

# APPENDIX 60A

## UNITIZATION PROCEDURES FOR AMMUNITION AND COMPONENTS PACKED IN CYLINDRICAL METAL OR PLASTIC CONTAINERS ON 4- WAY ENTRY METAL PALLETS

**2.75" HYDRA ROCKET, PACKED 4 PER M648 CYLINDRICAL METAL CONTAINER, UNITIZED 12 PER 78-1/2" X 29-5/16" SPECIAL METAL PALLET; APPROX CONTAINER SIZE 78-1/2" L X 9-1/4" W X 9-1/4" H**

**NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4231-20PA1006.**

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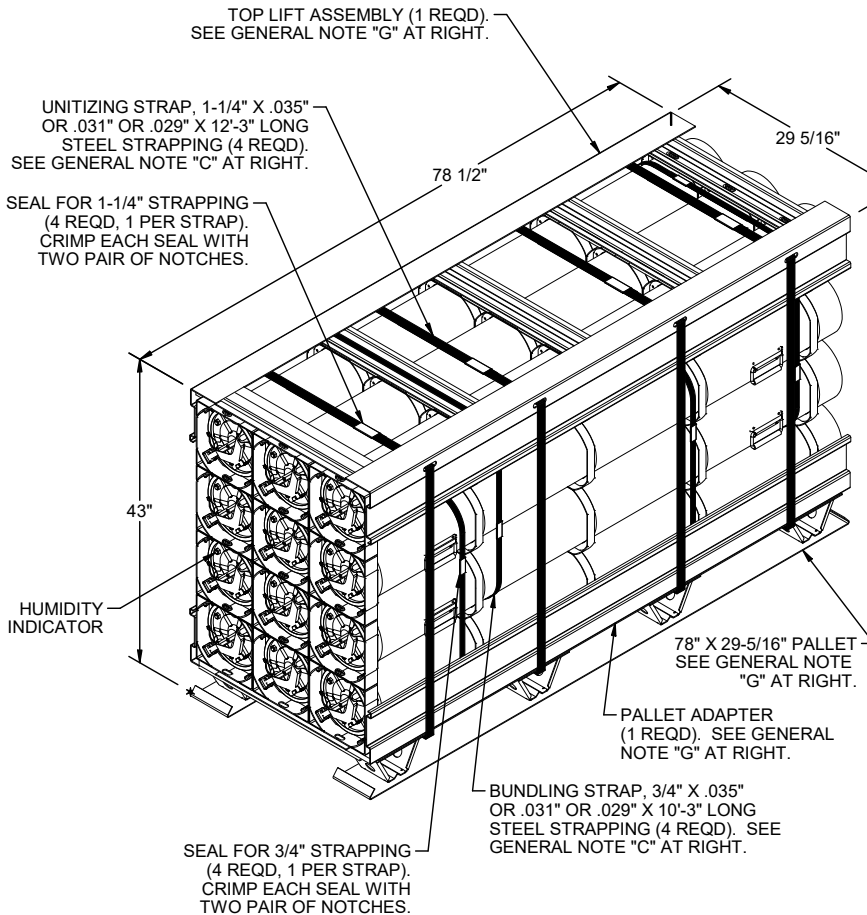
### U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, COMBAT CAPABILITIES DEVELOPMENT COMMAND ARMAMENTS CENTER  HANSENEN.JO SEPH.W.1376 495538  <small>Digitally signed by HANSENEN.JOSEPH.W.1 376495538 Date: 2020.10.01 13:33:20 -05'00'</small> FCDD-ACE-LTP	<b>CAUTION: VERIFY PRIOR TO USE AT <a href="https://www.dau.edu/cop/ammo/Pages/Default.aspx">https://www.dau.edu/cop/ammo/Pages/Default.aspx</a> THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</b>										
APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND  WARD.GINA. M.1369379808  <small>Digitally signed by WARD.GINA.M.1369379808 Date: 2020.10.26 08:52:20 -05'00'</small> AMSJM-MLT	<b>DO NOT SCALE</b>	<h2 style="margin: 0;">AUGUST 2020</h2>									
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  SMITH.THERESA. ANN.1009147639  <small>Digitally signed by SMITH.THERESA.ANN.1009147 639 Date: 2020.10.26 09:11:16 -05'00'</small> U.S. ARMY DEFENSE AMMUNITION CENTER	DESIGN ENGINEER  ENGINEERING DIVISON  TEST ENGINEER TEST REPORT NAVY15053  EXPLOSIVE SAFETY DIRECTORATE	BASIC REV.  FIEFFER.LAUR A.A.1230375727 <small>Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2020.08.18 07:03:01 -05'00'</small>  FELICIANO.ADI N.1259200373 <small>Digitally signed by FELICIANO.ADI.1259200373 Date: 2020.08.19 14:07:01 -05'00'</small>  THOMAS.CARL.AN THONY.1104621372 <small>Digitally signed by THOMAS.CARL.ANTHONY.11046 21372 Date: 2020.08.21 07:52:17 -05'00'</small>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">CLASS</td> <td style="width: 15%;">DIVISION</td> <td style="width: 15%;">DRAWING</td> <td style="width: 15%;">FILE</td> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">48</td> <td style="text-align: center;">4231/60A</td> <td style="text-align: center;">20PM1006</td> </tr> </table>	CLASS	DIVISION	DRAWING	FILE	19	48	4231/60A	20PM1006
CLASS	DIVISION	DRAWING	FILE								
19	48	4231/60A	20PM1006								

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1340-01-631-0794	HB16	1. 1	E	2, 646

\*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).

**GENERAL NOTES**



**PALLET UNIT**

SEE GENERAL NOTE "B" AT RIGHT.

12 CONTAINERS OF 2.75" HYDRA ROCKETS (4 PER CONTAINER) @ 195.8 LBS	2,350 LBS (APPROX)
DUNNAGE	186 LBS
PALLET	110 LBS
<b>TOTAL WEIGHT</b>	<b>2,646 LBS (APPROX)</b>
<b>CUBE</b>	<b>57.3 CU FT (APPROX)</b>

**BILL OF MATERIAL**

METAL PALLET, 78-1/2" X 29-5/16"	1 REQD	110 LBS
TOP ASSEMBLY	1 REQD	90 LBS
BOTTOM ASSEMBLY	1 REQD	85 LBS
STEEL STRAPPING, 3/4"	41.00' REQD	3.66 LBS
STEEL STRAPPING, 1-1/4"	49.00' REQD	7.00 LBS
SEAL FOR 3/4" STRAPPING	4 REQD	NIL
SEAL FOR 1-1/4" STRAPPING	4 REQD	NIL

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4231-20PA1006. 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. BUNDLING STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF THE UNITIZING STRAPS. BUNDLING STRAPS MUST ALSO BE INSTALLED AS CLOSE TO THE OUTER RINGS AS POSSIBLE, TO AVOID DAMAGE TO THE CONTAINER.
- D. ALTHOUGH THE CONTAINERS DEPICTED IN THE UNIT LOAD AT LEFT ARE CONSTRUCTED WITH INTERLOCKING DEVICES, THE INTERLOCKS WILL NOT FUNCTION PROPERLY UNLESS THE CONTAINERS ARE POSITIONED SO THAT THE "PINS" OF THE INTERLOCKS ARE FACING UPWARD. THIS ORIENTATION WILL AID IN THE PREVENTION OF CONTAINER MOVEMENT, BOTH Laterally AND LONGITUDINALLY, DURING SHIPMENT OF THE UNIT LOAD.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.
 

CARLOADING	19-48-4242/60A-5PM1004
TRUCKLOADING	19-48-4243/60A-11PM1004
STORAGE	19-48-4250/60A-1-2-3-4-14-22PM1004
END OPENING ISO	
CONTAINER	19-48-4245/60A-15PM1009
MILVAN	19-48-4244/60A-15PM1008
SIDE OPENING ISO	
CONTAINER	19-48-4272/60A-15PM1016
- F. IF ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS APPENDIX, THE CONTAINERS NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS APPENDIX.
- G. FOR DETAILS OF THE PALLET AND PALLET ADAPTERS, SEE DAC DRAWINGS ACV00156, MIL-A-70788 AND MIL-P-70786.
- H. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING 2.75" HYDRA ROCKETS WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBERS (NSN) THAN WHAT IS SHOWN ON PAGE 2, PROVIDED THE CONTAINER PACK DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- J. EMPTY OR REJECT M648 OR PA151 CONTAINERS WILL BE USED AS FILLER CONTAINERS AS NECESSARY. FILLER CONTAINERS MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER(S) OF CONTAINERS. IF THREE FULL CONTAINERS ARE TO BE OMITTED, ONE FULL LAYER OF CONTAINERS WILL BE OMITTED. WHEN (EMPTY/REJECTED) FILLER CONTAINERS ARE USED IN PLACE OF OMITTED CONTAINERS TO COMPLETE A LAYER ON A PALLET, THEY WILL BE PAINTED AND MARKED AS SPECIFIED IN DAC DRAWING ACV00561 AND ARDEC DRAWING 12982865.
- K. FOR DETAILS OF THE M648 CONTAINER SEE ACMOM DRAWING 13723424.

