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REPORT DOCUMENTATION PAGE

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1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED

1b. RESTRICTIVE MARKINGS

2a. SECURITY CLASSIFICATION AUTHORITY 1992

3. DISTRIBUTION / AVAILABILITY OF REPORT UNLIMITED

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2b. DECLASSIFICATION / DOWNGRADING SCHEDULE

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6a. NAME OF PERFORMING ORGANIZATION PACKAGING DIVISION, AED

6b. OFFICE SYMBOL (if applicable) SMCAR-AEP

7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code) U.S. ARMY, ARDEC PICATINNY ARSENAL, NJ 07806-5000

7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING / SPONSORING ORGANIZATION

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PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification) PERFORMANCE ORIENTED PACKAGING REPORT FOR THE FIRING DEVICE, DEMOLITION, TIME DELAY, XMI47

12. PERSONAL AUTHOR(S) DZURY, R. CHRIS

13a. TYPE OF REPORT FINAL

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17. COSATI CODES

FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

19. ABSTRACT (Continue on reverse if necessary and identify by block number) THIS REPORT CONTAINS THE TESTS PERFORMED AND TEST RESULTS ON THE FIRING DEVICE, DEMOLITION, TIME DELAY, XMI47, PACKED 24 PER PA19 METAL AMMUNITION CONTAINER, TWO PA19's PER WIREBOUND BOX FOR PERFORMANCE ORIENTED PACKAGING CERTIFICATION.

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20. DISTRIBUTION / AVAILABILITY OF ABSTRACT [X] UNCLASSIFIED/UNLIMITED [] SAME AS RPT [] DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED

22a. NAME OF RESPONSIBLE INDIVIDUAL STEVE RUFFINI

22b. TELEPHONE (Include Area Code) 201-724-2515

22c. OFFICE SYMBOL SMCAR-AEP

1. DATA SHEET:

Container:

Type: Box, Wood, Wirebound

UN Code: 4C1

Specification Number: PPP-B-46506

Material: wood and wire

Capacity: 1167.9 cubic inches

Drawing Number: 9366708

Dimensions: I.D. (in.): 12 1/2 X 12 1/6 X 10 3/8

Tolerance: +1/8

O.D. (reference, in.): 14 7/8 X 12 13/16 X 11 15/16

Closure (method/Type): bent wire

Tare Weight: 7 lbs.

Packed Out Container Weight (48 Firing Devices): 52 lbs.

Product:

Name: Firing Device, Demolition, Time Delay, XM147

NSN: 1375-01-340-7890

Drawing Number: 12914600

Proper Shipping Name: Fuzes, Detonating

Identification Number: UN 0257

Physical State: Solid

Quantity Per Wirebound Wood Box: 48

BACKGROUND AND TESTING:

This report contains the tests performed and test results of the Firing Device, Demolition, Time Delay, XM147 packed (24) twenty-four per PA19 metal ammunition container, (2) PA19's per wirebound box in accordance with drawing 12913801 for Performance Oriented Packaging Certification. Instead of testing this container configuration with the weight listed above, each PA19 container was loaded with steel weights weighing 34 lbs. and fiberboard filler. The final packed out weight of each wirebound box tested was 94 lbs. This is an acceptable analogy in accordance with Code of Federal Regulations Title 49. The following tests were performed in accordance with Performance Oriented Packaging test regulations of Code of Federal Regulations Title 49:

a. Stacking Test: Three wirebound wood boxes, each containing 2 PA 19 containers, were placed next to each other in a compression tester under a total load of 3800 lbs. for 64 hours. This exceeds the CFR requirement which is a load these wirebound boxes would see when at the bottom of a stack of wirebound boxes measuring 10 feet high for a period of 24 hours.

b. Loose Cargo Test: The loaded wirebound boxes which underwent the stacking test were then loose cargo tested together for one hour on a table having a steel plate and restraining walls. The rpms of the machine were adjusted so a 1/16 inch thick piece of material could be moved freely between the container and the steel plate. The test duration and machine input were in accordance with the CFR requirement.

c. Drop Test: After the three wirebound boxes were loose cargo tested, they were drop tested from 4 feet onto a steel plate in the following orientations:

<u>container</u>	<u>orientations dropped</u>
1	flat on top flat on bottom
2	flat on a long side flat on a short side
3	directly on a corner

These orientations are in accordance with the CFR requirement for a rectangular box.

3. TEST RESULTS: After each test, both PA19 containers remained consolidated in each wirebound box and there was no spillage or leakage of contents from any PA19 container. This is the criteria for successfully passing Performance Oriented Packaging Testing as prescribed in CFR Title 49. Therefore, this container configuration is considered safe for international shipment and in accordance with Performance Oriented Packaging Regulations.

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