIL TO THE VERTICALS W/2-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 4" X 45" (3 REQD).



SPACER ASSEMBLY

(ONE REQD)