

# APPENDIX 8K

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

**CARTRIDGE, CALIBER .30, BLANK, M1909, OR  
DUMMY, M13, PACKED VARIOUS QUANTITIES PER  
M2 SERIES METAL CONTAINER, 2 CONTAINERS PER  
WIREBOUND BOX, UNITIZED 48 BOXES PER 40" X  
48" PALLET; APPROX BOX SIZE 14-1/2" L X 12-3/4"  
W X 8-3/8" 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 <b>HANSEN.JO</b> Digitally signed by HANSEN.JOSEPH.W. <b>SEPH.W.1376</b> 1376495538 495538 Date: 2021.08.12 13:44:32 -05'00'	<b>CAUTION: VERIFY PRIOR TO USE AT <a href="https://www.dau.edu/cop/ammo/Pages/Default.aspx">https://www.dau.edu/cop/ammo/Pages/Default.aspx</a> THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b>						
APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND <b>WARD.GINA.</b> Digitally signed by WARD.GINA.M.1369379808 <b>M.1369379808</b> Date: 2021.08.15 09:54:23 -05'00'	<b>DO NOT SCALE</b>	<h2 style="margin: 0;">JULY 1983</h2>					
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <b>BRAILSFORD.KEIT</b> Digitally signed by BRAILSFORD.KEITH.ANTHONY. <b>H.ANTHONY.10286</b> 1028655661 55661 Date: 2021.08.17 07:31:35 -05'00' U.S. ARMY DEFENSE AMMUNITION CENTER	DESIGN ENGINEER <table border="1" style="margin: 0 auto;"> <tr> <td style="padding: 2px;">BASIC</td> <td style="padding: 2px;">WILLIAM FRERICHS</td> </tr> <tr> <td style="padding: 2px;">REV.</td> <td style="padding: 2px;">MADELINE BANKS</td> </tr> </table>	BASIC	WILLIAM FRERICHS	REV.	MADELINE BANKS	REVISION NO. 3	AUGUST 2021
BASIC	WILLIAM FRERICHS						
REV.	MADELINE BANKS						
ENGINEERING DIVISON TEST ENGINEER TEST REPORT	FIEFFER.LAUR A.A.1230375727 Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2021.08.11 12:12:46 -05'00'  FELICIANO.AD IN.1259200373 Digitally signed by FELICIANO.ADIN.1259200373 Date: 2021.08.12 11:47:06 -05'00'  FAIRHURST.ROBER T.JOHN.1015766880 Digitally signed by FAIRHURST.ROBERT.JOHN.10157 66880 Date: 2021.08.19 08:11:05 -05'00'	<b>SEE THE REVISION LISTING ON PAGE 2</b>					
EXPLOSIVE SAFETY DIRECTORATE	NA	CLASS	DIVISION	DRAWING	FILE		
		<b>19</b>	<b>48</b>	<b>4116/8K</b>	<b>20PA1002</b>		

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1305-				
00-028-6148	A186			2,923
00-301-1670	A224	1.4	S	2,923
00-542-0420	A224	1.4	S	2,919

\*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 APRIL 2005, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. UPDATING DRAWING FORMAT.

REVISION NO. 2, DATED AUGUST 2018, CONSISTS OF CHANGES PER ECP R19K3002-NOR 1 AND ECP R18K2021-NOR 8:

1. ADDING ITEM 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 NOTE "H" (CHAMFERS) ON PAGE 3.

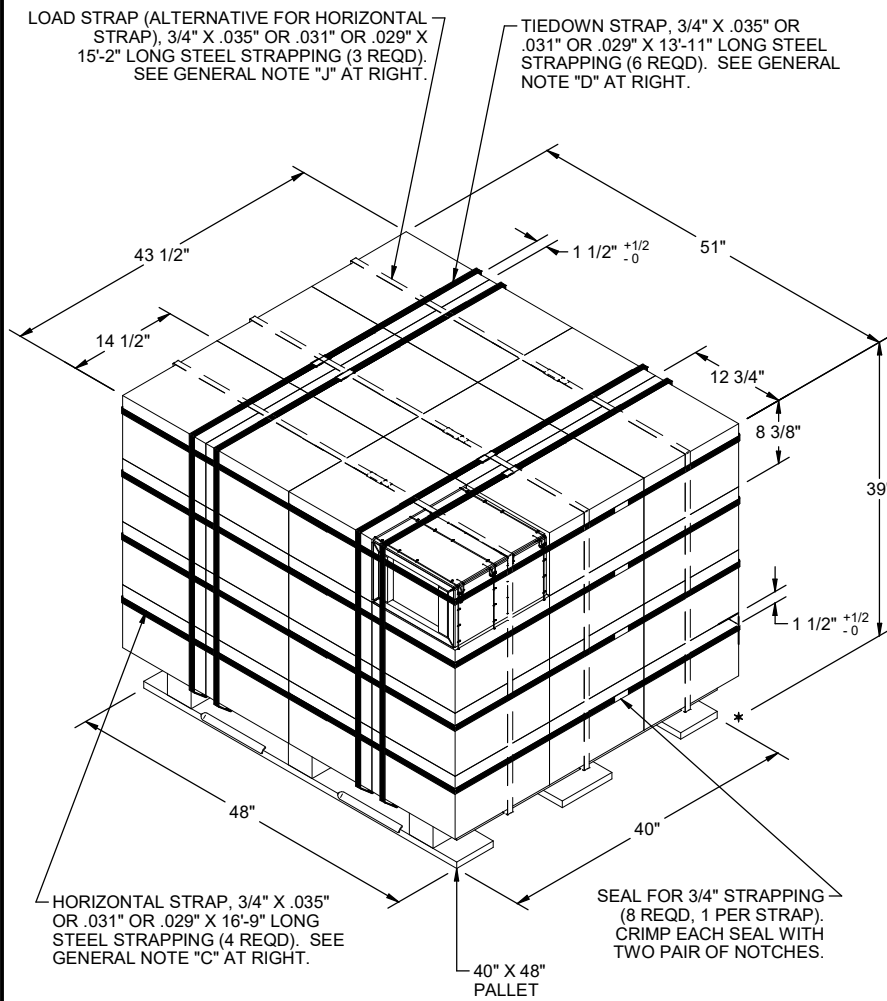
REVISION NO. 3, DATED AUGUST 2021, CONSISTS OF CHANGES PER ECP R20K2004-NOR 4:

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

**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. 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 .30 CALIBER 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. THE STYLE 1 PALLET DELINEATED IN THE DETAIL AT LEFT 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.
- 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. **NOTICE:** 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. FOR DETAILS OF THE WIREBOUND BOX SEE ARDEC DRAWING 7553659.



**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

48 BOXES OF .30 CAL CTG (960 PER BOX @ 59 LBS)	- - - -	2,832 LBS
DUNNAGE	- - - -	11 LBS
PALLET	- - - -	80 LBS
<hr/>		
TOTAL WEIGHT	- - - -	2,923 LBS (APPROX)
CUBE	- - - -	50.1 CU FT (APPROX)

**BILL OF MATERIAL**

PALLET, 40" X 48"	- - - -	1 REQD	- - - -	80 LBS
STEEL STRAPPING, 3/4"	- 122.67'	REQD	- - - -	10.95 LBS
SEAL FOR 3/4" STRAPPING	- - -	8 REQD	- - - -	NIL

