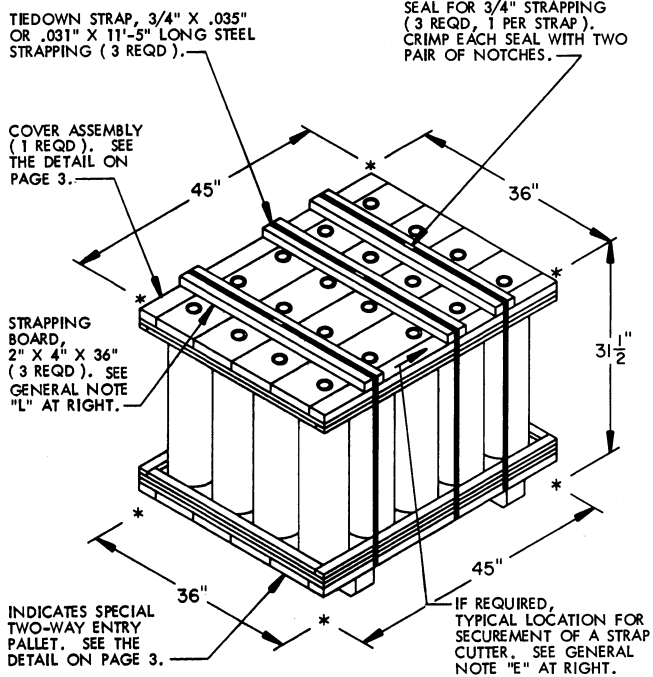


UNITIZATION PROCEDURES FOR CHEMICAL AGENTS PACKED IN THE DOT 3A STEEL SHIPPING BOTTLE, UNITIZED 20 BOTTLES PER SPECIAL TWO-WAY ENTRY PALLET

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JANUARY 1979					
CLASS	DIVISION	DRAWING	FILE		
19	48	4569	20PM 1001		

DO NOT SCALE



PALLET UNIT

SEE GENERAL NOTE "C" AT RIGHT.

20 EACH DOT 3A BOTTLES WITH CHEMICAL AGENT @ 64 LBS ---- 1,280 LBS (APPROX)
DUNNAGE/PALLET ----- 212 LBS

TOTAL WEIGHT ----- 1,492 LBS (APPROX)
CUBE ----- 29.5 CU FT (APPROX)

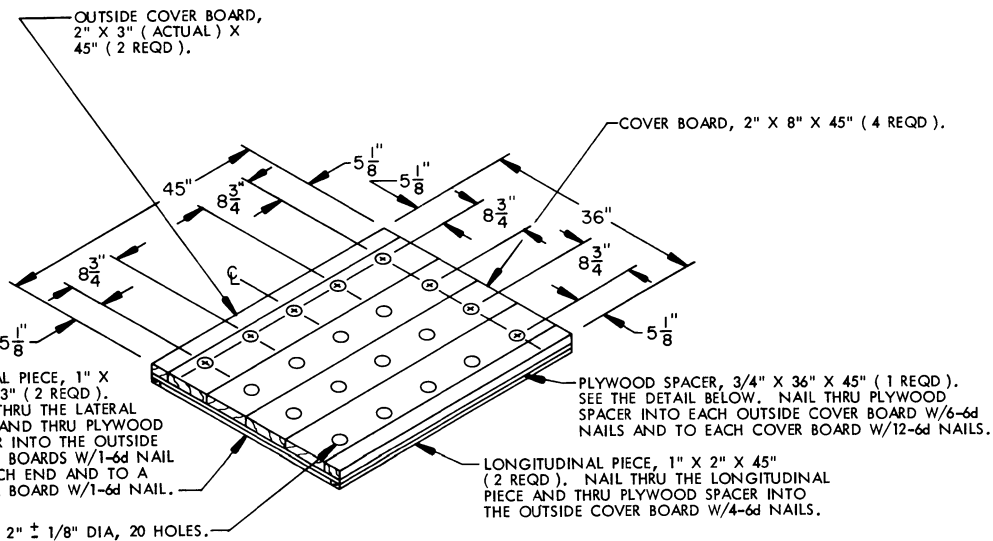
GENERAL NOTES

- 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. FOR DETAILS OF THE DOT 3A BOTTLE, SEE PICATINNY ARSENAL DRAWING HMCD-SK266:
BOTTLE DIMENSIONS ---- 25" HIGH (APPROX) BY 7" DIAMETER (APPROX)
BOTTLE WEIGHT
(W/CHEMICAL AGENT) -- 64 LBS (APPROX)
- C. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOTTLES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- D. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF A 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. IF THE 1" X 2" DUNNAGE LUMBER IS NOT READILY AVAILABLE, TWO ACCEPTABLE SIZE 1" X 2" PIECES CAN BE MADE BY RIPPING (SAWING) A PIECE OF NOMINAL SIZE 1" X 4" LUMBER ON THE CENTER LINE OF ITS 3-1/2" WIDTH. THE 2" X 3" (ACTUAL) MATERIAL SPECIFIED CAN BE MADE BY RIPPING (SAWING) A NOMINAL SIZE 2" X 4" PIECE TO A WIDTH OF 3".
- E. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE DARCOM DRAWING 19-48-4127-20P1000.
- F. UNLESS OTHERWISE SPECIFIED, 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.
- G. IN ORDER TO OBTAIN A COMPACT (SOUND) UNIT, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE STRAPPING BOARD AND THE PALLET DECK. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL. ALL STRAPPING MUST BE STRAIGHT WITHIN TWO INCHES (2") ON ANY SURFACE OF THE UNITIZED LOAD; I.E., TOP, BOTTOM, SIDES OR ENDS THAT IT ENCOMPASSES.
- 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 TENSIONING TOOL, AS MANUFACTURED BY SEVERAL COMPANIES, AND THE APPLICATION OF ONE ADDITIONAL SEAL.
- J. WHEN SHIPPING LESS THAN FULL PALLET UNITS, IT MAY BE NECESSARY TO USE A NOMINAL SIZE 4" X 4" X CUT-TO-FIT IN LENGTH FILLER PIECE IN PLACE OF AN OMITTED BOTTLE TO PROVIDE ADDED VERTICAL SUPPORT IN THE PALLET UNIT. FOR EXAMPLE, IF ONLY THREE BOTTLES ARE TO BE UNITIZED, A FILLER PIECE MUST BE ADDED TO THE UNIT AND THE THREE BOTTLES AND FILLER MUST BE PLACED IN THE CORNER HOLES IN THE COVER AND BASE ASSEMBLY.
- K. THIS DRAWING DEPICTS UNITIZATION PROCEDURES FOR THE DOT 3A METAL SHIPPING BOTTLE WITH END PLUG. THE PROCEDURES ARE NOT FOR THE 3A BOTTLE WHEN IT HAS THE TWO-PIECE PROTECTIVE COVER AND COLLAR ATTACHED.
- L. WHEN STACKING THE UNIT DEPICTED AT THE LEFT, THE TWO OUTBOARD 2" X 4" STRAPPING BOARDS WILL NEED TO BE REPLACED BY TWO 2" X 6" STRAPPING BOARDS.

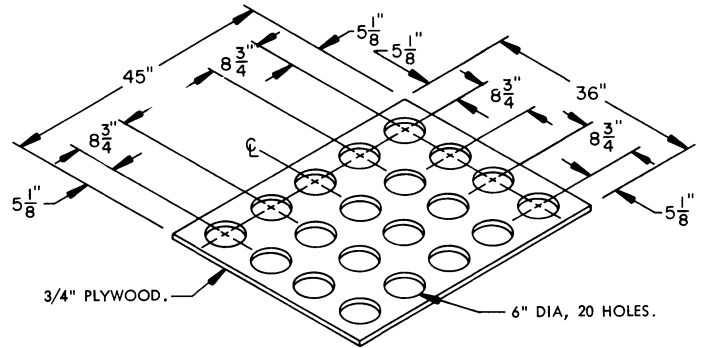
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	26.00	4.33
2" X 4"	24.00	16.00
2" X 8"	30.00	40.00
4" X 4"	6.00	8.00
NAILS	NO. REQD	POUNDS
6d (2")	88	0.52
8d (2-1/2")	60	0.63
16d (3-1/2")	32	0.70
PLYWOOD, 3/4"	34 SQ FT REQD	71 LBS
STEEL STRAPPING, 3/4"	34.25' REQD	2.45 LBS
SEAL FOR 3/4" STRAPPING	3 REQD	NIL

MATERIAL SPECIFICATIONS

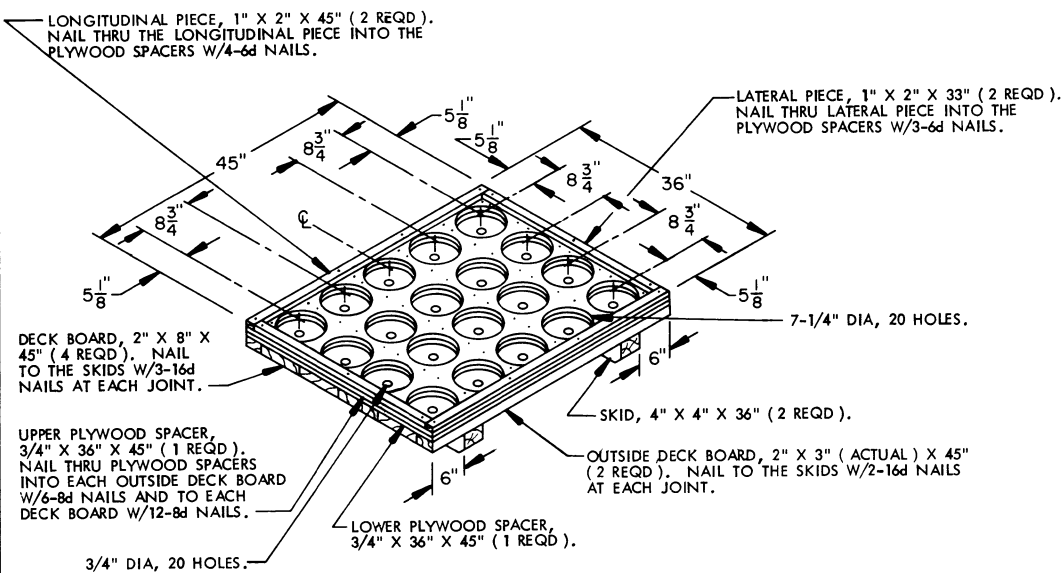
- LUMBER** ----- : TM 743-200-1, DUNNAGE LUMBER AND FED SPEC MM-L-751.
- NAILS** ----- : FED SPEC FF-N-105; COMMON, CEMENT COATED OR CHEMICALLY ETCHED. ALT: ANNULAR RING TYPE NAIL OF THE SAME SIZE.
- PLYWOOD** ----- : FED SPEC NN-P-530; GROUP B, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- STRAPPING, STEEL** ----- : FED SPEC QQ-S-781; CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH B (GRADE 2) (3/4" X .031" OR .035").
- SEAL, STRAP** ----- : FED SPEC QQ-S-781; TYPE D, STYLE I, II, OR IV, CLASS H.



COVER ASSEMBLY
(1 REQD)



PLYWOOD SPACER FOR COVER ASSEMBLY



SPECIAL TWO-WAY ENTRY PALLET
(1 REQD)

