

APPENDIX 28D

UNITIZATION PROCEDURES FOR BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS

CHARGE, PROPELLANT INCREMENT, FOR 60MM
MORTAR PACKED 1000 PER WOODEN BOX,
UNITIZED 48 BOXES PER 40" X 48" PALLET;
APPROX BOX SIZE $13\frac{5}{8}$ " L X $13\frac{5}{8}$ " W X $11\frac{1}{2}$ " H

PALLET UNIT DATA						
ITEMS INCLUDED		HAZARD CLASSIFICATION ^①				WEIGHT (LBS)
NSN	DODIC	DOT CLASS	CG CLASS	QD CLASS	COMP GROUP	
1310-00-028-4981	B622	A	IX-A	1.1	C	3,457

NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA10Q2.

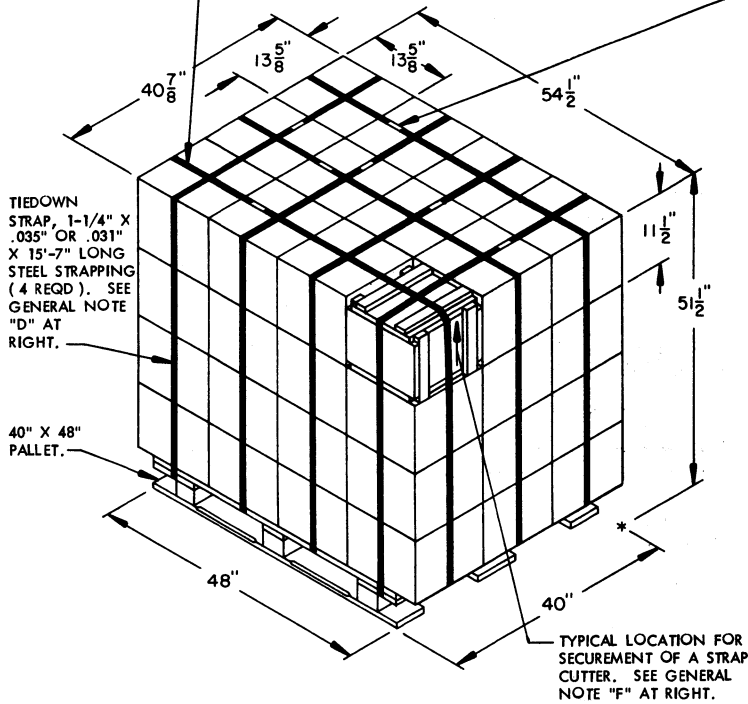
^① HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

DO NOT SCALE

REVISIONS				DESIGNED BY: <i>WJF/MLW</i> CHECKED BY: <i>RST/GRG</i> APPROVED, U. S. ARMY ARMAMENT, QUARTIONS AND CREWICAL COMMAND DRAWN BY: <i>[Signature]</i> APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM) U. S. ARMY DEFENSE AMMUNITION CENTER & SCHOOL U. S. ARMY DARCOM DRAWING NOVEMBER 1983
CLASS	DIVISION	DRAWING	FILE	
19	48	4116/28D	20PA1002	

LOAD STRAP, 1-1/4" X .035" OR .031" X 17'-10" LONG STEEL STRAPPING (3 REQD). SEE GENERAL NOTE "C" AT RIGHT.

SEAL FOR 1-1/4" STRAPPING (7 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.



PALLET UNIT

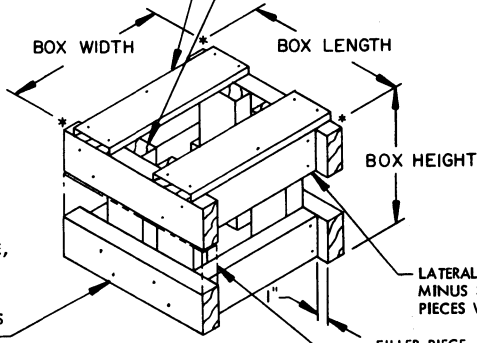
48 BOXES OF CHARGE, PROPELLANT INCREMENT (1000 PER BOX) @ 70 LBS --- 3,360 LBS (APPROX)
 DUNNAGE ----- 17 LBS
 PALLET ----- 80 LBS
 TOTAL WEIGHT ----- 3,457 LBS (APPROX)
 CUBE ----- 66.4 CU FT (APPROX)

BILL OF MATERIAL

PALLET, 40" X 48" -----	1 REQD -----	80 LBS
STEEL STRAPPING, 1-1/4" -----	115.83 REQD -----	16.55 LBS
SEAL FOR 1-1/4" STRAPPING -----	7 REQD -----	NIL

TIE PIECE, 1" X 4" X BOX WIDTH (2 REQD). NAIL TO LONGITUDINAL PIECES W/2-6d NAILS AT EACH END AND TO LATERAL PIECE W/1-6d NAIL.

VERTICAL PIECE, 2" X 4" X BOX HEIGHT MINUS 3/4" (4 REQD).



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

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

FILLER ASSEMBLY
(FOR MINUS ONE BOX)

FILLER PIECE, 2" X 4" X BOX LENGTH (AS REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH END. **NOTE:** WHEN A UNIT HAS MORE THAN SIXTEEN BOXES OMITTED, THE FILLER ASSEMBLY OR ASSEMBLIES LOCATED IN AN OUTER STACK ON THE 48" SIDE OR SIDES OF THE PALLET WILL REQUIRE A "FILLER PIECE" AS SHOWN.

GENERAL NOTES

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4116-20PA1002. 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 BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- C. THE LOAD STRAPS WILL BE PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING BOXES ON PALLET. LOAD STRAPS MUST NOT 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 BE TENSIONED AND SEALED PRIOR TO THE LOAD STRAPS.
- E. THE FOLLOWING DARCOM DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 CARLOADING ----- DRAWING 19-48-4115-5PA1002
 TRUCKLOADING ----- DRAWING 19-48-4117-11PA1003
 STORAGE ----- DRAWING 19-48-4118-1-2-3-4-22PA1002.
- F. FOR METHOD OF SECURING A STRAP CUTTER TO THE PALLET UNIT, SEE DARCOM 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. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING CHARGES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON THE TITLE PAGE, PROVIDED THE BOX PACK DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- J. WHEN THE UNIT LOAD DEPICTED AT LEFT IS TO BE USED FOR UNITIZING MARINE CORPS AMMUNITION, 2 LAYERS OF BOXES MUST BE OMITTED, TIEDOWN STRAP LENGTHS MUST BE DECREASED TO 11'-7", AND LOAD STRAP LENGTHS MUST BE DECREASED TO 13'-10". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 28'-1/2", A GROSS UNIT WEIGHT OF 1,767 POUNDS, AND A UNIT CUBE OF 36.7 CU FT. ADDITIONALLY, THE UNIT LOAD MAY BE MODIFIED AS DESCRIBED WHEN BEING SHIPPED BY MILVAN OR COMMERCIAL INTERMODAL FREIGHT CONTAINER, CONVENTIONAL VAN TRAILER OR CONVENTIONAL OR HIGH-CAPACITY BOXCAR. THE DETERMINATION TO REDUCE THE LOAD BY TWO LAYERS FOR TRANSPORTATION WILL BE MADE BY THE RESPONSIBLE COMMAND AND WILL BE BASED UPON ECONOMICS OF TRANSPORTATION AND HANDLING.