

# APPENDIX 7D

## UNITIZATION PROCEDURES FOR BOXED AMMUNITION AND COMPO- NENTS ON 4-WAY ENTRY PALLETS

**CARTRIDGE, 7.62MM, PACKED 1,500 PER M548  
METAL BOX, UNITIZED 24 BOXES PER 40" X 48"  
PALLET; APPROX BOX SIZE 18-19/32" L X 8-19/64" W  
X 14-19/32" H**

**NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION  
PROCEDURES DRAWING 19-48-4116-20PA1002.**

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### U.S. ARMY MATERIEL COMMAND DRAWING

<b>APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND</b> REHMSTEDT. MARK.J.123054 8400 <small>Digitally signed by REHMSTEDT.MARK.J.1230548400 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=REHMSTEDT.MARK.J.1230548400 Date: 2015.03.20 09:38:29 -05'00'</small> <b>RDAR-EIL-TP</b>		<b>CAUTION: VERIFY PRIOR TO USE AT <a href="https://mhp.redstone.army.mil">HTTPS://MHP.REDSTONE.ARMY.MIL</a> THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b>																									
<b>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</b> RUS.ALLEN.J.1230354282 <small>Digitally signed by RUS.ALLEN.J.1230354282 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=RUS.ALLEN.J.1230354282 Date: 2015.03.25 08:29:57 -05'00'</small> <b>AMSJM-LIT</b>		<b>DO NOT SCALE</b>																									
<b>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</b> SHIMP.UPTON.R.1231257183 .R.1231257183 U.S. ARMY DEFENSE AMMUNITION CENTER <small>Digitally signed by SHIMP.UPTON.R.1231257183 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=SHIMP.UPTON.R.1231257183 Date: 2015.03.25 10:00:37 -05'00'</small>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 2px;">DESIGN ENGINEER</td> <td style="width: 10%; padding: 2px;">BASIC</td> <td colspan="2" style="padding: 2px;"><b>WILLIAM R. FRERICHS</b></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">REV.</td> <td colspan="2" style="padding: 2px;"><b>MATTHEW THOMPSON</b></td> </tr> <tr> <td style="padding: 2px;">ENGINEERING DIVISION</td> <td style="padding: 2px;"></td> <td colspan="2" style="padding: 2px;">                     FIEFFER.LAUR A.A.1230375727  <small>Digitally signed by FIEFFER.LAUR A.A.1230375727 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FIEFFER.LAUR A.A.1230375727 Date: 2014.07.22 15:36:34 -05'00'</small> </td> </tr> <tr> <td style="padding: 2px;">TEST ENGINEER</td> <td style="padding: 2px;"></td> <td colspan="2" style="padding: 2px;">                     FELICIANO.AD IN.1259200373  <small>Digitally signed by FELICIANO.AD IN.1259200373 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FELICIANO.AD IN.1259200373 Date: 2014.07.28 07:39:48 -05'00'</small> </td> </tr> <tr> <td style="padding: 2px;">TEST REPORT</td> <td style="padding: 2px; text-align: center;"><b>NA</b></td> <td colspan="2" style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">EXPLOSIVE SAFETY DIRECTORATE</td> <td style="padding: 2px;"></td> <td colspan="2" style="padding: 2px;">                     TRIVITT.TERRY .F.1230872011  <small>Digitally signed by TRIVITT.TERRY.F.1230872011 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TRIVITT.TERRY.F.1230872011 Date: 2014.07.28 09:35:03 -05'00'</small> </td> </tr> </table>		DESIGN ENGINEER	BASIC	<b>WILLIAM R. FRERICHS</b>			REV.	<b>MATTHEW THOMPSON</b>		ENGINEERING DIVISION		FIEFFER.LAUR A.A.1230375727 <small>Digitally signed by FIEFFER.LAUR A.A.1230375727 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FIEFFER.LAUR A.A.1230375727 Date: 2014.07.22 15:36:34 -05'00'</small>		TEST ENGINEER		FELICIANO.AD IN.1259200373 <small>Digitally signed by FELICIANO.AD IN.1259200373 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FELICIANO.AD IN.1259200373 Date: 2014.07.28 07:39:48 -05'00'</small>		TEST REPORT	<b>NA</b>			EXPLOSIVE SAFETY DIRECTORATE		TRIVITT.TERRY .F.1230872011 <small>Digitally signed by TRIVITT.TERRY.F.1230872011 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TRIVITT.TERRY.F.1230872011 Date: 2014.07.28 09:35:03 -05'00'</small>	
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		<b>JUNE 1981</b>																									
		REVISION NO. 6	MAY 2015																								
		<b>SEE THE REVISION LISTING ON PAGE 2</b>																									
		CLASS	DIVISION																								
		DRAWING	FILE																								
		<b>19</b>	<b>48</b>																								
		<b>4116/7D</b>	<b>20PA1002</b>																								

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1305-				
00-143-8486	A163	1.4	S	2,969
00-935-9247	A164	1.4	S	2,969
01-569-2925	A164	1.4	S	3,185
00-926-3942	A165	1.4	S	2,969
01-569-2929	A165	1.4	S	3,185
00-152-3292	A168	1.4	S	2,969
01-569-2932	A168	1.4	S	3,185
01-380-9803	A257	1.4	S	2,969
01-380-9840	A258	1.4	S	2,969
01-458-6826	AA34	1.4	C	3,185
01-458-6823	AA36	1.4	C	3,185
01-598-5928	AB81	1.4	C	3,185
01-606-7063	AB88	1.4	S	2,969
01-606-6538	AB89	1.4	S	2,969

\*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).

### REVISIONS

REVISION NO. 1, DATED JANUARY 1984, CONSISTS OF:

CHANGING BOX DIMENSIONS.

REVISION NO. 2, DATED JUNE 1985, CONSISTS OF:

ADDING ITEM BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA CHART".

REVISION NO. 3, DATED SEPTEMBER 1993, CONSISTS OF:

CHANGING A NATIONAL STOCK NUMBER IN THE "PALLET UNIT DATA CHART".

REVISION NO. 4, DATED NOVEMBER 2002, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA CHART".
2. ADDING PAGES 3 AND 4.

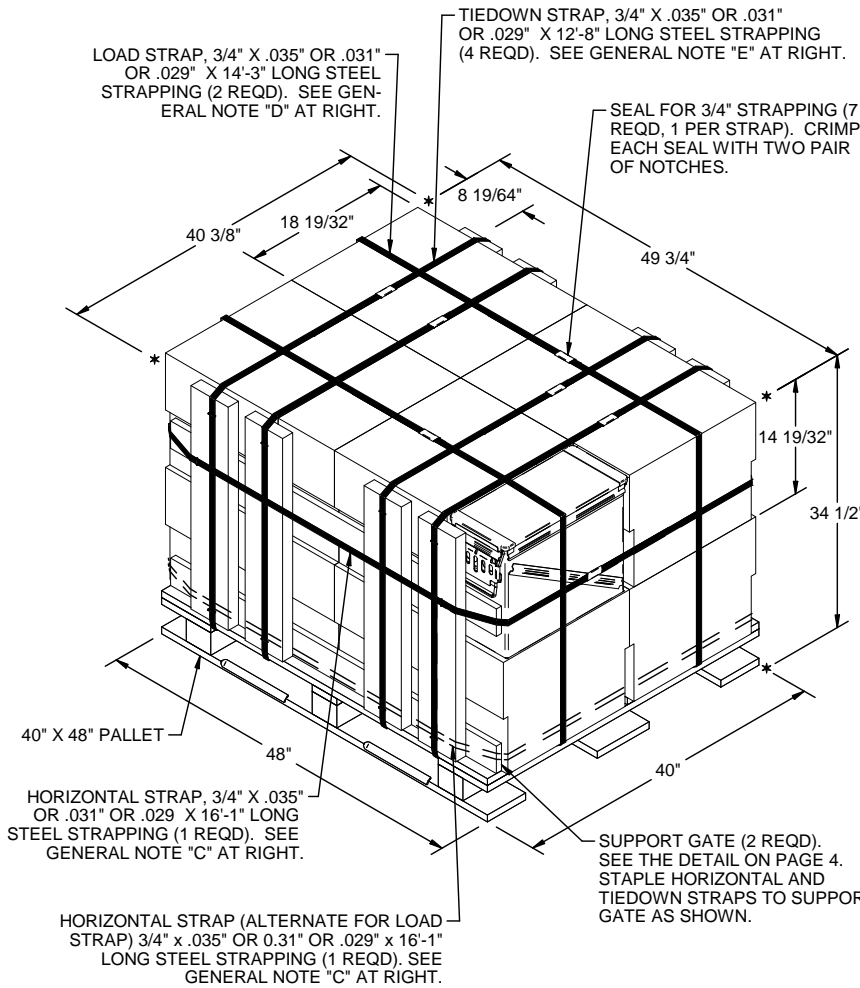
REVISION NO. 5, DATED JULY 2008, CONSISTS OF CHANGES PER ECP R06K3015 (NUMBER 1) INCLUDING:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA CHART".
2. ADDING HORIZONTAL STRAP AND MAKING LOAD STRAPS ALTERNATIVE.
3. ADDING .029" THICKNESS STRAPPING.

REVISION NO. 6, DATED MAY 2015, CONSISTS OF CHANGES PER ECP R11K2042-1 (NUMBERS 1 & 2) AND ECP R13K2012 (NUMBER 1) INCLUDING:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA CHART".
2. UPDATING GENERAL NOTE "J" TO MIL-DTL-15011.

**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. INSTALL THE HORIZONTAL STRAP(S) TO ENCIRCLE THE TOP LAYER OF BOXES IF ALSO USING LOAD STRAPS OR BOTH LAYERS OF BOXES IF NOT USING LOAD STRAPS. HORIZONTAL STRAPS ARE TO BE ALIGNED WITH THE HORIZONTAL PIECE OF THE "SUPPORT GATES" AS SHOWN. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF THE TIEDOWN AND LOAD STRAPS (IF USED).
- D. THE LOAD STRAPS MAY BE THREADED THROUGH THE STRAP SLOTS OF A PALLET OR PRE-POSITIONED ON THE PALLET DECK PRIOR TO PLACING THE BOXES ON THE PALLET. LOAD STRAPS MUST BE TENSIONED AND SEALED AFTER THE APPLICATION OF THE HORIZONTAL STRAP.
- E. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE ALIGNED WITH THE VERTICAL PIECES OF THE "SUPPORT GATES" AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS AND LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- F. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 

CARLOADING	- - - -	19-48-4115-5PA1002
TRUCKLOADING	- - - -	19-48-4117-11PA1003
STORAGE	- - - -	19-48-4118-1-2-3-4-14-22PA1002
END OPENING ISO CONTAINER	- - - -	19-48-4153-15PA1002
MILVAN	- - - -	19-48-4166-15PA1003
SIDE OPENING ISO CONTAINER	- - - -	19-48-4267-15PA1009

**PALLET UNIT**  
SEE GENERAL NOTE "B" AT RIGHT.

24 BOXES OF 7.62MM CTGS (1,500 PER BOX) @ 127 LBS	- - - -	3,048 LBS
DUNNAGE	- - - -	57 LBS
PALLET	- - - -	80 LBS
TOTAL WEIGHT		3,185 LBS (APPROX)
CUBE		40.0 CU FT (APPROX)

- G. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS REVISION TO THIS APPENDIX, THE BOXES NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS REVISION.
- H. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING 7.62MM CARTRIDGES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON PAGE 2, 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. THE STYLE 1 PALLET DELINEATED IN THE DETAIL AT LEFT NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-DTL-15011 WHEN USED FOR THE UNITIZATION OF ITEMS COVERED BY THIS APPENDIX.
- K. ALL DUNNAGE SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH GENERAL NOTE "AA" IN THE BASIC PROCEDURES.
- L. DIMENSIONS GIVEN FOR DUNNAGE PIECES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY TO THE PALLET UNIT. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES. ALSO, DUE TO THE VARIATION OF CONTAINER DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES OF DUNNAGE IN A DUNNAGE ASSEMBLY.
- M. FOR DETAILS OF THE M548 METAL BOX SEE ARDEC DRAWING 10535781, OR NAVAL SEA SYSTEMS COMMAND DRAWINGS 7308300 OR 7308302.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	16.00	5.33
2" X 6"	19.00	19.00
NAILS	NO. REQD	POUNDS
6d (2")	48	0.28
PALLET, 40" X 48" - - - - - 1 REQD - - - - - 80 LBS		
STEEL STRAPPING, 3/4" - - 95.25' REQD - - - - - 8.50 LBS		
SEAL FOR 3/4" STRAPPING - - - 6 REQD - - - - - NIL		
STAPLE, 15/16" X 3/4" - - - - 20 REQD - - - - - NIL		

