

# APPENDIX 80D

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

**ROCKET, 2.75 INCH, WITH WARHEAD, PACKED 3 OR  
4 PER WOODEN BOX, UNITIZED 15 BOXES PER 42"  
X 53" PALLET; APPROX BOX SIZE 72-13/16" L X 8-  
11/16" W X 9-1/2" H**

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

**NOTICE:** THIS APPENDIX SUPERSEDES APPENDIX 80F, DRAWING 19-48-4116/80F-20PA1002, DATED NOVEMBER 1981.

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### U.S. ARMY MATERIEL COMMAND DRAWING

<p>APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND</p> <p>REHMSTEDT, MARK.J.1230548400 48400</p> <p style="font-size: 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: 2016.12.28 07:53:58 -06'00'</p> <p style="text-align: right;"><b>RDAR-EIL-TP</b></p>		<p><b>CAUTION:</b> 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.</p>			
<p>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</p> <p>RUS.ALLEN.J.1230354282</p> <p style="font-size: 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: 2017.01.03 13:20:46 -06'00'</p> <p style="text-align: right;"><b>AMSJM-MMT</b></p>		<p><b>DO NOT SCALE</b></p>		<p><b>DECEMBER 1982</b></p>	
<p>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p>SHIMP.UPTON.R.1231257183</p> <p style="font-size: 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: 2017.01.13 09:41:24 -06'00'</p> <p style="text-align: right;"><b>U.S. ARMY DEFENSE AMMUNITION CENTER</b></p>		DESIGN ENGINEER	BASIC	GEORGE B. FECKE	
		REV.	SPENCER HOVEY		REVISION NO. 4
		ENGINEERING DIVISON	<p>FIEFFER.LAUR A.A.1230375727</p> <p style="font-size: x-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: 2016.10.31 14:08:37 -05'00'</p>		NOVEMBER 2016
		TEST ENGINEER	<p>FELICIANO.AD IN.1259200373</p> <p style="font-size: x-small;">Digitally signed by FELICIANO.ADIN.1259200373 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FELICIANO.ADIN.1259200373 Date: 2016.11.09 12:45:50 -06'00'</p>		SEE THE REVISION LISTING ON PAGE 2
		TEST REPORT	<b>NA</b>	CLASS	DIVISION
		EXPLOSIVE SAFETY DIRECTORATE	<p>TIRONE.JOSEPH.ANDREW.1026683749</p> <p style="font-size: x-small;">Digitally signed by TIRONE.JOSEPH.ANDREW.1026683749 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TIRONE.JOSEPH.ANDREW.1026683749 Date: 2016.11.14 14:02:14 -06'00'</p>		DRAWING
			<b>19</b>	<b>48</b>	<b>4116/80D</b>
					<b>20PA1002</b>

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1340-				
01-269-1447	H165	1. 2. 1	E	2, 825
01-309-5799	H462	1. 2. 1	C	2, 810
01-108-8849	H463	1. 2. 1	G	2, 825
01-108-8850	H464	1. 2. 1	E	2, 825
01-223-9187	H464	1. 2. 1	E	2, 825
00-180-9909	H488	1. 1	E	2, 855
01-309-8300	H642	1. 1	E	2, 855
01-268-7174	H974	1. 2. 1	G	2, 825
01-446-2902	HA09	1. 3	C	2, 855
01-446-2901	HA11	1. 2. 1	C	2, 810
01-448-8891	HA14	1. 2. 1	E	2, 825
01-448-7507	HA17	1. 2. 1	G	2, 825

\*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:

1. DELETING ITEMS BY NATIONAL STOCK NUMBER (NSN) FROM "PALLET UNIT DATA" CHART.
2. ADDING SUPERSESSION NOTE.
3. UPDATING DRAWING FORMAT.

REVISION NO. 2, DATED JANUARY 1995, CONSISTS OF:

ADDING ITEMS BY NATIONAL STOCK NUMBER (NSN) TO "PALLET UNIT DATA" CHART.

REVISION NO. 3, DATED APRIL 1998, CONSISTS OF:

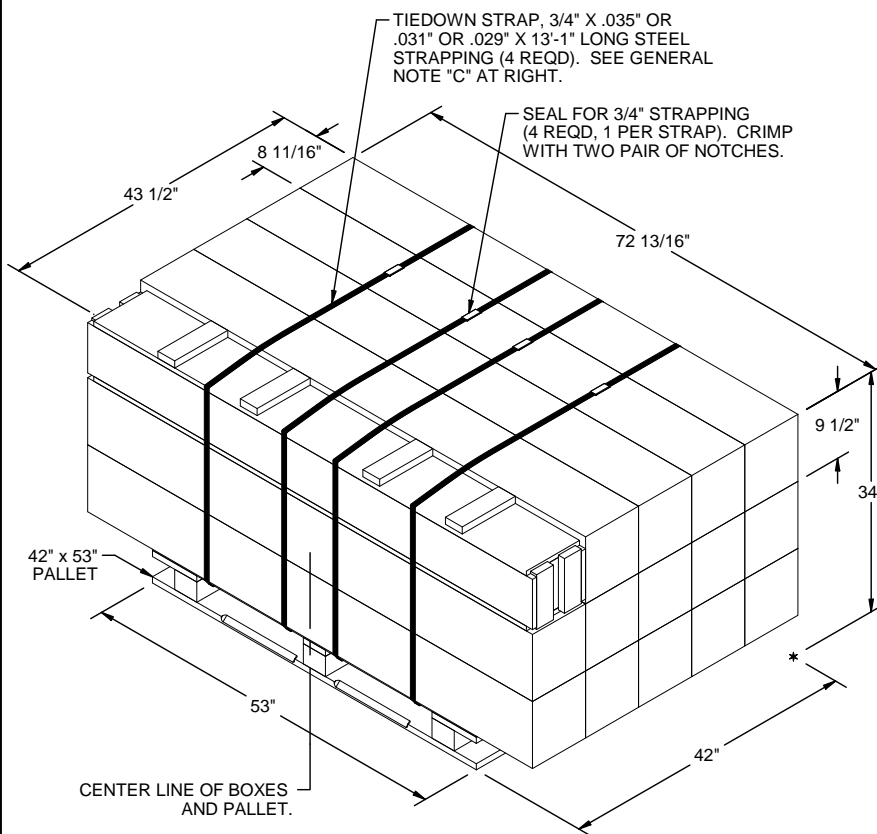
1. ADDING ITEMS BY NATIONAL STOCK NUMBER (NSN) TO "PALLET UNIT DATA" CHART.
2. DELETING GENERAL NOTE RELATING TO STRAP CUTTER AND RE-LETTERING OTHER GENERAL NOTES.
3. CHANGING THE WEIGHT OF ITEMS IN "PALLET UNIT DATA" CHART.

REVISION NO. 4, DATED NOVEMBER 2016, CONSISTS OF CHANGES PER ECP MI-R0891 (2):

1. UPDATING DRAWING FORMAT.
2. REVISING GENERAL NOTE "J" TO REPLACE MIL-P-15011 WITH MIL-DTL-15011.
3. DELETING ITEMS BY NATIONAL STOCK NUMBER (NSN) FROM "PALLET UNIT DATA" CHART.

**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 EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN.
- D. 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
- E. 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.
- F. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING 2.75 INCH ROCKETS 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.
- G. THE 72-13/16" WIDTH DIMENSION IS AN EXCEPTION TO THE BASIC PROCEDURES. HOWEVER, THE EXCEPTION IS NECESSARY FOR THE AMMUNITION PACK COVERED BY THIS APPENDIX TO MOST EFFECTIVELY GET AN ACCEPTABLE, COMPACT AND SOUND PALLET UNIT.
- H. A 40" X 48" PALLET MAY BE SUBSTITUTED FOR THE SPECIFIED 42" X 53" PALLET, BUT ONLY ON A LIMITED USE, CASE BY CASE BASIS AND ONLY IF OPERATIONAL NECESSITY SO DICTATES.
- J. THE STYLE 1B 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. FOR DETAILS OF THE MIL-DTL-2427 BOX SEE ARDEC DRAWING 9230116.



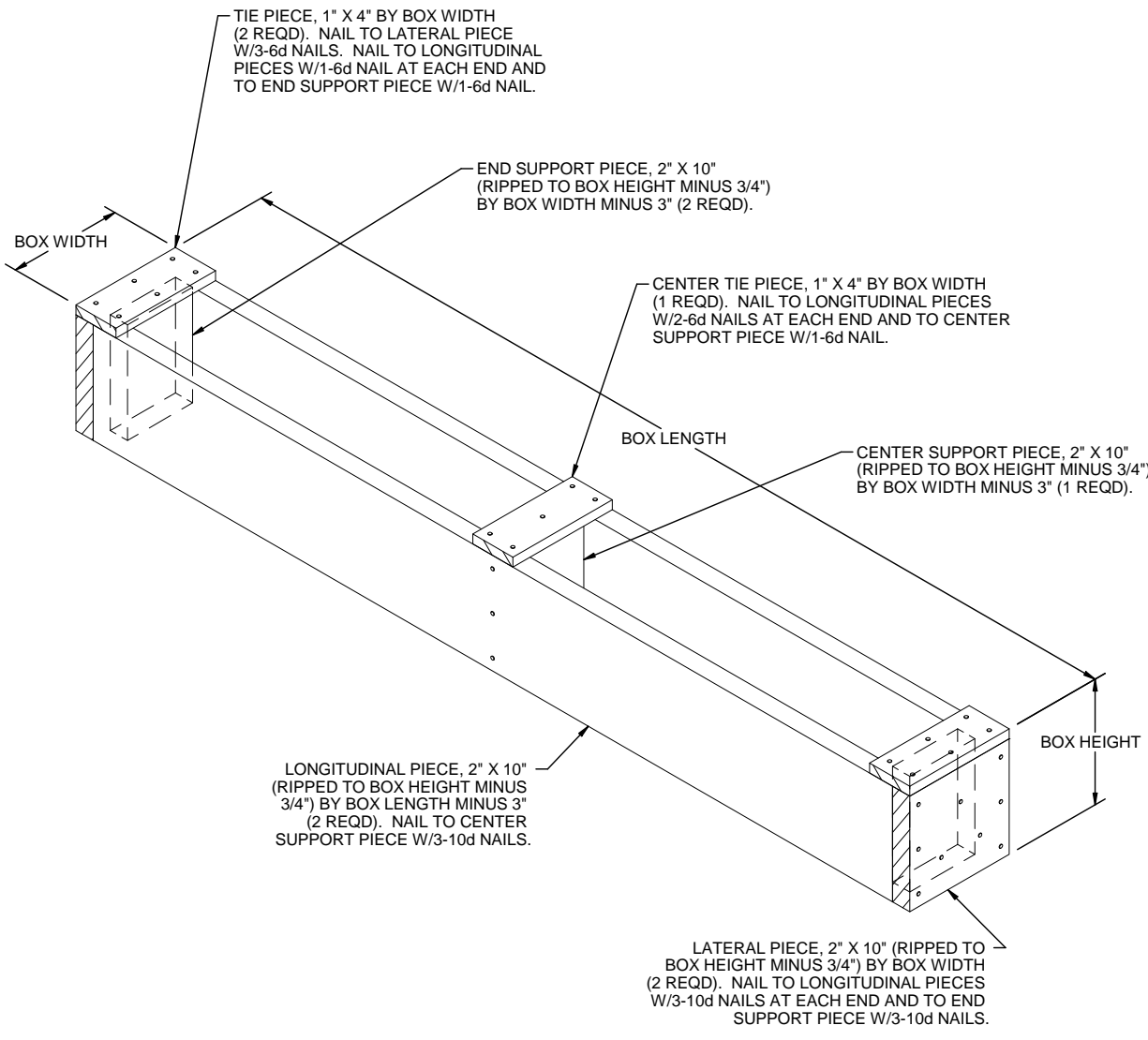
**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

15 BOXES OF 2.75 INCH ROCKETS (4 PER BOX) @ 184 LBS	- -	2,760 LBS
DUNNAGE	- - - - -	5 LBS
PALLET	- - - - -	90 LBS
<b>TOTAL WEIGHT</b>		<b>2,855 LBS (APPROX)</b>
<b>CUBE</b>		<b>62.2 CU FT (APPROX)</b>

**BILL OF MATERIAL**

PALLET, 42" X 53"	- - - - -	1 REQD	- - - - -	90 LBS
STEEL STRAPPING, 3/4"	- 52.33'	REQD	- - - - -	4.47 LBS
SEAL FOR 3/4" STRAPPING	- -	4 REQD	- - - - -	NI L



**FILLER ASSEMBLY**  
(FOR MINUS ONE BOX)