

# APPENDIX 109E

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

**SIMULATOR, PROJECTILE, AIR BURST, LIQUID, M9,  
PACKED 5 PER WOODEN BOX, UNITIZED 12 BOXES  
PER 40" X 48" PALLET; APPROX BOX SIZE 24-1/2" L  
X 13-3/8" W X 14" H**

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

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### U.S. ARMY MATERIEL COMMAND DRAWING

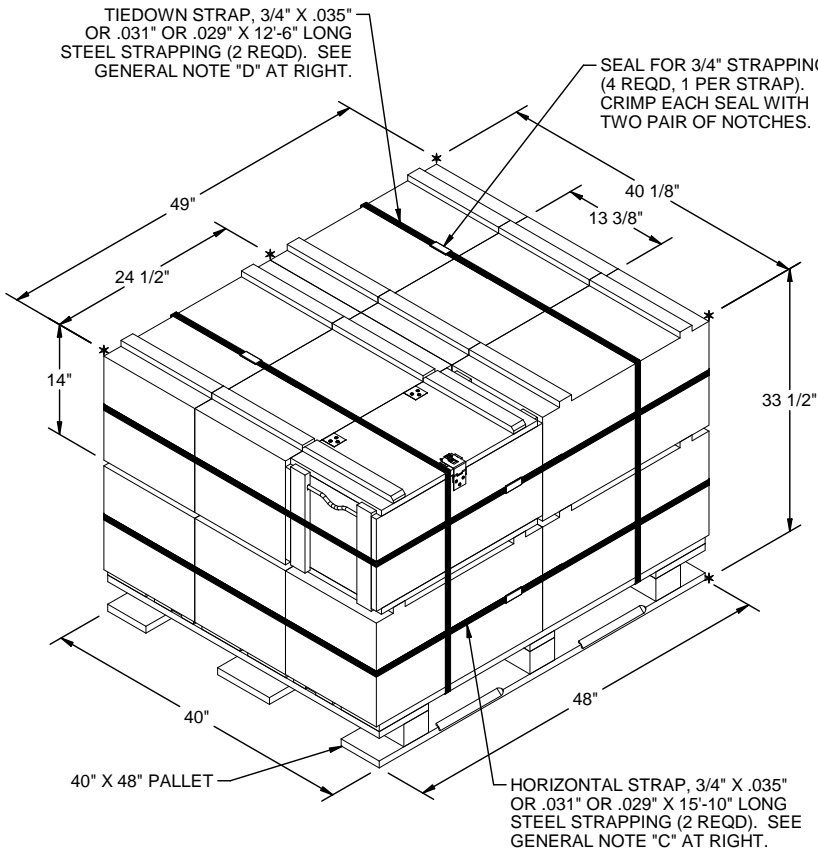
<p><b>APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND</b></p> <p>REHMSTEDT.MA RK.J.1230548400</p> <p style="font-size: small;">Digitally signed by REHMSTEDT.MARK.J.1230548400 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=CASILLAS.GILBERT.J.1230393644, ou=CASILLAS.GILBERT.J.1230393644, Date: 2012.03.12 09:27:59 -05'00'</p> <p style="text-align: right;"><b>RDAR-EIL-TP</b></p>	<p><b>CAUTION: VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b></p>										
<p><b>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</b></p> <p>CASILLAS.GILB ERT.J.12303936 44</p> <p style="font-size: small;">Digitally signed by CASILLAS.GILBERT.J.1230393644 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=CASILLAS.GILBERT.J.1230393644, ou=CASILLAS.GILBERT.J.1230393644, Date: 2012.03.16 06:39:53 -05'00'</p> <p style="text-align: right;"><b>AMSJM-LIT</b></p>	<p><b>DO NOT SCALE</b></p>	<p><b>DECEMBER 2011</b></p>									
<p><b>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</b></p> <p>SHIMP.UPTON .R.1231257183</p> <p style="font-size: small;">Digitally signed by SHIMP.UPTON.R.1231257183 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=SHIMP.UPTON.R.1231257183, ou=SHIMP.UPTON.R.1231257183, Date: 2012.03.23 14:51:22 -05'00'</p> <p style="text-align: center;"><b>U.S. ARMY DEFENSE AMMUNITION CENTER</b></p>	<p><b>TRANSPORTATION ENGINEERING DIVISION</b></p> <p><b>ENGINEER OR TECHNICIAN</b></p> <p><b>VALIDATION ENGINEERING DIVISION</b></p> <p><b>ENGINEERING DIRECTORATE</b></p>	<p><b>BASIC</b></p> <p><b>REV.</b></p> <p><b>BARICKMAN, PHILIP.W.123 0202202</b></p> <p><b>BEAVER.JERRY .W.1230949952</b></p>	<p><b>CANH TRAN</b></p> <p><b>FIEFFER.LAURA .A.1230375727</b></p> <p><b>TESTED</b></p> <p style="font-size: small;">Digitally signed by BARICKMAN.PHILIP.W.123020202 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=BARICKMAN.PHILIP.W.123020202, ou=BARICKMAN.PHILIP.W.123020202, Date: 2011.10.28 15:04:12 -05'00'</p> <p style="font-size: small;">Digitally signed by FIEFFER.LAURA.A.1230375727 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=FIEFFER.LAURA.A.1230375727, ou=FIEFFER.LAURA.A.1230375727, Date: 2011.10.27 14:46:18 -05'00'</p> <p style="font-size: small;">Digitally signed by BEAVER.JERRY.W.1230949952 DN: cn=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US, email=BEAVER.JERRY.W.1230949952, ou=BEAVER.JERRY.W.1230949952, Date: 2011.11.01 07:29:22 -05'00'</p>								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>CLASS</b></td> <td style="width: 15%;"><b>DIVISION</b></td> <td style="width: 15%;"><b>DRAWING</b></td> <td style="width: 15%;"><b>FILE</b></td> </tr> <tr> <td style="text-align: center;"><b>19</b></td> <td style="text-align: center;"><b>48</b></td> <td style="text-align: center;"><b>4116/ 109E</b></td> <td style="text-align: center;"><b>20PA1002</b></td> </tr> </table>	<b>CLASS</b>	<b>DIVISION</b>	<b>DRAWING</b>	<b>FILE</b>	<b>19</b>	<b>48</b>	<b>4116/ 109E</b>	<b>20PA1002</b>		
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PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1370-01-598-1547	L595	1. 4	D	698

\*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).

**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 BE LOCATED AS SHOWN. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR UNLOADING 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 APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- G. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING SIMULATORS 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-P-15011 WHEN USED FOR THE UNITIZATION OF ITEMS COVERED BY THIS APPENDIX.
- J. FOR DETAIL OF THE MIL-DTL-2427 WOODEN BOX SEE ARDEC DRAWING 13037512.

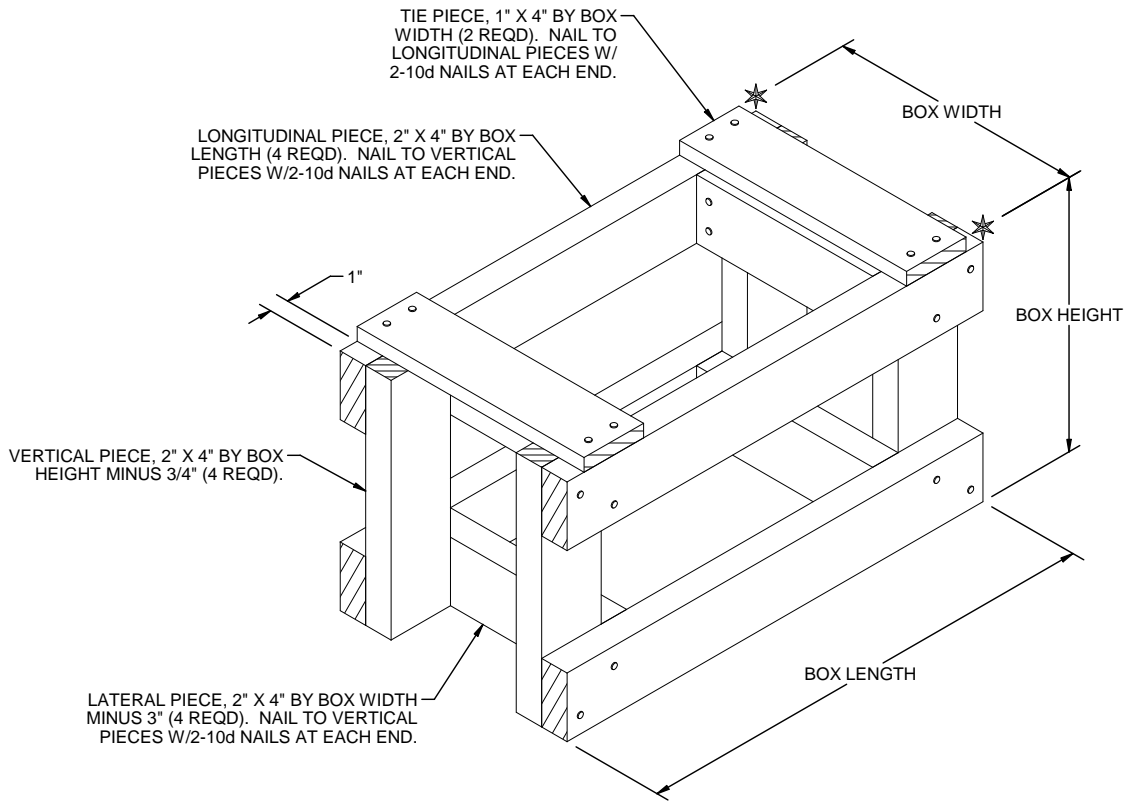


**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

12 BOXES OF SIMULATORS (5 PER BOX) @ 51 LBS - - - - -	612 LBS
DUNNAGE - - - - -	6 LBS
PALLET - - - - -	80 LBS
<hr/>	
TOTAL WEIGHT - - - - -	698 LBS (APPROX)
CUBE - - - - -	38.1 CU FT (APPROX)

BILL OF MATERIAL			
PALLET, 40" X 48"	- - - - -	1 REQD - - - - -	80 LBS
STEEL STRAPPING, 3/4"	- 56.58'	REQD - - - - -	5.05 LBS
SEAL FOR 3/4" STRAPPING	- - - - -	4 REQD - - - - -	NIL



**FILLER ASSEMBLY**

(FOR MINUS ONE BOX)