

# STINGER

UNITIZATION PROCEDURES FOR EJECT  
MISSILE GROUP ROCKET MOTOR,  
PACKED ONE PER MONOPAK CONTAINER,  
UNITIZED 6 CONTAINERS PER 4-WAY  
ENTRY PALLET

## U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY MISSILE COMMAND *7/6*

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U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

CLASS

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DRAWING

FILE

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DO NOT SCALE

## 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 CONTAINER AND THE SPECIFIC ITEM BEING UNITIZED.
- C. FOR DETAILS OF THE STINGER EJECT MISSILE GROUP MONOPAK CONTAINER, SEE U.S. ARMY MISSILE COMMAND DRAWING NO. 13049350.
- CONTAINER DIMENSIONS - - - 56" LONG X 17" WIDE  
X 12-3/4" HIGH
- GROSS WEIGHT OF CONTAINER  
WITH ITEM - - - - - 147 LBS (APPROX)
- D. CAUTION: THIS ITEM IS IN A "PROPULSIVE STATE" AND MUST BE LOADED ON THE PALLET WITH THE FORWARD END (FWD) OF ALL CONTAINERS FACING IN ONE DIRECTION.
- E. 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 DUNNAGE AND THE PALLET DECK. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL.
- F. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 6" MATERIAL IS ACTUALLY 3/4" THICK BY 5-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- G. 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.
- 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 THE 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 FILLER ASSEMBLIES WILL BE POSITIONED IN THE TOP LAYER OF A UNIT LOAD.
- K. IF LESS THAN SIX CONTAINERS ARE TO BE LOADED ON A PALLET, IT MAY BE ACCOMPLISHED BY SUBSTITUTING A FILLER ASSEMBLY, AS DIRECTED ON PAGE 4 FOR ONE OMITTED CONTAINER. HOWEVER, IF MORE THAN ONE CONTAINER IS TO BE OMITTED, A COMPLETE LAYER OF CONTAINERS MUST BE OMITTED AND THE DUNNAGE ASSEMBLY MUST BE ADJUSTED ACCORDINGLY.

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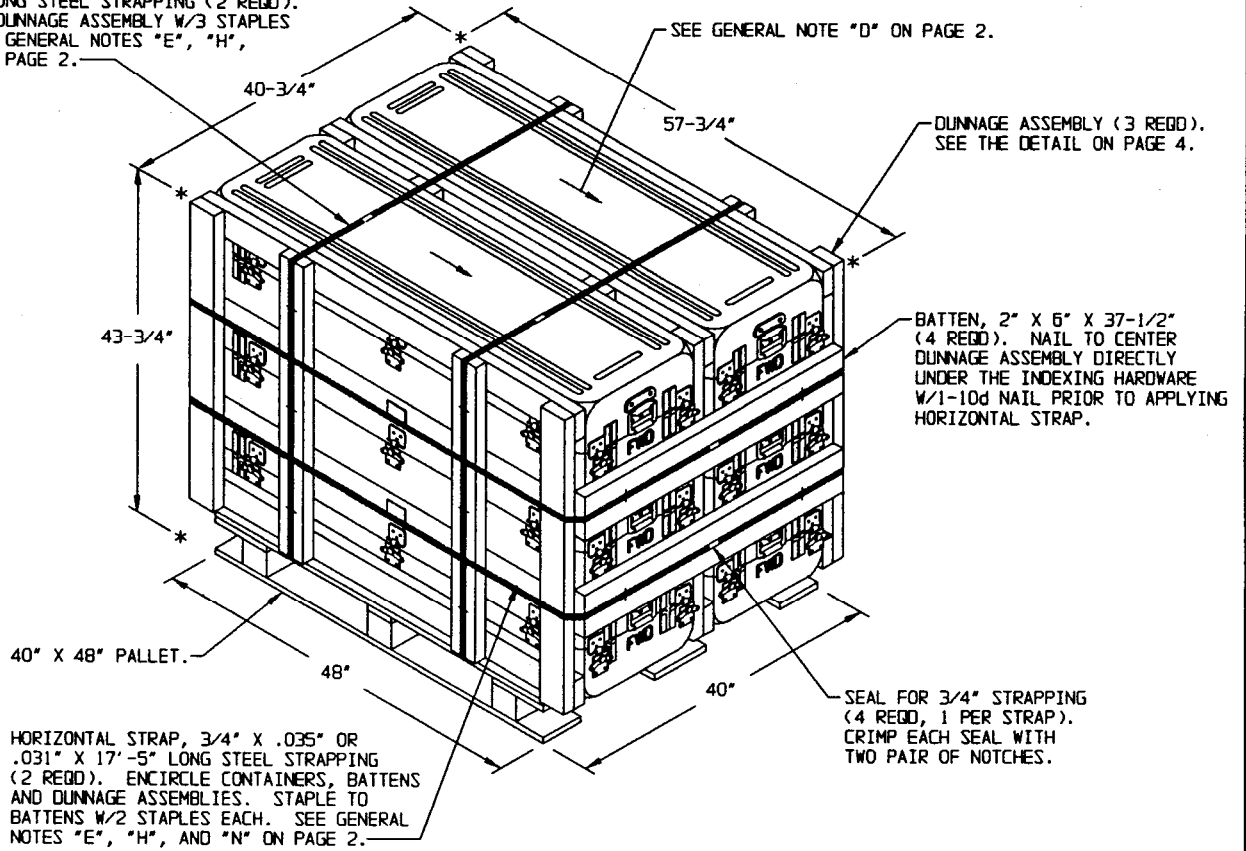
## MATERIAL SPECIFICATIONS

- PALLET - - - - - : MIL SPEC MIL-P-15011; 4-WAY ENTRY, STYLE I, TYPE I, CLASS 1, PRESERVATIVE TREATED.
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751. SEE GENERAL NOTE "P".
- 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 - - : FED SPEC QQ-S-781; CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" X .035" OR .031".
- SEAL, STRAP - - - - : FED SPEC QQ-S-781; TYPE D, STYLE I, II, OR IV, CLASS H, FINISH B (GRADE 2).
- STAPLE - - - - - : FED SPEC FF-N-105; 15/16" WIDE X 3/4" LEG LENGTH, TYPE III, STYLE 3.

## (GENERAL NOTES CONTINUED)

- L. 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.
- M. FOR THE METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE AMC DRAWING 19-48-4127-20P1000.
- N. INSTALL EACH HORIZONTAL STRAP TO ENCIRCLE DUNNAGE ASSEMBLIES AS SHOWN. HORIZONTAL STRAPS WILL BE TENSIONED AND SEALED PRIOR TO APPLICATION OF THE TIEDOWN STRAPS.
- O. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIE-DOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
- P. ALL WOODEN DUNNAGE USED IN UNIT LOADS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE PROCEDURES SPECIFIED IN MIL-B-2427 FOR CLEATED WOODEN BOXES. IF THE DUNNAGE CONSISTS OF MORE THAN ONE COMPONENT, IT MUST BE ASSEMBLED PRIOR TO TREATMENT. THE LETTERS PA DENOTING PDS6 (COPPER QUINOLINOLATE), PB DENOTING M-GARD W550 (ZINC NAPHTHENATE EMULSIFIABLE), OR PC DENOTING M-GARD W510 OR CUNAPSOL (COPPER NAPHTHENATE) MUST BE APPLIED TO THE WOOD DUNNAGE IN LETTERS AT LEAST ONE INCH HIGH.
- Q. WHEN ASSEMBLING A PALLET UNIT, CARE SHALL BE TAKEN TO INSURE THAT THE CONTAINERS AND ASSEMBLIES ARE EVENLY ALIGNED HORIZONTALLY AND VERTICALLY SO THAT THE SIDES AND ENDS OF THE PALLET UNIT DO NOT EXCEED A 1/2" TOLERANCE.

TIEDOWN STRAP, 3/4" X .035" OR .031" X 14'-3" LONG STEEL STRAPPING (2 RECD). STAPLE TO DUNNAGE ASSEMBLY W/3 STAPLES EACH. SEE GENERAL NOTES "E", "H", AND "O" ON PAGE 2.



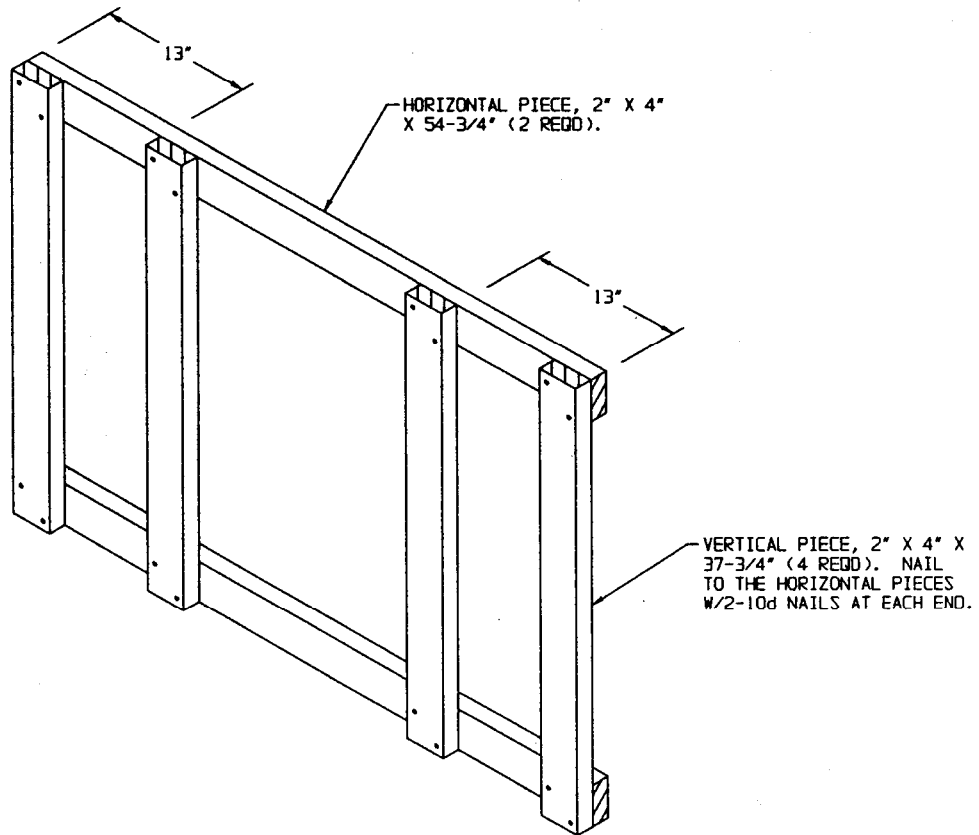
**PALLET UNIT**

SEE GENERAL NOTE "B" ON PAGE 2.

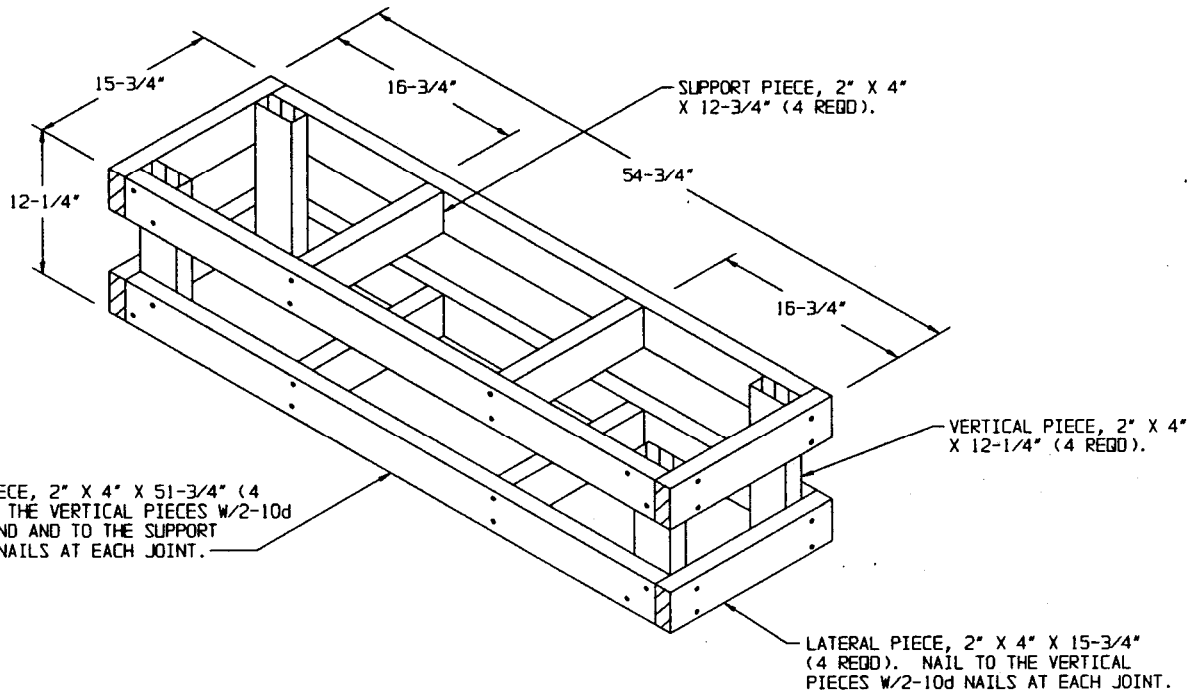
6 MONOPAK CONTAINERS @ 147 LBS	-----	882 LBS (APPROX)
DUNNAGE	-----	118 LBS
PALLET	-----	80 LBS
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TOTAL WEIGHT	-----	1,080 LBS (APPROX)
CUBE	-----	59.6 CU FT (APPROX)

**BILL OF MATERIAL**

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	65.13	43.42
2" X 6"	12.50	12.50
NAILS	NO. RECD	POUNDS
10d (3')	52	0.80
PALLET, 40" X 48" ----- 1 RECD ----- 80 LBS		
STEEL STRAPPING, 3/4" ----- 63.33' RECD ----- 4.52 LBS		
SEAL FOR 3/4" STRAPPING ----- 4 RECD ----- NIL		
STAPLE, 15/16" X 3/4" ----- 20 RECD ----- NIL		



**DUNNAGE ASSEMBLY**



**FILLER ASSEMBLY**

(FOR MINUS ONE CONTAINER)  
SEE GENERAL NOTES "J" AND "K" ON PAGE 2.