

UNITIZATION PROCEDURES FOR ARMOR
 TILE, M4, PACKED 9 PER WOODEN
 BOX, UNITIZED 18 BOXES PER 35" X
 45-1/2" PALLET; APPROX BOX SIZE
 23-5/8" L X 15" W X 14-3/4" H

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U.S. ARMY MATERIEL COMMAND DRAWING			
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		AUGUST 1987	
REVISION NO. 2	OCTOBER 1995	CLASS	DIVISION
SEE THE REVISION LISTING ON PAGE 2		DRAWING	FILE
		19	48
		4221/3	20PA 1009

DO NOT SCALE

PALLET UNIT DATA				
ITEMS INCLUDED		HAZARD CLASS AND DIVISION ●		APPROX WEIGHT LBS
NSN	DDIC	OD CLASS	COMP GROUP	
1375-				
01-257-3982	ML94	1.4	D	1,694
01-410-7413	ML94	1.4	D	1,892

- 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 OCTOBER 1987, CONSISTS OF:

1. ADDING GENERAL NOTE "O".

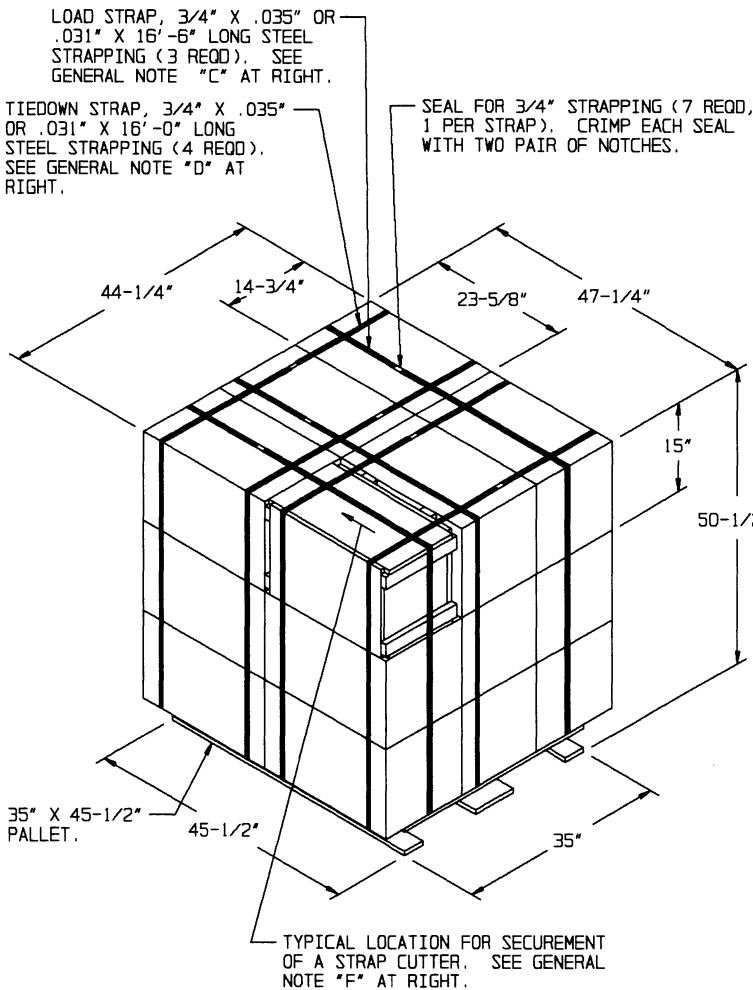
REVISION NO. 2, DATED OCTOBER 1995, CONSISTS OF:

1. CHANGING THE TITLE FROM XM4 TO M4.
2. CHANGING DATA ON "PALLET UNIT DATA" CHART.

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660.
- 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 MAY BE THREADED THROUGH THE STRAP SLOTS OF A PALLET OR PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON THE PALLET. LOAD 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 LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS DRAWING.

CARLOADING - -	DRAWING 19-48-4115-5PA1002
TRUCKLOADING -	DRAWING 19-48-4117-11PA1003
STORAGE - - -	DRAWING 19-48-4118-1-2-3-4-14-22PA1002
END OPENING ISO CONTAINER - -	DRAWING 19-48-4153-15PA1002
MILVAN - - - -	DRAWING 19-48-4166-15PA1003
SIDE OPENING ISO CONTAINER - -	DRAWING 19-48-4267-15PA1009
- F. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE AMC DRAWING 19-48-4127-20P1000.
- G. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- H. WHEN APPLYING ANY STRAP, CARE MUST BE EXERCISED TO ASSURE THAT THE END OF THE STRAP ON THE UNDERSIDE OF THE JOINT EXTENDS AT LEAST 6" BEYOND THE SEAL. THIS EXTRA MINIMUM LENGTH OF STRAP IS REQUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF A FEEDWHEEL TENSIONING TOOL, MANUAL OR PNEUMATIC, AND THE APPLICATION OF ONE ADDITIONAL SEAL.
- J. ALL WOODEN DUNNAGE AND PALLETS MUST BE PRESERVATIVE TREATED WITH EITHER COPPER-8-QUINOLINOLATE OR ZINC NAPHTHENATE EMULSIFIABLE. PALLETS AND DUNNAGE ASSEMBLIES MUST BE ASSEMBLED PRIOR TO TREATMENT. THE LETTERS "PA" DENOTING P056 (COPPER-8-QUINOLINOLATE) OR "PB" DENOTING M-GARD W550 (ZINC NAPHTHENATE EMULSIFIABLE) MUST BE APPLIED TO THE OUTER FACE OF THE CENTER POSTS ON THE 45-1/2" SIDES OF THE PALLET IN LETTERS AT LEAST ONE-INCH HIGH.
- K. A PLUS OR MINUS 1/4" IS ALLOWED ON OVERALL DIMENSIONS OF ANY DUNNAGE ASSEMBLY. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION.
- L. IN ORDER TO OBTAIN COMPACT (SOUND) UNITS, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE PALLET DECK. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES.
- M. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- N. THE UNIT LOAD DEPICTED AT LEFT MAY BE REDUCED BY A LAYER WHEN BEING SHIPPED BY MILVAN OR COMMERCIAL INTERMODAL FREIGHT CONTAINER. IF ONE LAYER OF BOXES IS OMITTED, THE TIEDOWN STRAP LENGTHS MUST BE DECREASED TO 13'-8", AND THE LOAD STRAP LENGTHS MUST BE REDUCED TO 14'-0". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 35-1/2", A GROSS UNIT WEIGHT OF 1,152 POUNDS, AND A UNIT CUBE OF 43.0 CUBIC FEET. 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.
- O. 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 UNITIZATION OF THE ITEMS COVERED BY THIS APPENDIX.



PALLET UNIT

SEE GENERAL NOTE "B" AT RIGHT.

18 BOXES OF ARMOR TILES (9 PER BOX) AT 101 LBS	-- 1,818 LBS (APPROX)
DUNNAGE	9 LBS
PALLET	65 LBS

TOTAL WEIGHT	-- 1,892 LBS (APPROX)
CUBE	61.1 CU FT (APPROX)

BILL OF MATERIAL

PALLET, 35" X 45-1/2"	-- 1 REOD	-- 65 LBS
STEEL STRAPPING, 3/4"	-- 113.50' REOD	-- 8.11 LBS
SEAL FOR 3/4" STRAPPING	-- 7 REOD	-- NIL

MATERIAL SPECIFICATIONS

PALLET	MIL SPEC MIL-P-15011; 4-WAY ENTRY, STYLE 1A, TYPE I, CLASS 1, PRESERVATIVE TREATED. SEE GENERAL NOTE "J".
LUMBER	SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
NAILS	FED SPEC FF-N-105; COMMON. ALT: ANNULAR-RING TYPE NAIL, PALLET TYPE (MECHANICALLY DEFORMED) NAIL, OR COOLER NAIL OF SAME SIZE.
STRAPPING, STEEL	ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" X .035" OR .031".
SEAL, STRAP	ASTM D3953; CLASS H, FINISH B (GRADE 2), DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

VERTICAL PIECE, 2" X 4" X
BOX WIDTH (4 REQD).

BOX HEIGHT

BOX LENGTH

SUPPORT PIECE, 2" X 4" BY CUT-TO-FIT
(AS REQD). NAIL TO THE VERTICAL
PIECE W/2-10d NAILS. NOTE: WHEN A
FILLER ASSEMBLY IS LOCATED IN AN
OUTER STACK ON A 45-1/2" SIDE OF A
PALLET, "SUPPORT PIECES" WILL BE
REQUIRED AS SHOWN.

SUPPORT PIECE, 2" X 4"
X CUT-TO FIT (2 REQD).
NAIL TO THE VERTICAL
PIECE W/2-10d NAILS.

BOX WIDTH

LONGITUDINAL PIECE, 2" X 4" X
BOX LENGTH (4 REQD). NAIL TO
THE VERTICAL PIECES W/2-10d
NAILS AT EACH END.

LATERAL PIECE, 2" X 4" X BOX
HEIGHT MINUS 3" (4 REQD).
NAIL TO THE VERTICAL PIECES
W/2-10d NAILS AT EACH END.

FILLER ASSEMBLY
(FOR MINUS ONE BOX)