

# APPENDIX 39

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

**CARTRIDGE, 4.2 INCH, GAS, PERSISTENT, M2,  
PACKED 2 PER WOODEN BOX, UNITIZED 48  
BOXES PER 42" X 53" PALLET; APPROX BOX  
SIZE 27" L X 11-1/4"W X 7-1/4" H**

● **NOTE: THESE PROCEDURES ONLY APPLY TO 4.2 INCH  
CARTRIDGE OF TOXIC CHEMICAL MUNITIONS.**

**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

<p>APPROVED, U.S. ARMY OPERATIONS SUPPORT COMMAND <i>NH</i></p> <p><i>David G. Picholik</i></p> <p style="text-align: right;">AMSTA-AR-WEP-RP</p>	<p><b>CAUTION: VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL/DET THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b></p>				
<p>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p><i>Charles P. Frow</i></p> <p style="text-align: right;">U.S. ARMY DEFENSE AMMUNITION CENTER</p>	<p><b>DO NOT SCALE</b></p>		<p><b>NOVEMBER 1983</b></p>		
	ENGINEER OR TECHNICIAN	BASIC REV.	<p><b>MELVIN DAEUMER</b></p> <p><b>RANDIE UNSER</b></p>		
<p>TRANSPORTATION ENGINEERING DIVISION</p> <p><i>G. L. Willis</i></p>	<p>REVISION NO. 1</p> <p style="text-align: right;">AUGUST 2002</p>		<p>SEE THE REVISION LISTING ON PAGE 2</p>		
<p>VALIDATION ENGINEERING DIVISION</p> <p><i>William R. French</i></p>	TESTED	CLASS	DIVISION	DRAWING	FILE
<p>ENGINEERING DIRECTORATE</p>	<i>William R. French</i>	19	48	4116/ 39	20PA1002

PROJECT FSA 146/39-75

PALLET UNIT DATA				
ITEMS INCLUDED		● HAZARD CLASS AND DIVISION	● COMPAT- ABILITY GROUP	APPROX WEIGHT LBS
NSN	DODIC			
1315-00-028-5024	C698	1. 2. 2	K	3, 462
00-028-5018	C703	1. 2. 2	K	3, 462
00-028-5027	C703	1. 2. 2	K	3, 462

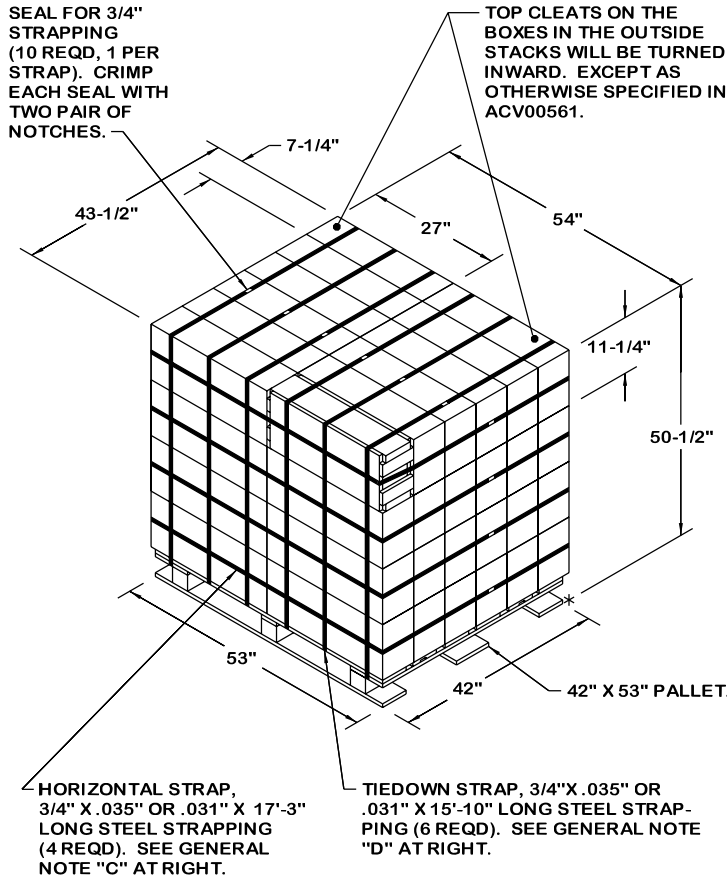
● HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

### REVISION

REVISION NO. 1, DATED AUGUST 2002, CONSISTS OF:

1. CHANGING DODIC FOR SPECIFIED NATIONAL STOCK NUMBER IN THE PALLET UNIT DATA CHART.
2. DELETING ITEM BY NATIONAL STOCK NUMBER FROM THE PALLET UNIT DATA CHART.
3. UPDATING DRAWING FORMAT.

**GENERAL NOTES**



**PALLET UNIT**

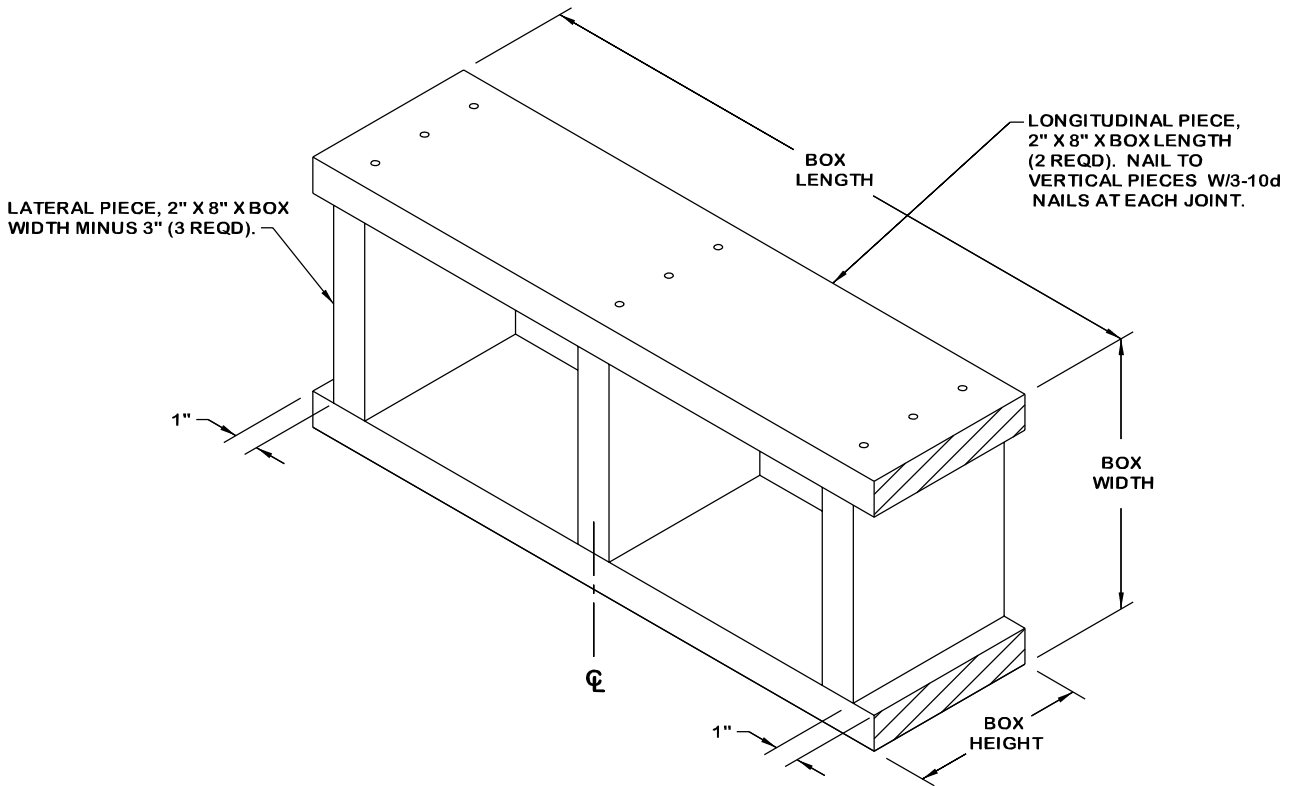
SEE GENERAL NOTE "B" AT RIGHT

48 BOXES, 4.2" CARTRIDGE (2 PER BOX) @ 70 LBS	- - - - -	3,360 LBS (APPROX)
DUNNAGE	- - - - -	15 LBS
PALLET	- - - - -	90 LBS
<hr/>		
TOTAL WEIGHT	- - - - -	3,465 LBS (APPROX)
CUBE	- - - - -	68.6 CU FT (APPROX)

**BILL OF MATERIAL**

PALLET, 42" X 53"	- - - - -	1 REQD	- - - - -	90 LBS
STEEL STRAPPING, 3/4"	-	164.00' REQD	- - - - -	14.64 LBS
SEAL FOR 3/4" STRAPPING	- - - - -	10 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. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK/STRINGER 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 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 4.2 INCH TOXIC CHEMICAL 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 1B 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. 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 14'-0", AND ONE HORIZONTAL STRAP MUST BE OMITTED. THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 39-1/4", A GROSS UNIT WEIGHT OF 2,623 POUNDS, AND A UNIT CUBE OF 53.4 CUBIC FEET. ADDITIONALLY, THE UNIT MAY BE MODIFIED AS DESCRIBED WHEN BEING SHIPPED BY MILVAN OR ISO IN INTERMODAL FREIGHT CONTAINER. 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.



**FILLER ASSEMBLY**  
 (FOR MINUS ONE BOX)