

UNITIZATION PROCEDURES FOR BULK EXPLOSIVES WHEN PACKAGED IN A 19-1/2" DIAMETER BY 27" HIGH FIBERBOARD DRUM, OVERPACKED SIX PER SPECIAL PALLET UNIT (58-1/2" L X 39-1/2" W X 34-1/2" H)

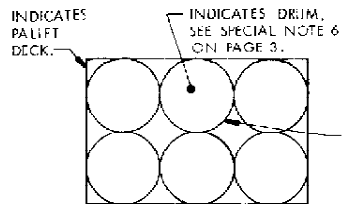
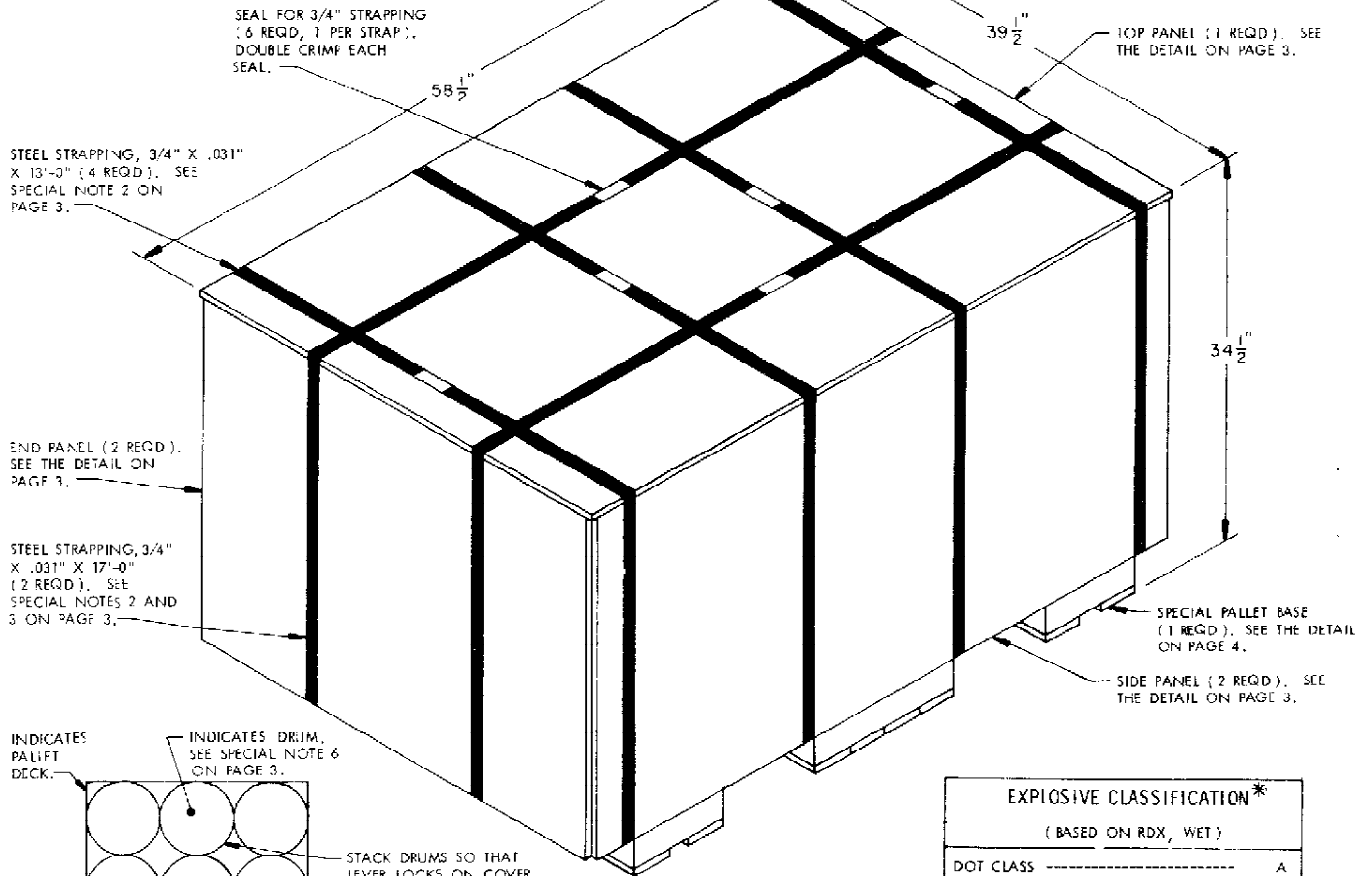
- THE PALLET UNIT DATA DISPLAYED HEREIN IS BASED ON DRUM-PACKED RDX (WET I). HOWEVER, THE SPECIFIED UNITIZATION PROCEDURES ARE ALSO APPLICABLE TO OTHER DRUM-PACKED BULK EXPLOSIVES WHICH ARE PACKED IN THE SAME SIZE OR NEARLY THE SAME SIZE FIBERBOARD DRUM, PROVIDING THE GROSS WEIGHT OF A COMPLETE PALLET UNIT DOES NOT EXCEED 2,200 POUNDS. SIZE ADJUSTMENTS TO THE SPECIAL PALLET UNIT WILL BE MADE DURING FABRICATION AS REQUIRED TO COMPENSATE FOR DRUMS THAT VARY SLIGHTLY IN SIZE FROM THE DESIGNATED DIMENSIONS OF 19-1/2" AND 27". THE SPECIFIED PROCEDURES ARE APPLICABLE TO DRUMS WHICH HAVE DIAMETERS FROM 18" TO 21-1/2" AND HEIGHTS OF NOT MORE THAN 46". DRUMS WHICH ARE 15-1/2" OR LESS IN HEIGHT CAN BE TRIPLE-TIERED WITHIN A PALLET UNIT AND THOSE THAT ARE NOT MORE THAN 23" HIGH CAN BE DOUBLE-TIERED.

DO NOT SCALE

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(GENERAL NOTES CONTINUED)

DECKING IN LIEU OF THE SPECIFIED DIMENSIONAL LUMBER, STAPLES AS SPECIFIED HEREIN CAN BE USED ON A ONE-FOR-ONE BASIS FOR FASTENING PLYWOOD DECKING, IN LIEU OF THE SPECIFIED 58 NAILS, IF DESIRED. PIECES OF PLYWOOD USED FOR DECKING MUST BE 36-1/2" LONG; SPLICING IS NOT PERMITTED. SEE SPECIAL NOTE 1 ON PAGE 3 FOR ADDITIONAL GUIDANCE.



STACK DRUMS SO THAT LEVER LOCKS ON COVER ASSEMBLIES ARE IN VOID AREAS.

DRUM PLACEMENT ON PALLET

PALLET UNIT (BASED ON RDX, WET)

6 DRUMS @ 255 LBS	-----	1,530 LBS
PALLET AND PANEL MATERIALS	----	282 LBS
TOTAL WEIGHT	-----	1,812 LBS (APPROX)
CUBE	-----	47.1 CU FT

EXPLOSIVE CLASSIFICATION*	
(BASED ON RDX, WET)	
DOT CLASS	----- A
COAST GUARD CLASS	----- IX-B
G D CLASS	----- 7
COMPATIBILITY GROUP	----- M

*THE EXPLOSIVE CLASSIFICATION OF OTHER DRUM-PACKED BULK EXPLOSIVES MAY BE DIFFERENT THAN THAT SHOWN.

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. DATA FOR FIBERBOARD DRUM WHEN PACKED WITH RDX (WET):
 DIMENSIONS ----- 19-1/2" DIAMETER BY 27" HIGH.
 GROSS WEIGHT ----- 255 POUNDS (APPROX).
- C. PALLET UNIT DETAILS ARE BASED ON THE DIMENSIONS IDENTIFIED ABOVE. ANY VARIATION IN THE SIZE OF THE FIBER DRUMS ACTUALLY USED WILL REQUIRE A CORRESPONDING ADJUSTMENT IN THE UNIT DETAILS TO COMPENSATE. FOR EXAMPLE, IF THE DRUMS SHOULD ACTUALLY BE 26-1/2" HIGH, THE HEIGHT OF THE UNIT SIDE PANELS AND END PANELS WILL BE ADJUSTED ACCORDINGLY.
- D. WHERE PLYWOOD PANELS ARE SPECIFIED FOR VARIOUS LOCATIONS, THE DIMENSIONS ARE BASED ON USING ONE SOLID PIECE OF PLYWOOD FOR EACH PANEL. HOWEVER, IT IS PERMITTED TO ASSEMBLE SIDE PANELS FROM TWO PIECES PROVIDED THE CONSTRUCTED PANEL MEETS ALL SPECIFIED DIMENSIONAL CRITERIA. ONLY A HORIZONTAL BUTT JOINT IS PERMITTED, AND NOT MORE THAN ONE JOINT PER SIDE PANEL. NEITHER PIECE OF PLYWOOD ON A PANEL WILL BE LESS THAN TWELVE INCHES (12") WIDE. WHEN TWO STRIPS OF PLYWOOD ARE USED ON A SIDE PANEL, EXTRA STAPLES WILL BE USED, ONE (1) NOT MORE THAN ONE INCH (1") FROM THE JOINT ON EACH SIDE OF THE BUTT JOINT AT EACH SPECIFIED STAPLING LOCATION.
- E. STRIPS NOT LESS THAN FIVE INCHES (5") WIDE OR SMALL SHEETS OF PLYWOOD OF VARIOUS WIDTHS, WHICH REMAIN AFTER PIECES ARE CUT FOR TOP, SIDE AND END PANELS FROM PARENT SHEETS OF PLYWOOD, CAN ALSO BE USED AS PALLET

(CONTINUED AT TOP LEFT)

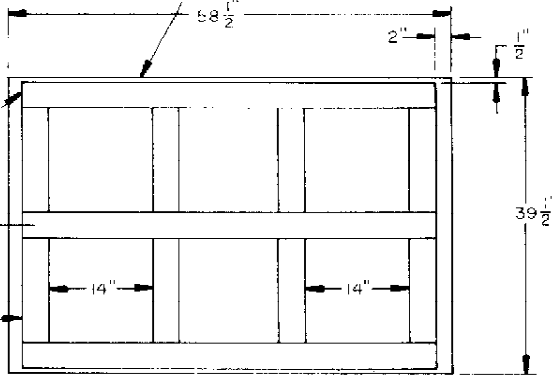
MATERIAL SPECIFICATIONS

LUMBER	-----	SEE MIL-STD-731, CLASS II, III OR IV.
PLYWOOD	-----	GROUP B OR C, GRADE C-D (EXTERIOR); FED SPEC NN-P-330. NOTE: A BETTER GRADE MAY BE SUBSTITUTED.
NAILS	-----	COMMON, CEMENT COATED OR CHEMICALLY ETCHED; FED SPEC FF-N-105. ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
STRAPPING, STEEL	----	CLASS I, TYPE I OR IV, HEAVY DUTY, FINISH B, GRADE 2, FED SPEC QQ-5-781.
SEAL, STRAP	-----	TYPE D, STYLE I, II, OR IV, CLASS H, FED SPEC QQ-5-781.
STAPLE FOR LUMBER	-----	TYPE III, STYLE 3, FED SPEC FF-N-105.

1/2" PLYWOOD, 58-1/2" X 39-1/2" (1 REQD.). SEE GENERAL NOTE "D" ON PAGE 2.

2" X 4" X 54-1/2" (3 REQD.), STAPLE THRU PLYWOOD INTO 2" X 4" W/1-STAPLE EVERY 6".

2" X 4" X 14" (8 REQD.), STAPLE THRU PLYWOOD INTO 2" X 4" W/3-STAPLES.

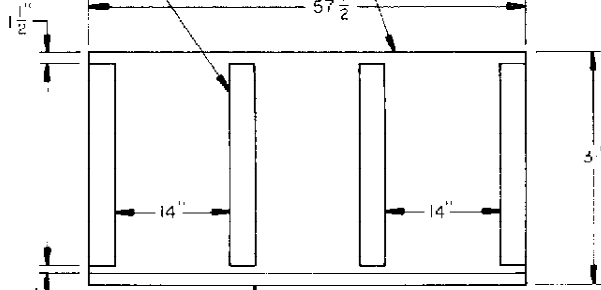


TOP PANEL

(BOTTOM OF PANEL SHOWN)

2" X 4" X 27" (4 REQD.), STAPLE THRU PLYWOOD INTO 2" X 4" W/1-STAPLE EVERY 6". SEE SPECIAL NOTE 1 ABOVE.

1/2" PLYWOOD, 57-1/2" X 31" (1 REQD.), SEE GENERAL NOTE "D" ON PAGE 2.



SEE SPECIAL NOTE 1 ABOVE.

2" X 2" X 57-1/2" (1 REQD.), STAPLE THRU PLYWOOD INTO 2" X 2" W/1-STAPLE EVERY 6".

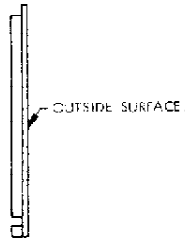
SIDE PANEL

(INSIDE SURFACE SHOWN)

SPECIAL NOTES:

1. IF DESIRED, 1/2" PLYWOOD MAY BE USED IN LIEU OF 1" X 6" BOARDS FOR THE TOP DECK OF THE PALLET. ADDITIONALLY, IF THIS ALTERNATIVE IS USED, THE FOLLOWING CHANGES IN THE "SIDE PANEL" AND "END PANEL" DETAILS WILL BE REQUIRED. INCREASE THE LENGTH OF THE INTERIOR VERTICAL PIECES TO 27-1/4" AND REDUCE THE CLEARANCE DIMENSION AT THE BOTTOM OF EACH ASSEMBLY BY A CORRESPONDING 1/4".
2. THE STEEL STRAPPING SPECIFIED IN THE PALLET UNIT DETAIL ON PAGE 2 IS 3/4" WIDE BY .031" THICK. FOR AN ALTERNATIVE, 3/4" WIDE BY .035" THICK STEEL STRAPPING MAY ALSO BE USED.
3. THE STEEL STRAPPING ENCIRCLING THE PALLET UNIT IN THE DIRECTION OF THE 58-1/2" DIMENSION, MUST BE ALIGNED SO AS TO BE POSITIONED ON THE INTERMEDIATE STRINGERS. ALL STRAPPING MUST BE STRAIGHT WITHIN TWO INCHES (2") ON ANY SURFACE OF THE UTILIZED LOAD; I.E., TOP, BOTTOM, SIDES OR ENDS THAT IT ENCOMPASSES. EACH STRAP WILL BE TENSIONED SUFFICIENTLY TO SLIGHTLY CRUSH THE EDGES OF THE PALLET UNIT.
4. A MANUFACTURING TOLERANCE OF + OR - 1/4" IS ALLOWED ON ALL DIMENSIONS. ALTHOUGH A + OR - 1/4" TOLERANCE IS ALLOWED, ALL DIMENSIONAL LUMBER MEMBERS IN A SET, SUCH AS THE VERTICAL 2" X 4" CLEATS ON INTERIOR OF A SIDE PANEL, MUST BE WITHIN 1/8" OF THE SAME LENGTH.
5. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
6. IF FEWER THAN 8 DRUMS ARE LOADED INTO A PALLET UNIT, A BOX-TYPE ASSEMBLY CONSTRUCTED FROM DIMENSIONAL LUMBER AND PLYWOOD MUST BE INSTALLED TO OCCUPY THE VOID CREATED BY THE ELIMINATION OF A DRUM OR DRUMS. THE SPACE-OCCUPYING ASSEMBLY MUST BE AS STRONG OR STRONGER THAN THE DRUM(S) REPLACED.
7. IF DESIRED DURING ASSEMBLY OF A PALLET UNIT, ONE (1) 10d NAIL CAN BE DRIVEN THROUGH A SIDE PANEL AT EACH CORNER INTO AN INTERNAL FRAME MEMBER OF AN END PANEL, TO TEMPORARILY HOLD PANELS IN PLACE PRIOR TO APPLYING STRAPPING.

(CONTINUED ON PAGE 4)



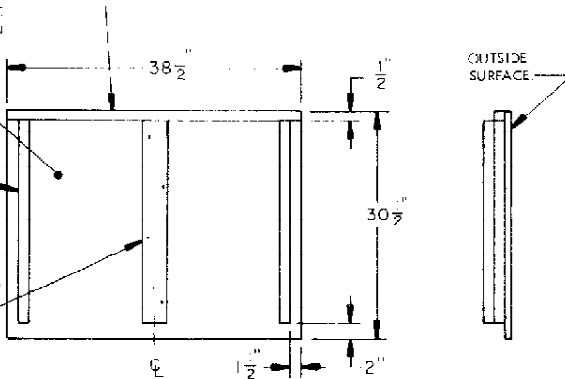
END VIEW OF SIDE PANEL

1/2" PLYWOOD, 38-1/2" X 30-1/2" (1 REQD.). SEE GENERAL NOTE "D" ON PAGE 2.

2" X 2" X 38-1/2" (1 REQD.), STAPLE THRU PLYWOOD INTO 2" X 2" W/1-STAPLE EVERY 6".

2" X 2" X 27" (2 REQD.), STAPLE THRU PLYWOOD INTO 2" X 2" W/1-STAPLE EVERY 6".

2" X 4" X 27" (DOUBLED) (1 REQD.), LAMINATE TOGETHER W/4-10d NAILS. STAPLE THRU PLYWOOD INTO 2" X 4" W/1-STAPLE EVERY 6".



OUTSIDE SURFACE

END PANEL

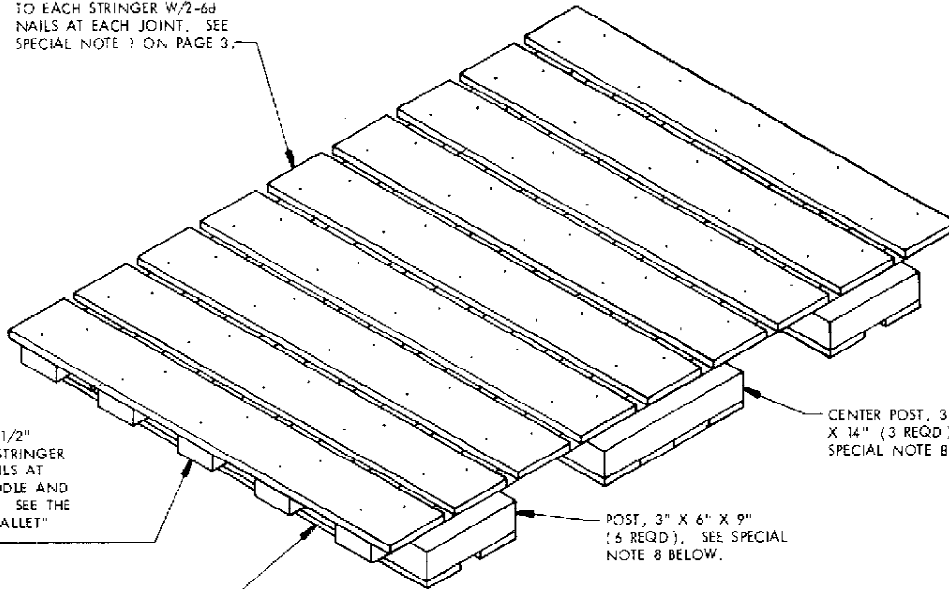
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END VIEW OF END PANEL

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	28	10
1" X 6"	30	15
2" X 2"	26	9
2" X 4"	74	50
3" X 6"	8	12
NAILS	NO. REQD.	POUNDS
6d (2")	162	1
10d (3")	27	1/2
PLYWOOD, 1-1/2"	57 SQ. FT. REQD.	79 LBS.
STRAPPING, STEEL, 3/4" X .031"	86 FT. REQD.	7 LBS.
SEALS, STRAPPING, 3/4"	6 REQD.	1/4 LB.
STAPLES, *	136 REQD.	1-1/2 LBS.

* STAPLES TO BE USED SHOULD BE OF A TYPE USED IN PNEUMATIC OR MECHANICAL GUNS FOR FASTENING WOOD. LEG LENGTH WILL BE ONE INCH (1") AND THE CROWN WIDTH WILL BE 1/2" MINIMUM TO 1" MAXIMUM. THE WIRE GAGE OF THE STAPLE SHOULD BE SIXTEEN (16) GAGE OR HEAVIER.

TOP DECK BOARD, 1" X 6" X 38-1/2" (9 REQD.). NAIL TO EACH STRINGER W/2-6d NAILS AT EACH JOINT. SEE SPECIAL NOTE 7 ON PAGE 3.



STRINGER, 2" X 4" X 57-1/2" (5 REQD.). NAIL THRU STRINGER INTO POSTS W/3-10d NAILS AT EACH JOINT AT THE MIDDLE AND TWO OUTER LOCATIONS. SEE THE "END VIEW OF SPECIAL PALLET" DETAIL BELOW.

CENTER POST, 3" X 6" X 14" (3 REQD.). SEE SPECIAL NOTE 8 BELOW.

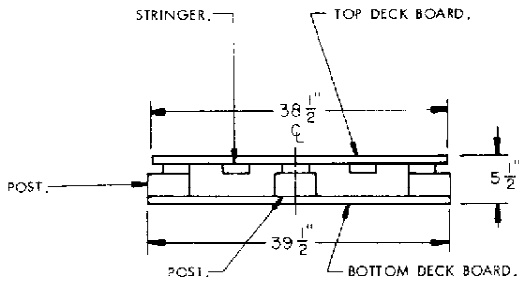
POST, 3" X 6" X 9" (5 REQD.). SEE SPECIAL NOTE 8 BELOW.

BOTTOM DECK BOARD, 1" X 4" X 39-1/2" (8 REQD.). NAIL TO POSTS W/3-6d NAILS AT EACH JOINT.

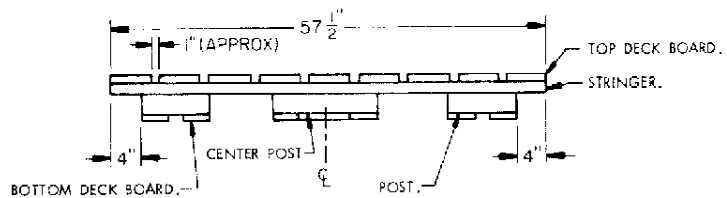
SPECIAL PALLET

SPECIAL NOTE: (CONTINUED FROM PAGE 3)

- 8. THE 3" X 6" POSTS FOR THE SPECIAL PALLET SHOWN ABOVE MAY BE FABRICATED BY LAMINATING APPROPRIATE LENGTH PIECES OF 1" X 6" AND 2" X 6" W/3-6d NAILS FOR EACH POST. IN LIEU OF LAMINATING AN ALTERNATIVE POST W/6d NAILS, DURING PALLET ASSEMBLY NAIL THRU THE BOTTOM DECK BOARDS AND A 1" X 6" PIECE INTO A 2" X 6" PIECE W/3-10d NAILS AT EACH JOINT. THE 3-10d NAILS WILL REPLACE THE 3-6d NAILS THAT ARE SPECIFIED AS BOTTOM DECK BOARD FASTENERS. ALSO, 4" X 6" POSTS CAN BE SUBSTITUTED FOR THE SPECIFIED 3" X 6" POSTS IF 3" X 6" MATERIAL IS NOT READILY AVAILABLE, OR IF DESIRED.



END VIEW OF SPECIAL PALLET



SIDE VIEW OF SPECIAL PALLET