

# APPENDIX 38B

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

**CARTRIDGE, 120MM FULL RANGE PRACTICE, M931,  
PACKED 2 PER WIREBOUND BOX, UNITIZED 21  
BOXES PER 35" X 45-1/2" PALLET; APPROX BOX  
SIZE 33" L X 11-7/8" W X 6-1/2" 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><b>REHMSTEDT. MARK.J.12305 48400</b></p> <p><small>Digitally signed by REHMSTEDT.MARK.J.1230548400 DN: c=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=REHMSTEDT.MARK.J.1230548 400 Date: 2016.12.27 14:58:28 -0600</small></p> <p style="text-align: right;"><b>RDAR-EIL-TP</b></p>	<p><b>CAUTION: VERIFY PRIOR TO USE AT <a href="https://MHP.REDSTONE.ARMY.MIL">HTTPS://MHP.REDSTONE.ARMY.MIL</a> THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b></p>		<p style="font-size: 24pt; font-weight: bold;">FEBRUARY 1997</p>				
<p><b>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</b></p> <p><b>RUS.ALLEN.J .1230354282</b></p> <p><small>Digitally signed by RUS.ALLEN.J.1230354282 DN: c=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=RUS.ALLEN.J.1230354282 Date: 2017.01.03 13:22:54 -0600</small></p> <p style="text-align: right;"><b>AMSJM-MMT</b></p>	<p><b>DO NOT SCALE</b></p>	<p style="font-size: 24pt; font-weight: bold;">REVISION NO. 2</p> <p style="font-size: 24pt; font-weight: bold;">NOVEMBER 2016</p>					
<p><b>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</b></p> <p><b>SHIMP.UPTON .R.1231257183</b></p> <p><small>Digitally signed by SHIMP.UPTON.R.1231257183 DN: c=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=SHIMP.UPTON.R.1231257183 Date: 2017.01.13 09:55:43 -0600</small></p> <p style="text-align: right;"><b>U.S. ARMY DEFENSE AMMUNITION CENTER</b></p>	<p><b>DESIGN ENGINEER</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">BASIC</td> <td style="width: 80%;">SANDRA M. SCHULTZ</td> </tr> <tr> <td>REV.</td> <td>QUYEN TRAN</td> </tr> </table>	BASIC	SANDRA M. SCHULTZ	REV.	QUYEN TRAN	<p><b>SEE THE REVISION LISTING ON PAGE 2</b></p>	
BASIC	SANDRA M. SCHULTZ						
REV.	QUYEN TRAN						
<p><b>TEST ENGINEER</b></p> <p><b>TEST REPORT</b></p> <p style="text-align: center; font-weight: bold; font-size: 18pt;">NA</p>	<p><b>ENGINEERING DIVISION</b></p> <p><b>FIEFFER.LAUR A.A.1230375727</b></p> <p><small>Digitally signed by FIEFFER.LAURA.A.1230375727 DN: c=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FIEFFER.LAURA.A.1230375727 Date: 2016.11.14 11:16:17 -0600</small></p>	<p><b>CLASS</b></p> <p style="font-size: 24pt; font-weight: bold;">19</p>	<p><b>DIVISION</b></p> <p style="font-size: 24pt; font-weight: bold;">48</p>	<p><b>DRAWING</b></p> <p style="font-size: 24pt; font-weight: bold;">4116/38B</p>	<p><b>FILE</b></p> <p style="font-size: 24pt; font-weight: bold;">20PA1002</p>		
<p><b>EXPLOSIVE SAFETY DIRECTORATE</b></p>	<p><b>TIRONE.JOSEPH.A NDREW.1026683749</b></p> <p><small>Digitally signed by TIRONE.JOSEPH.ANDREW.1026683749 DN: c=US, ou=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TIRONE.JOSEPH.ANDREW.1026683749 Date: 2016.12.09 10:48:52 -0600</small></p>						

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1315-				
01-451-4546	CA09	1. 2. 2	G	1, 924
01-467-0993	CA09	1. 2. 2	G	1, 924
01-576-8539	CA09	1. 2. 2	G	1, 924
01-621-7162	CA09	1. 2. 2	G	1, 924

\*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 JUNE 1999, CONSISTS OF:

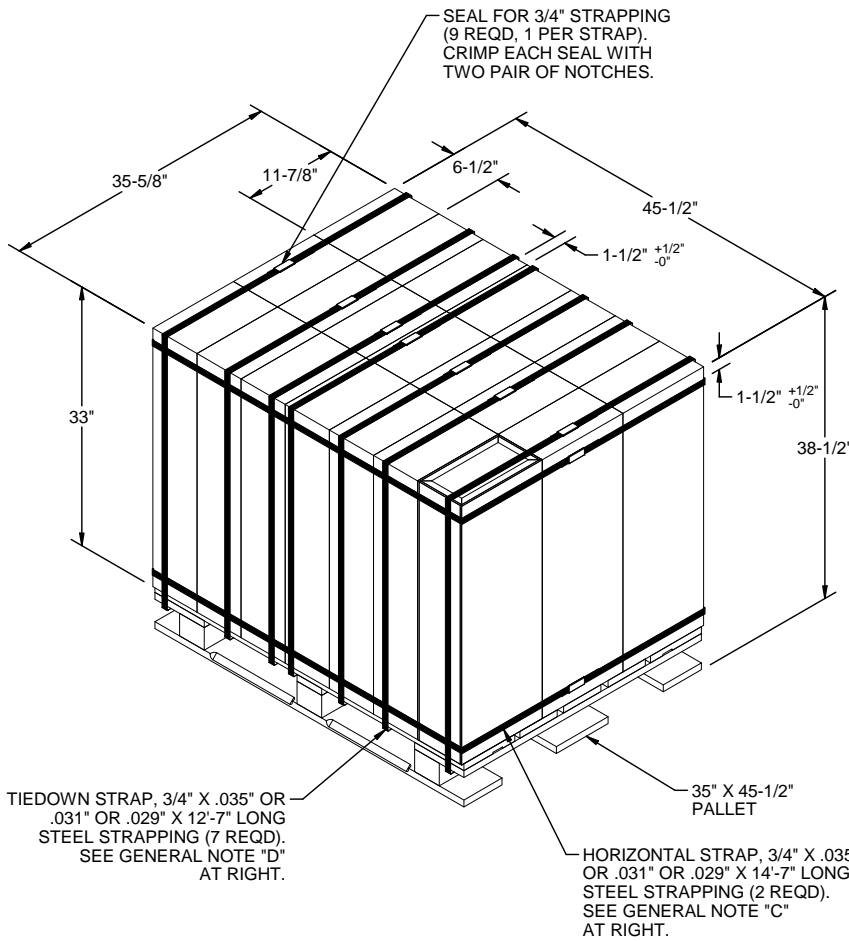
1. CHANGING THE NSN, DODIC, HAZARD CLASS, AND COMPATIBILITY GROUP.
2. CHANGING THE OFFICE SYMBOL FROM AMSIO-TMJ TO AMSIO-JTM.
3. ADDING ITEMS BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.

REVISION NO. 2, DATED NOVEMBER 2016, CONSISTS OF:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. UPDATING THE "HAZARD CLASS" ON "PALLET UNIT DATA" CHART.
3. ADDING .029" THICKNESS STRAPPING TO THE LEADERS (2) ON PAGE 3.
4. UPDATING GENERAL NOTES "F" (REUNITIZATION), "G" (OTHER NSN), "H" (CHAMFERS), AND "J" (BOX REFERENCE) ON PAGE 3.
5. UPDATING DRAWING TO CURRENT STANDARD FORMAT.

**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 AND BOTTOM 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 DECK/STRINGER 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 120MM MORTAR CARTRIDGES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS DELINEATED 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. FOR DETAILS OF THE WIREBOUND BOX SEE ARDEC DRAWING 12957063.



**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

21 BOXES OF 120MM CARTRIDGES (2 PER BOX) @ 88 LBS	- - - -	1,848 LBS (APPROX)
DUNNAGE	- - - -	11 LBS
PALLET	- - - -	65 LBS
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TOTAL WEIGHT	- - - -	1,924 LBS (APPROX)
CUBE	- - - -	36.1 CU FT (APPROX)

**BILL OF MATERIAL**

PALLET, 35" X 45-1/2"	- - - -	1 REQD	- - - -	65 LBS
STEEL STRAPPING, 3/4"	- - -	117.25' REQD	- - - -	10.47 LBS
SEAL FOR 3/4" STRAPPING	- - - -	9 REQD	- - - -	NIL

