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## MENTATION PAGE

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| 1a. F<br>Un                                                                                                                                                                                                                                                           |       |                                      | 1b. RESTRICTIVE MARKINGS                                                                                                       |                                       |                            |
| 2a. SECURITY CLASSIFICATION AUTHORITY                                                                                                                                                                                                                                 |       |                                      | 3. DISTRIBUTION / AVAILABILITY OF REPORT                                                                                       |                                       |                            |
| 2b. DECLASSIFICATION / DOWNGRADING SCHEDULE                                                                                                                                                                                                                           |       |                                      | Unlimited                                                                                                                      |                                       |                            |
| 4. PERFORMING ORGANIZATION REPORT NUMBER(S)                                                                                                                                                                                                                           |       |                                      | 5. MONITORING ORGANIZATION REPORT NUMBER(S)                                                                                    |                                       |                            |
| DOD POP HMTR/AYD 91-003                                                                                                                                                                                                                                               |       |                                      |                                                                                                                                |                                       |                            |
| 6a. NAME OF PERFORMING ORGANIZATION                                                                                                                                                                                                                                   |       | 6b. OFFICE SYMBOL<br>(If applicable) | 7a. NAME OF MONITORING ORGANIZATION                                                                                            |                                       |                            |
| Packaging Division, AED                                                                                                                                                                                                                                               |       | SMCAR-AEP                            |                                                                                                                                |                                       |                            |
| 6c. ADDRESS (City, State, and ZIP Code)                                                                                                                                                                                                                               |       |                                      | 7b. ADDRESS (City, State, and ZIP Code)                                                                                        |                                       |                            |
| U.S. Army, ARDEC<br>Picatinny Arsenal, NJ 07806-5000                                                                                                                                                                                                                  |       |                                      |                                                                                                                                |                                       |                            |
| 8a. NAME OF FUNDING / SPONSORING ORGANIZATION                                                                                                                                                                                                                         |       | 8b. OFFICE SYMBOL<br>(If applicable) | 9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER                                                                                |                                       |                            |
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| 8c. ADDRESS (City, State, and ZIP Code)                                                                                                                                                                                                                               |       |                                      | 10. SOURCE OF FUNDING NUMBERS                                                                                                  |                                       |                            |
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| 11. TITLE (Include Security Classification)                                                                                                                                                                                                                           |       |                                      |                                                                                                                                |                                       |                            |
| Performance Oriented Packaging Report for Charge, Demolition Block, 1/4 Pound, (TNT) w/ Priming Adapters M1A4                                                                                                                                                         |       |                                      |                                                                                                                                |                                       |                            |
| 12. PERSONAL AUTHOR(S)                                                                                                                                                                                                                                                |       |                                      |                                                                                                                                |                                       |                            |
| Sniezek, Frank                                                                                                                                                                                                                                                        |       |                                      |                                                                                                                                |                                       |                            |
| 13a. TYPE OF REPORT                                                                                                                                                                                                                                                   |       | 13b. TIME COVERED                    |                                                                                                                                | 14. DATE OF REPORT (Year, Month, Day) |                            |
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| 16. SUPPLEMENTARY NOTATION                                                                                                                                                                                                                                            |       |                                      |                                                                                                                                |                                       |                            |
| 17. COSATI CODES                                                                                                                                                                                                                                                      |       |                                      | 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)                                              |                                       |                            |
| FIELD                                                                                                                                                                                                                                                                 | GROUP | SUB-GROUP                            | Performance Oriented Packaging, POP,<br>Charge, Demolition Block, 1/4 Pound, (TNT)<br>w/ Priming Adapters, Mil-B-2427 wood box |                                       |                            |
|                                                                                                                                                                                                                                                                       |       |                                      |                                                                                                                                |                                       |                            |
|                                                                                                                                                                                                                                                                       |       |                                      |                                                                                                                                |                                       |                            |
| 19. ABSTRACT (Continue on reverse if necessary and identify by block number)                                                                                                                                                                                          |       |                                      |                                                                                                                                |                                       |                            |
| This POP report is for the Charge, Demolition Block, 1/4 Pound, (TNT) w/ Priming Adapters which is packaged 192 charges/Mil-B-2427 wood box. This report describes the results of testing conducted on a similar packaging which is used as an analogy for this item. |       |                                      |                                                                                                                                |                                       |                            |
| 20. DISTRIBUTION / AVAILABILITY OF ABSTRACT                                                                                                                                                                                                                           |       |                                      | 21. ABSTRACT SECURITY CLASSIFICATION                                                                                           |                                       |                            |
| <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS                                                                                                                                             |       |                                      | Unclassified                                                                                                                   |                                       |                            |
| 22a. NAME OF RESPONSIBLE INDIVIDUAL                                                                                                                                                                                                                                   |       |                                      | 22b. TELEPHONE (Include Area Code)                                                                                             |                                       | 22c. OFFICE SYMBOL         |
| STEVE RUFFINI                                                                                                                                                                                                                                                         |       |                                      | (201) 724-2515                                                                                                                 |                                       | SMCAR-AEP                  |

I. REPORT NUMBER: DOD POP HMTR/AYD 91-003

II. TITLE: Performance Oriented Packaging Report for Charge, Demolition Block, 1/4 Pound, (TNT) w/ Priming Adapters M1A4

AUTHOR: Frank M. Sniezek

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army  
ARDEC, SMCAR-AEP  
HQ, U.S. Army Armament, Munitions, and Chemical Command  
Picatinny Arsenal, NJ 07806-5000

DATE: 2 Nov 92

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| A-1                |                                     |

## 1. DATA SHEET

### CONTAINER

Type: Box  
UN Code: 4C1  
Nomenclature: Packing and Marking for Charge, Demolition Block, 1/4 Pound, (TNT) w/ Priming Adapters M1A4  
Specification Number: Type II, Grade A, Class 2, Mil-B-2427  
Drawing Number: 8797739  
Material: Wood  
Gross Weight: 84.0 pounds  
Outside Dimensions: 18 x 16 5/8 x 9 3/4 (P/N 8797113)  
18 1/4 x 16 7/8 x 9 3/4 (P/N 9287850)  
Inside Dimensions: 15 1/8 x 15 1/8 x 7 9/16 (P/N 8797113)  
15 3/8 x 15 3/8 x 7 9/16 (P/N 9287850)

### PRODUCT

Name: 1/4 Pound (TNT) w/ Priming Adapters M1A4  
Drawing Number: 8797113 or 9287850  
United Nations Number: 0048  
Physical State: Solid  
Amount per Container: 192 Charge, Demolition Block, 1/4 lb, (TNT) w/ 48 Priming Adapters M1A4

## 2. BACKGROUND, TESTS, AND RESULTS

Reference the following document:  
a. 49CFR, October 1, 1991 Edition

Instead of testing the specific containers used for the 1/4 Pound Demolition Block Charges, three wooden boxes built to the same specification but packed with a fiberboard box loaded with sand were tested. The corresponding weight and dimensions of the tested box are as follows:

Gross Weight: 120 pounds  
Outside Dimensions: 18 1/4 x 16 7/8 x 12 1/4  
Inside Dimensions: 15 3/8 x 15 3/8 x 9 3/4

This falls within the guidelines for analogy IAW Variation III of para. 178.601(g)(3) of Reference a.

A Stacking Test was conducted on one container with a weight of 1200 pounds for 72 hours in lieu of three containers for 24 hours. This weight exceeds the minimum requirement for a 10 foot stack height which is 1176 pounds.

A Loose Cargo Test was conducted on three containers for one hour. The packages were tested at a vibration table frequency such that the bottom of the packages were raised 1/4 inch from the platform, which exceeds the requirement of 1/16 inch.

A Four Foot Drop Test was conducted on one of the containers that was subjected to the Loose Cargo Test. One container was dropped five times at different orientations as follows: top, bottom, long side, short side, and a top corner at the closure. This exceeds the requirement of one drop per container.

Test results indicated no leakage or spillage of the contents from the containers following any of the tests conducted meeting the requirements of the 49CFR.