

APPENDIX 156

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

**FUSE, MOFA, MT, MTSQ, PD, OR PROXIMITY,
PACKED 8 PER M2 SERIES CONTAINER, 2 CON-
TAINERS PER WIREBOUND BOX, UNITIZED 36 BOX-
ES PER 40" X 48" PALLET; APPROX BOX SIZE 14-
5/8" L X 12-13/16" W X 8-9/16" 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

| | | | | | | | | | | |
|--|--|-------------------------------|--|------------------------|------------------------|--|---------------------|------------------------|-----------------------|--------------------|
| <p>APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND</p> <p>PENNOCK.AM ANDA.C.13800 42157</p> <p><small>Digitally signed by PENNOCK.AM.ANDA.C.1380042157 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=PENNOCK.AM.ANDA.C.1380042157 Date: 2017.04.24 16:13:10 -0500</small></p> <p style="text-align: right;">RDAR-EIL-TP</p> | <p>CAUTION: VERIFY PRIOR TO USE AT HTTPS://MHP.REDSTONE.ARMY.MIL THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 4.</p> | | <p style="font-size: 24pt;">JULY 1980</p> | | | | | | | |
| <p>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</p> <p>RUS.ALLEN.J .1230354282</p> <p><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: 2017.05.02 09:14:52 -0500</small></p> <p style="text-align: right;">AMSJM-MMT</p> | <p>DO NOT SCALE</p> | <p>REVISION NO. 13</p> | <p>JULY 2017</p> | | | | | | | |
| <p>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p>SHIMP.UPTON .R.1231257183</p> <p><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: 2017.05.02 10:01:19 -0500</small></p> <p style="text-align: right;">U.S. ARMY DEFENSE AMMUNITION CENTER</p> | <p>DESIGN ENGINEER</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">BASIC</td> <td style="width: 80%;">WILLIAM R. FRERICHS</td> </tr> <tr> <td>REV.</td> <td>QUYEN TRAN</td> </tr> </table> | BASIC | WILLIAM R. FRERICHS | REV. | QUYEN TRAN | <p>SEE THE REVISION LISTING ON PAGE 2</p> | <p>CLASS</p> | <p>DIVISION</p> | <p>DRAWING</p> | <p>FILE</p> |
| BASIC | WILLIAM R. FRERICHS | | | | | | | | | |
| REV. | QUYEN TRAN | | | | | | | | | |
| <p>TEST ENGINEER</p> <p>TEST REPORT</p> <p style="text-align: center;">NA</p> | <p>ENGINEERING DIVISION</p> <p>FIEFFER.LAUR A.A.1230375727</p> <p><small>Digitally signed by FIEFFER.LAUR.A.1230375727 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FIEFFER.LAUR.A.1230375727 Date: 2017.03.28 09:41:15 -0500</small></p> | <p>19</p> | <p>48</p> | <p>4116/156</p> | <p>20PA1002</p> | | | | | |
| <p>EXPLOSIVE SAFETY DIRECTORATE</p> | <p>TIRONE.JOSEPH.A NDREW.102668374 9</p> <p><small>Digitally signed by TIRONE.JOSEPH.ANDREW.102668374 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TIRONE.JOSEPH.ANDREW.102668374 Date: 2017.04.18 07:03:59 -0500</small></p> | | | | | | | | | |

PALLET UNIT DATA

| ITEMS INCLUDED | | *HAZARD CLASS AND DIVISION | *COMPATI-BILITY GROUP | APPROX WEIGHT (LBS) |
|----------------|-------|----------------------------|-----------------------|---------------------|
| NSN | DODIC | | | |
| 1390- | | | | |
| 00-889-2104 | N248 | 1.4 | B | 2,069 |
| 00-993-5691 | N248 | 1.4 | B | 2,069 |
| 00-892-4897 | N276 | 1.4 | B | 1,997 |
| 00-935-6140 | N276 | 1.4 | B | 1,673 |
| 00-935-6141 | N276 | 1.4 | B | 1,673 |
| 00-935-6144 | N276 | 1.4 | B | 1,673 |
| 00-889-2044 | N278 | 1.1 | D | 2,105 |
| 01-032-6130 | N278 | 1.1 | D | 2,105 |
| 00-892-4264 | N280 | 1.1 | B | 2,105 |
| 00-814-3422 | N282 | 1.4 | B | 2,105 |
| 00-892-4193 | N282 | 1.4 | B | 2,105 |
| 00-805-0692 | N285 | 1.4 | D | 1,709 |
| 01-158-8194 | N285 | 1.4 | D | 1,709 |
| 01-247-4013 | N285 | 1.4 | D | 1,709 |
| 00-169-5864 | N286 | 1.1 | D | 1,745 |
| 01-158-8193 | N286 | 1.2.2 | D | 1,745 |
| 01-159-8044 | N286 | 1.2.2 | D | 1,745 |
| 01-247-4012 | N286 | 1.2.2 | D | 1,745 |
| 01-046-6802 | N287 | 1.1 | B | 2,105 |
| 01-309-6452 | N291 | 1.2.2 | D | 1,601 |
| 00-143-7008 | N308 | 1.1 | D | 1,601 |
| 00-957-5719 | N308 | 1.1 | D | 1,601 |
| 00-965-0570 | N308 | 1.1 | D | 1,601 |
| 00-071-2482 | N309 | 1.1 | D | 1,745 |
| 00-438-7508 | N309 | 1.1 | D | 1,745 |
| 00-877-6968 | N309 | 1.1 | D | 1,745 |
| 00-009-5572 | N311 | 1.1 | D | 2,213 |
| 00-892-4898 | N311 | 1.1 | D | 2,213 |
| 00-935-1952 | N318 | 1.4 | B | 1,709 |
| 00-028-4901 | N319 | 1.1 | B | 2,105 |
| 00-892-4153 | N319 | 1.2.2 | B | 2,105 |
| 00-814-0266 | N323 | 1.1 | B | 2,105 |
| 00-978-7764 | N329 | 1.2.2 | D | 1,709 |
| 00-926-3973 | N330 | 1.1 | B | 2,105 |
| 00-676-7837 | N331 | 1.2.2 | B | 2,105 |
| 00-926-3932 | N331 | 1.1 | B | 2,105 |
| 00-182-3029 | N334 | 1.1 | B | 1,637 |
| 01-348-0214 | N334 | 1.2.2 | D | 1,637 |
| 00-187-5392 | N335 | 1.1 | D | 2,105 |
| 00-889-2117 | N335 | 1.1 | D | 2,105 |
| 00-892-4302 | N335 | 1.1 | D | 2,105 |
| 01-080-4171 | N335 | 1.1 | D | 2,105 |
| 00-574-7705 | N340 | 1.1 | D | 1,745 |
| 01-080-9447 | N340 | 1.2.2 | D | 1,745 |
| 01-132-7481 | N340 | 1.2.2 | D | 1,745 |
| 01-600-4635 | N340 | 1.2.2 | D | 1,745 |
| 00-425-6265 | N386 | 1.4 | S | 1,709 |
| 00-764-9124 | N402 | 1.1 | B | 1,601 |
| 00-028-5057 | N501 | 1.4 | B | 1,709 |
| 01-436-2308 | NA08 | 1.2.2 | D | 1,781 |
| 01-462-0699 | NA09 | 1.2.2 | D | 1,997 |
| 01-462-0661 | NA10 | 1.4 | D | 1,709 |
| 01-482-6009 | NA18 | 1.2.2 | D | 2,033 |
| 01-616-7163 | NA18 | 1.2.2 | D | 2,033 |
| 01-054-5138 | ---- | 1.2.2 | B | 2,069 |
| 01-436-2779 | ---- | I NERT | I NERT | 1,493 |

*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 JULY 1981, CONSISTS OF:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. UPDATING STORAGE DRAWING NUMBER AND CHANGING FILLER ASSEMBLY DSGN.

REVISION NO. 2, DATED FEBRUARY 1982, CONSISTS OF:

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

REVISION NO. 3, DATED SEPTEMBER 1982, CONSISTS OF:

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

REVISION NO. 4, DATED OCTOBER 1983, CONSISTS OF:

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

REVISION NO. 5, DATED MARCH 1984, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. DELETING ITEM BY NATIONAL STOCK NUMBER FROM "PALLET UNIT DATA" CHART.

REVISION NO. 6, DATED SEPTEMBER 1986, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. DELETING ITEM BY NATIONAL STOCK NUMBER FROM "PALLET UNIT DATA" CHART.

REVISION NO. 7, DATED OCTOBER 1987, CONSISTS:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. ADDING GENERAL NOTE "K".

REVISION NO. 8, DATED MARCH 1995, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. DELETING ITEM BY NATIONAL STOCK NUMBER FROM "PALLET UNIT DATA" CHART.

REVISION NO. 9, DATED MARCH 1996, CONSISTS OF:

1. UPDATING ITEM INFORMATION ON THE "PALLET UNIT DATA" CHART.
2. UPDATING GENERAL NOTES.

REVISION NO. 10, DATED DECEMBER 1996, CONSISTS OF:

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

REVISION NO. 11, DATED MARCH 2002, CONSISTS OF:

1. ADDING ITEM BY NATIONAL STOCK NUMBER TO "PALLET UNIT DATA" CHART.
2. ADDING THE ALTERNATIVE FILLER ASSEMBLY.

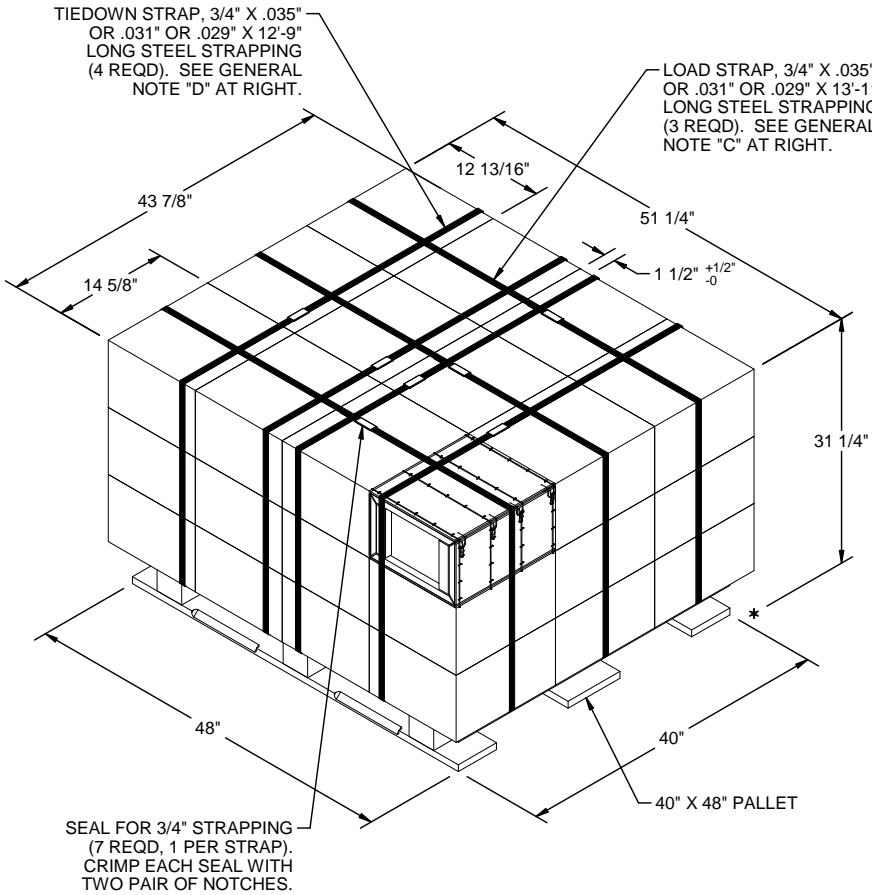
REVISION NO. 12, DATED DECEMBER 2005, CONSISTS:

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

REVISION NO. 13, DATED APRIL 2017, CONSISTS OF:

1. ADDING ITEMS BY NATIONAL STOCK NUMBER TO THE "PALLET UNIT DATA" CHART.
2. UPDATING GENERAL NOTE "J" (PALLET SPECIFICATION).
3. ADDING .029" THICKNESS STRAPPING TO THE LEADERS ON PAGE 3.

GENERAL NOTES



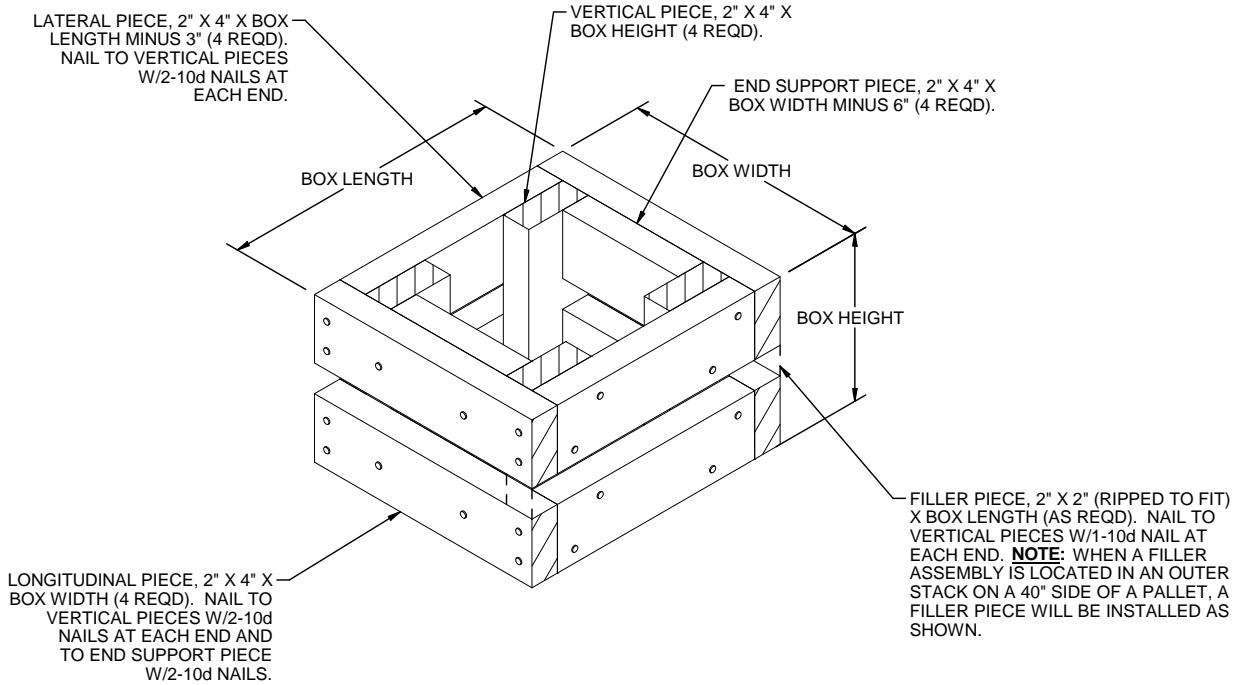
PALLET UNIT
SEE GENERAL NOTE "B" AT RIGHT.

- 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 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 PRIOR TO APPLICATION OF TIEDOWN STRAPS.
- D. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE TOP DECK BOARDS OF THE PALLET. NOTE THAT THE STRAPS WILL BE LOCATED AS SHOWN, NEAR THE SIDE CLEATS OF THE END PANELS OF THE BOX. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE LOAD STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.

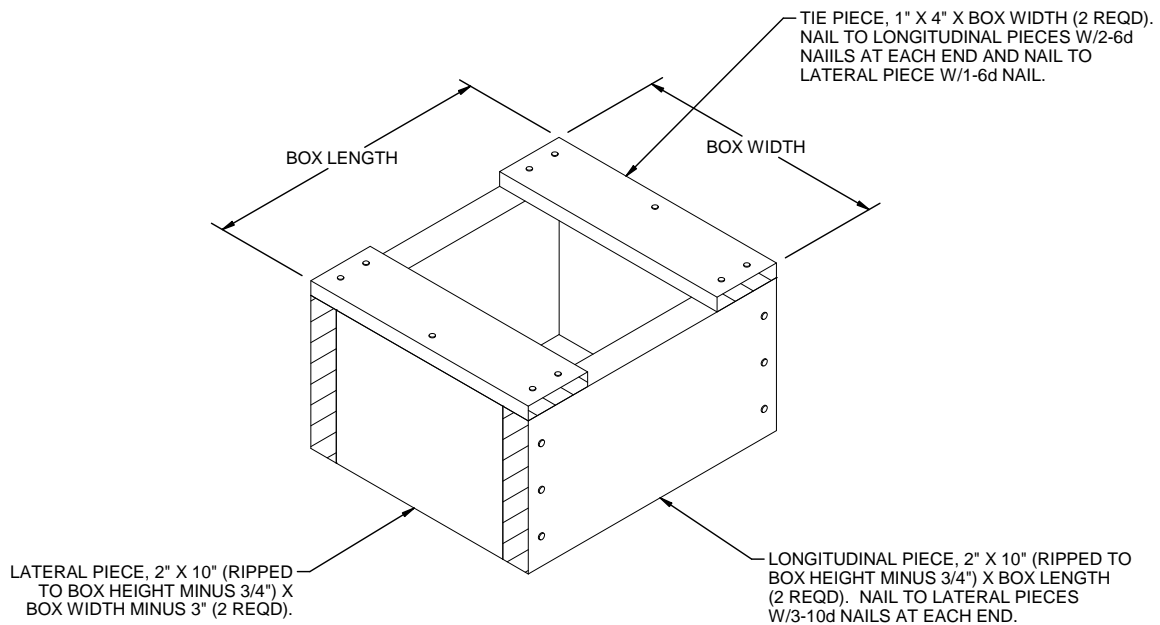
| | | |
|------------------|---------|--------------------------------|
| CARLOADING | - - - - | 19-48-4115-5PA1002 |
| TRUCKLOADING | - - - - | 19-48-4117-11PA1003 |
| STORAGE | - - - - | 19-48-4118-1-2-3-4-14-22PA1002 |
| END OPENING ISO | | |
| CONTAINER | - - - - | 19-48-4153-15PA1002 |
| MILVAN | - - - - | 19-48-4166-15PA1003 |
| SIDE OPENING ISO | | |
| CONTAINER | - - - - | 19-48-4267-15PA1009 |
- F. 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.
- G. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING FUZZES 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.
- H. POSITION THE THREE OUTBOARD BOXES ON BOTH OF THE 40" SIDES OF THE BOTTOM LAYER OF THE UNIT WITH THE TOPS DOWNWARD, AND THE THREE OUTWARD BOXES ON BOTH OF THE 40" SIDES OF THE TOP LAYER OF THE UNIT WITH TOPS UPWARDS.
- 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. IF DEEMED MORE ECONOMICALLY FEASIBLE, THE ALTERNATIVE FILLER ASSEMBLY MAY BE SUBSTITUTED FOR THE FILLER ASSEMBLY TO COMPLETE A LAYER ON A PALLET.
- L. FOR DETAILS OF THE WIREBOUND BOX SEE ARDEC DRAWING 12960853.

| | | |
|---|-----------|---------------------|
| 36 BOXES OF FUSES (16 PER BOX) @ 59 LBS | - - - - - | 2,124 LBS (APPROX) |
| DUNNAGE | - - - - - | 9 LBS |
| PALLET | - - - - - | 80 LBS |
| <hr/> | | |
| TOTAL WEIGHT | - - - - - | 2,213 LBS (APPROX) |
| CUBE | - - - - - | 40.7 CU FT (APPROX) |

| BILL OF MATERIAL | | | |
|-------------------------|-----------|------------|--------------------|
| PALLET, 40" X 48" | - - - - - | 1 REQD | - - - - - 80 LBS |
| STEEL STRAPPING, 3/4" | - - - - - | 92.75 REQD | - - - - - 8.28 LBS |
| SEAL FOR 3/4" STRAPPING | - - - - - | 7 REQD | - - - - - NIL |



FILLER ASSEMBLY
(FOR MINUS ONE BOX)



ALTERNATIVE FILLER ASSEMBLY
(FOR MINUS ONE BOX)
SEE GENERAL NOTE "K" ON PAGE 3.