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Performance Oriented Packaging	g (POP) Testing	of M204 Prope	elling Char	ges, P	acked	one thousend	
seven hundred twenty eight (1)	728) per fiberbo	ard box					
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20. DISTRIBUTION/AVAILABILITY OF ABSTRACT

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22b TELEPHUNE (Include Area Code) 22c. OFFICE SYMBOL 201-724-2865 SMCAR-AEP



# DEPARTMENT OF THE ARMY U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER PICATINNY ARSENAL, NJ 07806-5000



REPLY TO ATTENTION OF

SMCAR-AEP (1mm)

1 2 APR 1994

MEMORANDUM FOR Commander, Defense Technical Information Center, Building 5, Cameron Station, Alexandria, VA 22304-6145

SUBJECT: Release of Performance Oriented Packaging Compliance Report

1. The enclosed report (DOD POP HMTR/AYD 94-013) entitled: "Performance Oriented Packaging (POP) Testing of M204, Propelling, Charges, Packed one thousand seven hundred twenty eight (1728) per fiberboard box" is hereby submitted to the Defense Technical Information Center for formal release. Please send notification of formal release to:

U.S. Army Armament Research, Development and Engineering Center Attn: SMCAR-AEP, Building 455 Picatinny Arsenal, NJ 07806-5000

2. If there are any problems, questions, or comments regarding this report, contact Mrs. Oltea Bogdan at (201) 724-2220 (DSN 880-2220).

Encl as Gene Farrel

Actg. Chief, Packaging Division

I. Report Number: DOD HMTR/AYD 94-013

II. TITLE: Performance Oriented Packaging (POP) Certification of M204 Propelling Charges, packed one thousand seven hundred twenty eight (1728) per fiberboard box by analogy

Drawing Number: 9313703

Author: Oltea Bogdan

Performing Activity: U. S. Army Armament Research, Development and Engineering Center (ARDEC)

Address: Department of the Army

Commander, U.S. Army ARDEC

Attn: SMCAR-AEP

Picatinny Arsenal, N.J. 07806-5000

Date: April 1994

<u>Distribution Statement A.</u>
Approved for Public Release; Distribution is Unlimited.

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#### 1. DATA SHEET

#### al. Tested Container

Type: Box, Fiberboard

UN Code: 4G

Specification Number: PPP-B-636
Material: Fiberboard
Part Number (P/N): 9313721
Capacity: 154.5 liters

Dimensions:  $70 \text{cm} \times 55.4 \text{cm} \times 39.84 \text{cm}$ 

 $(27 9/16" \times 21 13/16" \times 15 11/16")$ 

Gross weight: 88 pounds (40 kg)

a2. Container being POP certified by analogy IAW 178.601(g)(3) variation 3:

Type: Box, Fiberboard

UN Code: 4G

Specification Number: PPP-B-636
Material: Fiberboard
Part Number (P/N): 9313703
Capacity: 156.6 liters

Dimensions: 65.88cm x 51.28cm x 46.36cm

 $(25 \ 15/16" \ x \ 20 \ 3/16" \ x \ 18 \ 1/4")$ 

Gross weight: 31 pounds (31 kg)

#### bl. Tested Product:

Name: M218, Propelling, Charges

Part Number: 9300234 United Nations Number: UN 0242

United Nations Packaging Group: II

United Nations Nomenclature: CHARGES, PROPELLING, FOR

CANNON

Physical State: Solid

Amount per Container: 672 Propelling Charges

NSN: 1315-01-290-1598

### b2. Product being POP certified by analogy:

Name: M204, Propelling, Charges

Part Number: 9312698
United Nations Number: UN 0242

United Nations Packaging Group: II

United Nations Nomenclature: CHARGES, PROPELLING, FOR

CANNON

Physical State: Solid

Amount per Container: 1728 Propelling Charges

NSN: 1310-01-050-8896

#### 2. BACKGROUND, TESTS, AND RESULTS

The Department of Transportation (DOT) per Code of Federal Regulations (CFR), Title 49, Parts 100-180, dated 1 Oct 92, requires that Hazardous Materials should be packed in a container that passes the Performance Oriented Packaging (POP) tests.

The Fiberboard, Box being certified by analogy (P/N 9313703) is used as the shipping container for one thousand seven hundred twenty eight (1728) M204 Propelling Charges.

Reference the following documents:

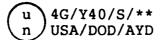
- a. Code of Federal Regulations, Title 49, Dated 1 Oct 1992.
  - b. POP Report DOD POP HMTR/AYD 92-026

Instead of testing the specific container used for shipping of the M204 Propelling Charges, the fiberboard box is certified to meet the requirements of the Code of Federal Regulations (CFR), Title 49 based on a previously tested fiberboard box which has been tested and has the characteristics specified in paragraph 1.al (see attached DOD POP HMTR/AYD 92-026 POP Report).

Stacking Test, Loose Cargo and Four Foot Drop Tests were conducted in accordance with Reference 2b. Based on the Reference 2a and 2b the fiberboard box falls within the guidelines for analogy IAW with Paragraph 178.601(g)(3) of Reference 2a (Variation 3).

### 3. CONCLUSION

Based upon the DOD POP HMTR/AYD 92-026 POP test, the following POP symbol shall be applied to containers that are packed in accordance with ARDEC DWG. 9313703.



\*\* Insert last two digits of year packed.

PAGE 3

Cranshay, U.S. Department of the Army

U.M. PROPER SELPPING HANG AND PORTER!

Charges, propelling, for cannon, UN0242

U.N. CLASSIFICATION CODE: 1.30

REFERENCE NUMBER PRODUCT DESIGNATION/PART NUMBER

EX-9309083

Charges, Propelling, M204 (NSN: 1310-01-050-8896) / 💢

D.N. PROPER SEIFFING HAME AND MUDBER!

Cord; (Fase) detonating, mild effect, UN0104

U.H. CLASSIFICATION CODE: 1.4D

reference number

PRODUCT DESIGNATION/PART NUMBER

EX-9309056

Linear Shaped Charge P/F 044725-1 (NSN:

1336-01-211-0175) -

EX-9309057

Interstage, P/N 1175647-4 (NSM: 1337-01-187-3207)

U.N. PROPER SHIPPIEG NAME AND BUMBER: Cutters, cable, explosive, UN0070

D.H. CLASSIFICATION CODE:

1.45

REFERENCE NUMBER

PRODUCT DESIGNATION/PART NUMBER

EX-9309084

Cutter, Locking Cord, P/N CI-4.0 (HSN:

1377-01-333-9143) \_