

APPENDIX 50A

UNITIZATION PROCEDURES FOR AMMUNITION AND COMPONENTS PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY METAL PALLETS

**MODULAR ARTILLERY CHARGE SYSTEM (MACS),
M232, PACKED 5 PER PA103A2 CYLINDRICAL
METAL CONTAINER, UNITIZED 36 PER 46-1/2"
X 38" PALLET; APPROX CONTAINER SIZE
38" L X 7-1/2" W X 7-1/2" H**

**NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH
THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4231-20PM1006.**

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U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY OPERATIONS SUPPORT COMMAND <i>David A. Postleth</i> AMSTA-AR-WEP-RP	ENGINEER	BASIC	MICHAEL BARTOSIAK	DO NOT SCALE			
		REV.	MICHAEL BARTOSIAK	WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC		AUGUST 1998			
		REV.		REVISION NO. 1		FEBRUARY 2002	
	DRAFTSMAN	BASIC	BETTY J. KUNDERT	SEE THE REVISION LISTING ON PAGE 2			
		REV.		CLASS	DIVISION	DRAWING	FILE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>[Signature]</i> U.S. ARMY DEFENSE AMMUNITION CENTER	TRANSPORTATION ENGINEERING DIVISION		<i>[Signature]</i>	19	48	4231/ 50A	20PM1006
	VALIDATION ENGINEERING DIVISION		<i>[Signature]</i>				
	ENGINEERING DIRECTORATE		<i>William R. French</i>				

PALLET UNIT DATA				
ITEMS INCLUDED		HAZARD CLASS AND DIVISION	● COMPATIBILITY GROUP	APPROX WEIGHT LBS
NSN	DODIC			
1320- -----	----	---	-	2, 112

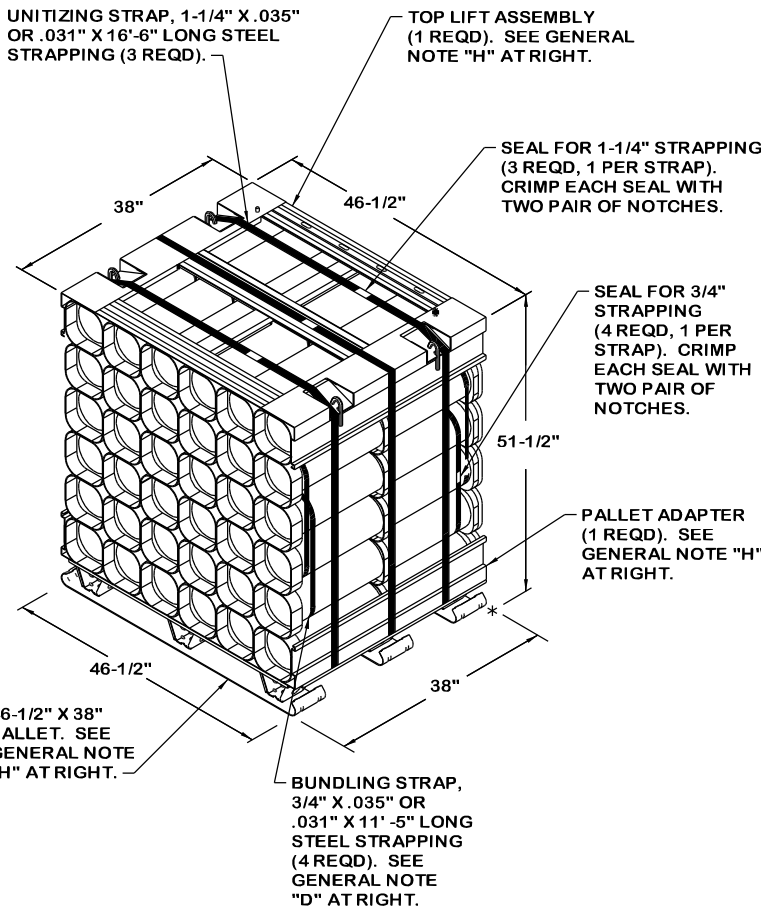
- HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

REVISION

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

1. UPDATING DRAWING FORMAT.
2. UPDATED PALLET UNIT DATA TABLE ON PAGE 2 TO REFLECT MORE ACCURATE REPRESENTATION OF HAZARD CLASS AND DIVISION.
3. CHANGE REFERENCE TO DRAWING ACV00561 TO ARDEC DRAWING 12982865.

GENERAL NOTES



PALLET UNIT

SEE GENERAL NOTE "B" AT RIGHT.

36 CONTAINERS OF MACS (5 PER CNTR) AT 51 LBS	--	1,836 LBS (APPROX)
DUNNAGE	-----	166 LBS
PALLET	-----	110 LBS
<hr/>		
TOTAL WEIGHT	-----	2,112 LBS (APPROX)
CUBE	-----	52.7 CU FT (APPROX)

BILL OF MATERIAL

PALLET, 46-1/2" X 38"	-----	1 REQD	-----	110 LBS
STEEL STRAPPING, 3/4"	-----	45.67' REQD	-----	4.08 LBS
SEAL FOR 3/4" STRAPPING	-----	4 REQD	-----	NIL
STEEL STRAPPING, 1-1/4"	-----	49.50' REQD	-----	7.50 LBS
SEAL FOR 1-1/4" STRAPPING	-----	3 REQD	-----	NIL
PALLET ADAPTER	-----	1 REQD	-----	74 LBS
TOP LIFT ASSEMBLY	-----	1 REQD	-----	80 LBS

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4231-20PM1006. 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 CONTAINERS AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4 MM AND ONE POUND EQUALS 0.454 KG.
- D. BUNDLING STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF THE UNITIZING STRAPS. INSTALL BUNDLING STRAPS AS CLOSE TO THE OUTER CONTAINER RINGS AS POSSIBLE, TO AVOID DAMAGE TO THE CONTAINERS. CAUTION: STRAPS MUST NOT BE ALLOWED TO OVERLAP.
- E. ALTHOUGH THE CONTAINERS DEPICTED IN THE UNIT LOAD AT LEFT ARE CONSTRUCTED WITH INTERLOCKING DEVICES, THE INTERLOCKS WILL NOT FUNCTION PROPERLY UNLESS THE CONTAINERS ARE POSITIONED SO THAT THE "PINS" OF THE INTERLOCKS ARE FACING UPWARD. THIS ORIENTATION WILL AID IN THE PREVENTING OF CONTAINER MOVEMENT, BOTH Laterally AND LONGITUDINALLY, DURING SHIPMENT OF THE UNIT LOAD.
- F. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.

CARLOADING	-----	19-48-4240/50A-5PM1004
TRUCKLOADING	-----	19-48-4243/50A-11PM1004
STORAGE	-----	19-48-4250/50A-1-2-3-4-14-22PM1004
END OPENING ISO CONTAINER	-----	19-48-4245/50A-15PM1009
MIL VAN	-----	19-48-4244/50A-15PM1008
SIDE OPENING ISO CONTAINER	-----	19-48-4272/50A-15PM1016
- G. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE CONTAINERS NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- H. FOR DETAILS OF PALLET, TOP LIFT ASSEMBLY, AND PALLET ADAPTER, SEE DAC DRAWING ACV00067, MIL-A-70788, AND MIL-P-70786.
- J. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING MACS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON PAGE 2, PROVIDED THE CONTAINER DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- K. EMPTY OR REJECT PA103A2 CONTAINERS WILL BE USED AS FILLER CONTAINERS AS NECESSARY. FILLER CONTAINERS MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER(S) OF CONTAINERS. IF SIX FULL CONTAINERS ARE TO BE OMITTED, ONE FULL LAYER OF CONTAINERS WILL BE OMITTED. WHEN (EMPTY) FILLER CONTAINERS ARE USED IN PLACE OF OMITTED CONTAINERS TO COMPLETELY FILL OUT A LAYER ON A PALLET, THEY WILL BE MARKED AS SPECIFIED IN ARDEC DRAWING 12982865.
- L. WHEN TWO OR MORE LAYERS ARE OMITTED, THE BUNDLING STRAP REQUIREMENT WILL CHANGE. A FOUR LAYER UNIT WILL HAVE THE TWO BUNDLING STRAPS OMITTED THAT WERE AROUND THE THIRD, FOURTH AND FIFTH LAYERS. THE REMAINING BUNDLING STRAPS WILL SURROUND THE SECOND THROUGH FOURTH LAYERS. A UNIT WITH THREE OR LESS LAYERS DOES NOT REQUIRE BUNDLING STRAPS.
- M. FOR DETAILS OF THE PA103A2 CONTAINER SEE ARDEC DRAWING 12961080.

