

APPENDIX 45Q

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

CARTRIDGE, 105MM, PACKED 2 PER WOODEN BOX,
UNITIZED 15 BOXES PER 40" X 48" PALLET; UNIT
LOAD A APPROX BOX SIZE 47 $\frac{11}{16}$ " L X 14 $\frac{1}{16}$ " W X 8 $\frac{9}{16}$ " H;
UNIT LOAD B APPROX BOX SIZE 46 $\frac{1}{8}$ " L X 14 $\frac{1}{16}$ " W X
8 $\frac{9}{16}$ " H

PALLET UNIT DATA							
ITEMS INCLUDED		HAZARD CLASSIFICATION				WEIGHT (LBS)	
NSN	DODIC	DOT CLASS	CG CLASS	QD CLASS	COMP GROUP	UNIT A	UNIT B
1315-01-030-6838	C521	B	II-B	(08)1.2	C	2,216	2,185
01-082-9856	C523	B	II-B	(08)1.2	C	2,051	2,020
01-082-1717	C521	B	II-B	(08)1.2	C	2,216	2,185

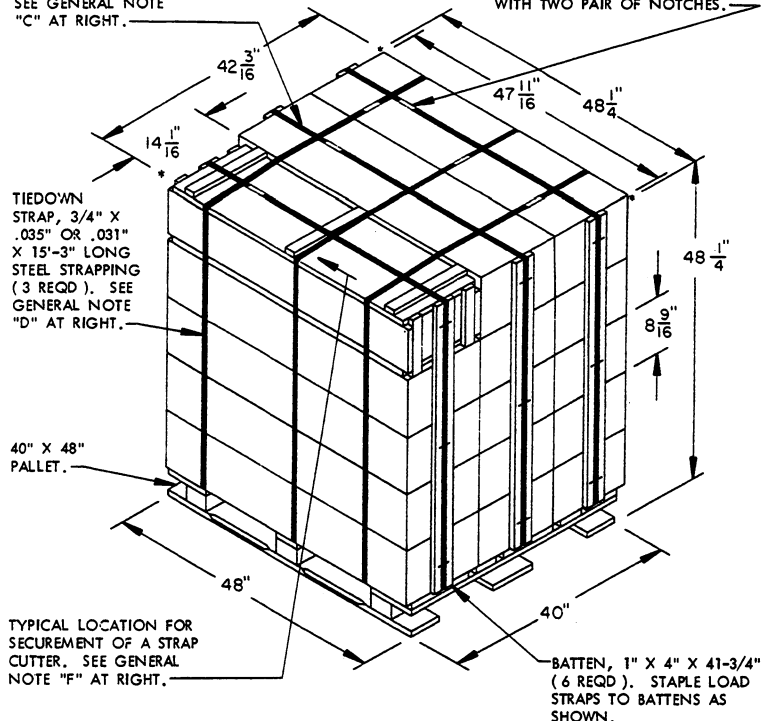
NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002.

REVISIONS											
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <small>DESIGNED BY</small> <i>WREHMAN</i> </div> <div style="text-align: center;"> <small>FILED BY</small> <i>WREHMAN</i> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="text-align: center;"> <small>CHECKED BY</small> <i>SES</i> </div> <div style="text-align: center;"> <small>LOG BOOK OFFICE</small> <i>WREHMAN</i> </div> </div>								
/	/	/	<small>APPROVED, U. S. ARMY AMMUNITION MATERIAL READINESS COMMAND</small> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <small>DESIGNED BY</small> <i>WREHMAN</i> </div> <div style="text-align: center;"> <small>FILED BY</small> <i>WREHMAN</i> </div> </div>								
/	/	/	<small>APPROVED BY OFFICE OF CHIEF OF STAFF, U. S. ARMY MATERIAL DEVELOPMENT AND READINESS COMMAND (MARCOS)</small> <div style="text-align: center; margin-top: 5px;"> <i>John X. Reynolds</i> <small>U. S. ARMY WEAPONS AMMUNITION CENTER AND SCHOOL</small> </div>								
U. S. ARMY DARCOM DRAWING											
MARCH 1983											
/	/	/	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th style="width: 25%;">CLASS</th> <th style="width: 25%;">DIVISION</th> <th style="width: 25%;">DRAWING</th> <th style="width: 25%;">FILE</th> </tr> <tr> <td>19</td> <td>48</td> <td>4116/ 45Q</td> <td>20PA 1002</td> </tr> </table>	CLASS	DIVISION	DRAWING	FILE	19	48	4116/ 45Q	20PA 1002
CLASS	DIVISION	DRAWING	FILE								
19	48	4116/ 45Q	20PA 1002								

DO NOT SCALE

LOAD STRAP, 3/4" X .035" OR .031" X 16'-3" LONG STEEL STRAPPING (3 REQD). SEE GENERAL NOTE "C" AT RIGHT.

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



PALLET UNIT A

SEE GENERAL NOTE "B" AT RIGHT.

15 BOXES OF 105MM CARTRIDGE (2 PER BOX) @ 141 LBS	-----	2,115 LBS (APPROX)
DUNNAGE	-----	21 LBS
PALLET	-----	80 LBS
TOTAL WEIGHT	-----	2,216 LBS (APPROX)
CUBE	-----	56.8 CU FT (APPROX)

BILL OF MATERIAL (UNIT A)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	20.88	6.9%
PALLET, 40" X 48"	1 REQD	80 LBS
STEEL STRAPPING, 3/4"	94.50' REQD	6.75 LBS
SEAL FOR 3/4" STRAPPING	6 REQD	NIL
STAPLE, 15/16" X 3/4"	18 REQD	NIL

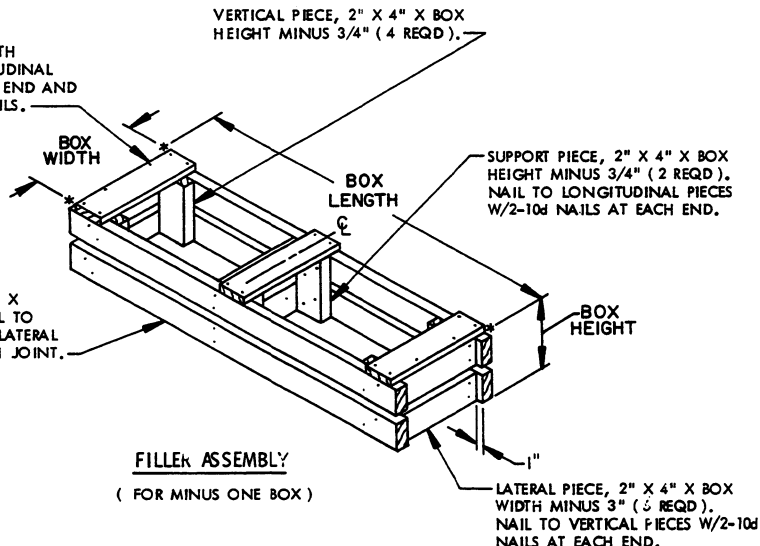
GENERAL NOTES (UNIT A)

- A. THIS PAGE OF 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 ON THIS PAGE OF THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED.
- 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 WILL BE PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL BE TENSIONED AND SEALED PRIOR TO LOAD STRAPS.
- E. THE FOLLOWING DARCOM DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.

CARLOADING	-----	DRAWING 19-48-4115-SPA1002
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 105MM CARTRIDGES 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. THE "FILLER ASSEMBLY" AS DELINEATED BELOW IS TO BE USED IN THE "PALLET UNIT A" IN PLACE OF AN OMITTED BOX (ES).
- 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 13'-10" AND LOAD STRAP LENGTHS MUST BE DECREASED TO 14'-10" AND BATTEN LENGTHS MUST BE DECREASED TO 33'-1/2". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 39'-3/4". A GROSS UNIT WEIGHT OF 1,790 POUNDS, AND A UNIT CUBE OF 46.8 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.

TIE PIECE, 1" X 4" X BOX WIDTH (3 REQD). NAIL TO LONGITUDINAL PIECES W/2-6d NAILS AT EACH END AND TO LATERAL PIECES W/2-6d NAILS.

VERTICAL PIECE, 2" X 4" X BOX HEIGHT MINUS 3/4" (4 REQD).



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

FILLER ASSEMBLY
(FOR MINUS ONE BOX)

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

LOAD STRAP, 3/4" X .035" OR .031" X 16'-3" LONG STEEL STRAPPING (3 REQD). SEE GENERAL NOTE "C" AT RIGHT.

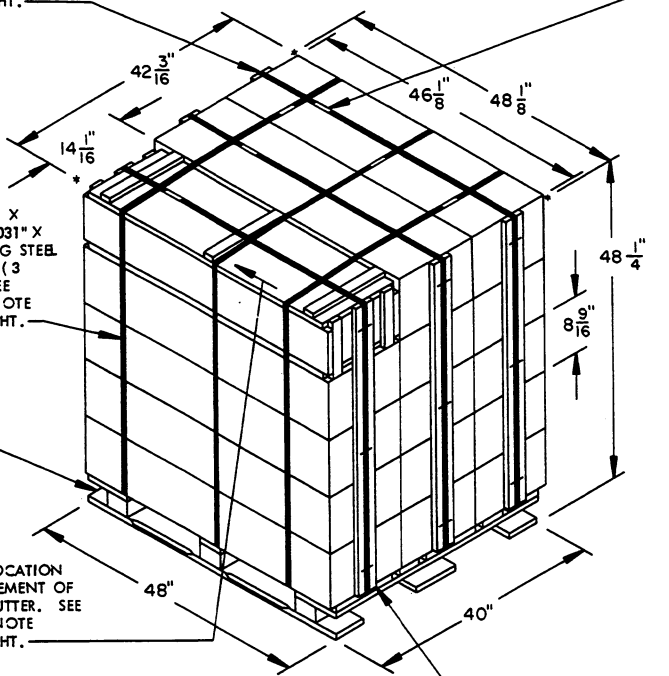
SEAL FOR 3/4" STRAPPING (6 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

GENERAL NOTES (UNIT B)

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

40" X 48" PALLET.

TYPICAL LOCATION FOR SECUREMENT OF A STRAP CUTTER. SEE GENERAL NOTE "F" AT RIGHT.



PALLET UNIT B

BATTEN, 2" X 4" X 41-3/4" (6 REQD). STAPLE LOAD STRAPS TO BATTENS AS SHOWN.

SEE GENERAL NOTE "B" AT RIGHT.

15 BOXES OF 105MM CARTRIDGE (2 PER BOX) @ 138 LBS	2,070 LBS (APPROX)
DUNNAGE	35 LBS
PALLET	80 LBS
TOTAL WEIGHT	2,185 LBS (APPROX)
CUBIC FEET	56.7 CU FT (APPROX)

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- J. THE "FILLER ASSEMBLY" AS DELINEATED ON PAGE 2 CAN ALSO BE USED IN THE "PALLET UNIT B" IN PLACE OF AN OMITTED BOX(ES).
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BILL OF MATERIAL (UNIT B)

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	20.88	13.92
PALLET, 40" X 48"	1 REQD	80 LBS
STEEL STRAPPING, 3/4"	94.50' REQD	6.75 LBS
SEAL FOR 3/4" STRAPPING	6 REQD	NIL
STAPLE, 15/16" X 3/4"	18 REQD	NIL

