

# APPENDIX 28M

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

**CARTRIDGE, 60MM, PACKED 14 PER WOODEN BOX,  
UNITIZED 30 BOXES PER 35" X 45-1/2" PALLET;  
APPROX BOX SIZE 23-49/64" L X 7-21/64" W X 13-  
59/64" 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 style="font-size: small;">APPROVED, U.S. ARMY FIELD SUPPORT COMMAND</p> <p style="font-size: x-small;">AMSRS-AAR-AIL-TP</p> <p style="font-size: x-small;">AMSFS-ST</p> <p style="font-size: x-small;">APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p style="font-size: x-small;">U.S. ARMY DEFENSE AMMUNITION CENTER</p>	<p style="text-align: center;"><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 style="text-align: center;"><b>DO NOT SCALE</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; font-size: x-small;">ENGINEER OR TECHNICIAN</td> <td style="width: 15%; font-size: x-small;">BASIC REV.</td> <td style="width: 70%;"> <p style="text-align: center;">ROBERT REGAZZI</p> <p style="text-align: center;">ADIN FELICIANO</p> </td> </tr> <tr> <td colspan="2" style="font-size: x-small;">TRANSPORTATION ENGINEERING DIVISION</td> <td style="text-align: center;"> <p style="font-size: x-small;">G. L. Willis</p> </td> </tr> <tr> <td colspan="2" style="font-size: x-small;">VALIDATION ENGINEERING DIVISION</td> <td style="text-align: center;"> <p style="font-size: x-small;">G. L. Willis</p> </td> </tr> <tr> <td colspan="2" style="font-size: x-small;">ENGINEERING DIRECTORATE</td> <td style="text-align: center;"> <p style="font-size: x-small;">G. L. Willis</p> </td> </tr> </table>	ENGINEER OR TECHNICIAN	BASIC REV.	<p style="text-align: center;">ROBERT REGAZZI</p> <p style="text-align: center;">ADIN FELICIANO</p>	TRANSPORTATION ENGINEERING DIVISION		<p style="font-size: x-small;">G. L. Willis</p>	VALIDATION ENGINEERING DIVISION		<p style="font-size: x-small;">G. L. Willis</p>	ENGINEERING DIRECTORATE		<p style="font-size: x-small;">G. L. Willis</p>
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		<b>NOVEMBER 1983</b>											
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		<b>SEE THE REVISION LISTING ON PAGE 2</b>											
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19	48	4116/ 28M	20PA1002										

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1310-				
00-028-4940	B634	1. 2. 2	E	2, 264
00-509-2970	B634	1. 2. 2	E	1, 265
00-509-2978	B634	1. 2. 2	E	2, 265

\*HAZARD AND 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

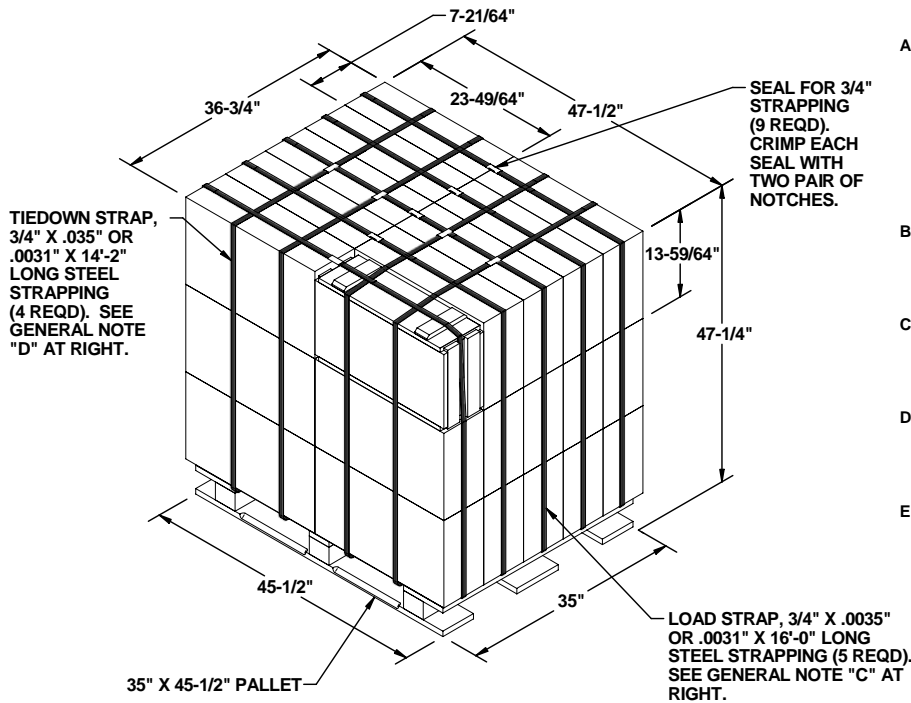
REVISION NO. 1, DATED MAY 1986, CONSISTS OF:

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

REVISION NO. 2, DATED APRIL 2005, CONSISTS OF:

1. REVISING DRAWING FORMAT.
2. REVISING GENERAL NOTES.
3. DELETING ITEM BY NATIONAL STOCK NUMBER FROM "PALLET UNIT DATA" CHART.

**GENERAL NOTES**



**PALLET UNIT**  
SEE GENERAL NOTE "B" AT RIGHT.

- 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. THE LOAD STRAPS MUST BE PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. LOAD STRAPS WILL NOT BE TENSIONED AND SEALED UNTIL TIEDOWN STRAPS HAVE BEEN APPLIED.
- 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 AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 

CARLOADING	- - - -	19-48-4115-5PA1002s
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 60MM 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 1A 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 DETAILS OF THE MIL-B-2427 WOODEN BOX SEE DRAWING 9281170.
- 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 11'-11", AND LOAD STRAP LENGTHS MUST BE DECREASED TO 13'-8". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 33'-3/8", A GROSS UNIT WEIGHT OF 1,536 POUNDS, AND A UNIT CUBE OF 33.7 CUBIC FEET. ADDITIONALLY, THE UNIT MAY BE MODIFIED AS DESCRIBED WHEN BEING SHIPPED BY MILVAN OR ISO INTERMODAL FREIGHT CONTAINER, VAN TRAILER, OR 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.

30 BOXES OF 60MM CARTRIDGE (14 PER BOX) @ 73 LBS	- - - -	2,190 LBS
DUNNAGE	- - - -	13 LBS
PALLET	- - - -	65 LBS

TOTAL WEIGHT	- - - - -	2,268 LBS (APPROX)
CUBE	- - - - -	47.7 CU FT (APPROX)

BILL OF MATERIAL			
PALLET, 35" X 45-1/2"	- - - -	1 REQD	- - - - 65 LBS
STEEL STRAPPING, 3/4"	- 136.67'	REQD	- - - - 12.20 LBS
SEAL FOR 3/4" STRAPPING	- - - -	4 REQD	- - - - 0.41 LBS

