

APPENDIX 5A

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

**CARTRIDGE, 5.56MM, PACKED VARIOUS QUANTI-
TIES PER M2 SERIES METAL CONTAINER, 2 CON-
TAINERS PER WIREBOUND BOX, UNITIZED 48
BOXES PER 40" X 48" PALLET; APPROX BOX SIZE
14-7/16" L X 12-17/32" W X 8-1/8" 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:

**APPROVED FOR PUBLIC RELEASE
DISTRIBUTION IS UNLIMITED.**

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, COMBAT CAPABILITIES DEVELOPMENT COMMAND ARMAMENTS CENTER HANSSSEN.JOSEP H.W.1376495538 <small>Digitally signed by HANSSSEN.JOSEPH.W.13764955 38 Date: 2022.04.08 06:20:46 -05'00'</small> FCDD-ACE-LTP	CAUTION: VERIFY PRIOR TO USE AT https://www.dau.mil/cop/ammo/Pages/Default.aspx THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.		<h2 style="margin: 0;">APRIL 1982</h2>					
APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND WARD.GINA. M.1369379808 <small>Digitally signed by WARD.GINA.M.1369379808 Date: 2022.04.18 10:05:50 -05'00'</small> AMSJM-MLT	DESIGN ENGINEER	BASIC REV.	WILLIAM R. FRERICHS MADELINE BANKS		REVISION NO. 8	APRIL 2022		
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND BRAILSFORD.KEITH .ANTHONY.1028655 661 DEFENSE AMMUNITION CENTER <small>Digitally signed by BRAILSFORD.KEITH.ANTHONY.1 028655661 Date: 2022.07.20 11:45:32 -05'00'</small>	TEST ENGINEER TEST REPORT	NA	ENGINEERING DIVISON	FIEFFER.LAUR A.A.1230375727 FELICIANO.AD IN.1259200373 CUMMINS.PAU L.A.1231883122 <small>Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2022.03.24 08:31:50 -05'00'</small> <small>Digitally signed by FELICIANO.ADIN.1259200373 Date: 2022.03.28 13:52:00 -05'00'</small> <small>Digitally signed by CUMMINS.PAUL.A.1231883122 Date: 2022.03.29 09:24:40 -05'00'</small>	CLASS	DIVISION	DRAWING	FILE
					19	48	4116/5A	20PA1002

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATI-BILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1305-				
00-764-8437	A060	----- INERT -----		2,832
01-131-5246	A064	1.4	S	2,347
01-156-7584	A064	1.4	S	2,347
00-773-1257	A066	1.4	S	2,539
00-968-5892	A066	1.4	S	2,875
01-155-5463	A075	1.4	S	2,347
01-155-5464	A075	1.4	S	1,843
01-174-9278	A075	1.4	S	1,843
00-005-8005	A080	1.4	S	2,731
00-182-3217	A080	1.4	S	2,760
00-764-8436	A080	1.4	S	2,731
00-926-9302	A080	1.4	S	2,731
01-507-7511	AA53	1.4	S	2,112
01-675-1363	AB46	----- INERT -----		2,827
01-696-5592	AC66	1.4	S	2,098

*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

REVISION NO. 1, DATED MAY 1983, CONSISTS OF:

ADDING ITEM BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.

REVISION NO. 2, DATED OCTOBER 1985, CONSISTS OF:

1. ADDING ITEM WITH INCREASED QUANTITIES PER BOX BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. UPDATING PALLET TO CONFORM TO 1 ABOVE.

REVISION NO. 3, DATED SEPTEMBER 1987, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. ADDING ALTERNATIVE FILLER ASSEMBLY.

REVISION NO. 4, DATED OCTOBER 1988, CONSISTS OF:

DELETING ITEMS BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.

REVISION NO. 5, DATED JUNE 1989, CONSISTS OF:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. DELETING ITEMS BY NATIONAL STOCK NUMBER FROM THE "PALLET UNIT DATA" CHART.
3. UPDATING GENERAL NOTES ON PAGE 3.
4. UPDATING PALLET UNIT TO CONFORM TO 3 ABOVE.

REVISION NO. 6, DATED MAY 1996, CONSISTS OF:

1. CHANGING ALTERNATIVE FILLER ASSEMBLY.
2. CHANGING BOX SIZE TO CONFORM TO WIREBOUND BOX DIMENSIONS.
3. UPDATING PALLET UNIT SIZE TO CONFORM TO NO 2 ABOVE.
4. DELETING GENERAL NOTE RELATING TO STRAP CUTTER AND RE-LETTERING OTHER GENERAL NOTES.
5. ADDING GENERAL NOTE PERTAINING TO WIREBOUND BOX DRAWING.

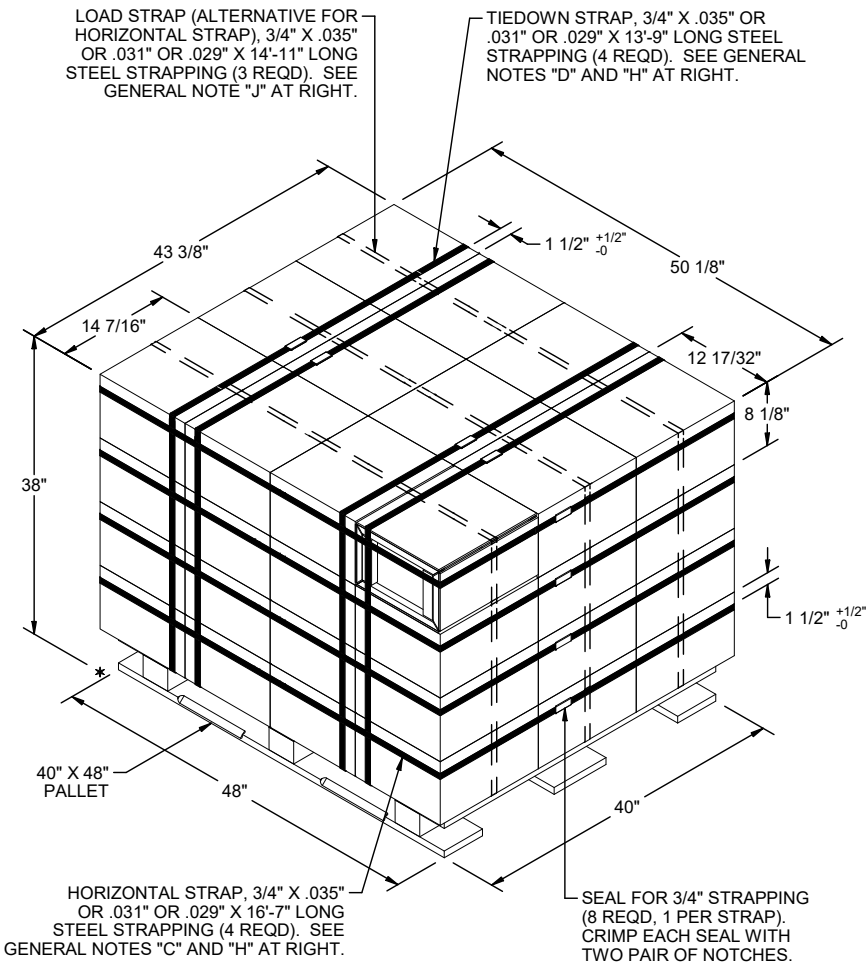
REVISION NO. 7, DATED APRIL 2019, CONSISTS OF CHANGES PER ECP R18S2011 NOR 6 (NUMBER 1):

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. ADDING .029" THICKNESS STRAPPING TO THE ISOMETRIC VIEW ON PAGE 3.
3. UPDATING GENERAL NOTES "J" (LOAD STRAPS) AND "L" (CHAMFERS) ON PAGE 3.
4. UPDATING WEIGHTS IN THE "PALLET UNIT DATA" CHART.
5. UPDATING THE DRAWING FORMAT.

REVISION NO. 8, DATED APRIL 2022, CONSISTS OF CHANGES PER ECP R21K2009 NOR 5 AND ECP R22K3002 NOR 2:

ADDING ITEM BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.

GENERAL NOTES



PALLET UNIT

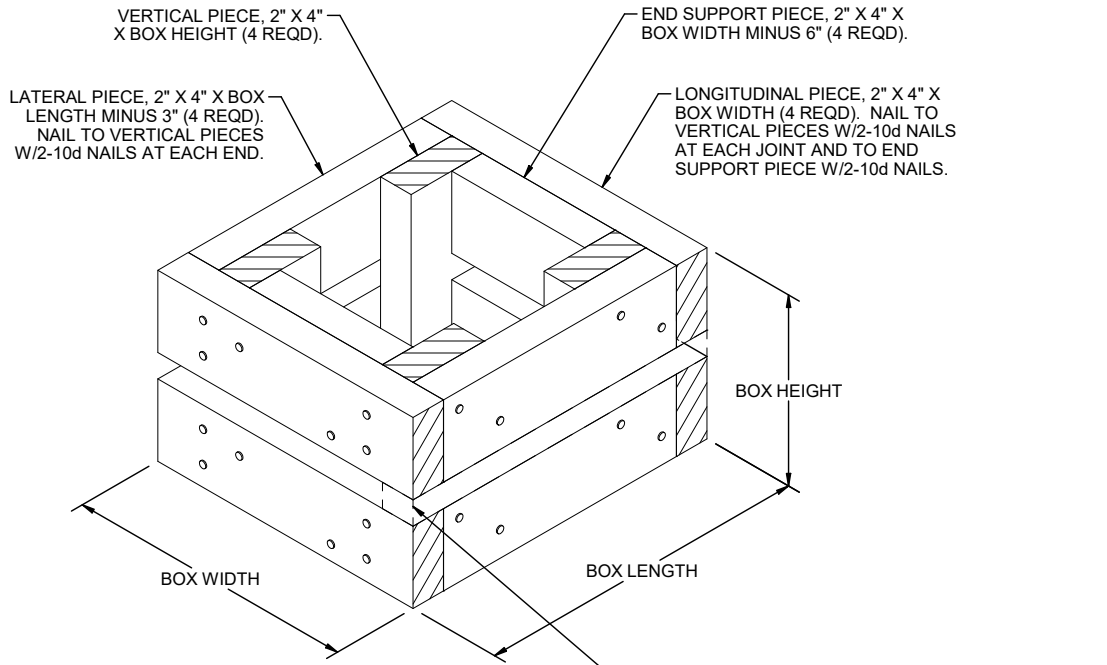
SEE GENERAL NOTE "B" AT RIGHT.

48 BOXES OF 5.56MM CTG (1,640 PER BOX) @ 57.1 LBS	---	2,741 LBS
DUNNAGE	---	11 LBS
PALLET	---	80 LBS
<hr/>		
TOTAL WEIGHT	---	2,832 LBS (APPROX)
CUBE	---	47.8 CU FT (APPROX)

BILL OF MATERIAL	
PALLET, 40" x 48"	1 REQD - 80 LBS
STEEL STRAPPING, 3/4"	121.33' REQD - 10.83 LBS
SEAL FOR 3/4" STRAPPING	8 REQD - NIL

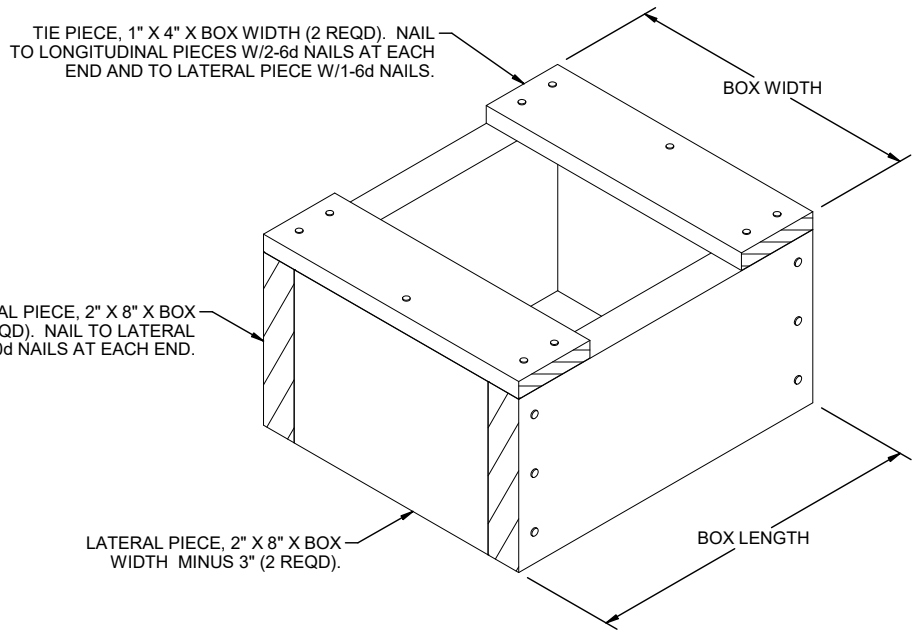
- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002. TO PRODUCE AN APPROVED UNIT LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN 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 HORIZONTAL STRAP TO ENCIRCLE A LAYER OF BOXES ON THE PALLET. NOTE THAT THE STRAPS WILL BE LOCATED AS SHOWN, NEAR THE TOP OF EACH LAYER. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET. NOTE THAT THE STRAPS WILL BE LOCATED AS SHOWN, NEAR THE SIDE CLEATS OF THE END PANELS OF THE BOX. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL 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. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS REVISION TO THIS APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS REVISION.
- G. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING 5.56MM CARTRIDGES 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.
- H. 1-1/4" STRAPS MAY BE SUBSTITUTED FOR THE 3/4" STRAPPING SPECIFIED IN THE "PALLET UNIT" AT LEFT. FOUR 1-1/4" TIEDOWN STRAPS WILL REPLACE THE SIX 3/4" TIEDOWN STRAPS SPECIFIED. REFER TO GENERAL NOTE "CC" IN THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002 FOR ADDITIONAL GUIDANCE.
- J. LOAD STRAPS MAY BE USED IN LIEU OF HORIZONTAL STRAPS. LOAD STRAPS WILL BE PRE-POSITIONED AND LOCATED AS SHOWN IN THE DETAIL AT LEFT. **NOTE:** WHEN LOAD STRAPS ARE BEING USED IN LIEU OF HORIZONTAL STRAPS, THE THREE OUTBOARD BOXES ON THE 40" SIDES OF THE BOTTOM LAYER OF THE UNIT WILL BE POSITIONED WITH THE TOPS DOWNWARD, AND THE THREE OUTBOARD BOXES ON THE 40" SIDES OF THE TOP LAYER OF THE UNIT WILL BE POSITIONED WITH TOPS UPWARDS. LOAD STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF TIEDOWN STRAPS.
- K. IF DEEMED MORE ECONOMICALLY FEASIBLE, THE ALTERNATIVE FILLER ASSEMBLY MAY BE SUBSTITUTED FOR THE FILLER ASSEMBLY TO COMPLETE A LAYER ON A PALLET.
- L. THE STYLE 1 PALLET DELINEATED IN THE DETAIL ABOVE NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-DTL-15011 WHEN USED FOR THE UNITIZATION OF ITEMS COVERED BY THIS APPENDIX.
- M. FOR DETAILS OF THE WIREBOUND BOX SEE ARDEC DRAWING 7553347.



FILLER ASSEMBLY

(FOR MINUS ONE BOX)



ALTERNATIVE FILLER ASSEMBLY

(FOR MINUS ONE BOX)
SEE GENERAL NOTE "K" ON PAGE 3.