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12. PERSONAL AUTHOR(S): Raymond J. Siroy

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19. ABSTRACT (Continue on reverse if necessary and identify by block number): This Performance Oriented Packaging (POP) report is for the Propelling Charge, 155MM Projectile, M203A1, packed one (1) per PA103 Square Rim Metal Ammunition Container in accordance with drawing 9354642. This report describes the results of testing conducted on a similar packaging which is used as an analogy for this item.

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**I. Report Number: DOD POP HMTR/AYD 94-026**

**II. Title: Performance Oriented Packaging (POP) Testing of Charge, Propelling,  
155 MM Projectile, M203A1, Packed One (1) per PA103 Square Rim Metal  
Ammunition Container"**

**Drawing Number: 9354642**

**Author: Raymond J. Siroy**

**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: August 1994**

**Report Type: Final**

**Distribution Statement A.**

**Approved for public release; distribution is unlimited.**

**1. DATA SHEET:**

**a. CONTAINER**

Type: Removable head steel drum  
UN Code: 1A2  
Part Number: 9349398  
Spec Number: MIL-C-63461  
Material: Steel  
Capacity: 1163.40 cubic inches  
Dimensions :

Inside Diameter = 6.50 in. min.  
Outside Diameter = 7.49 in. max.  
at Flat Side  
Inside length = 35.06 in. min.  
Outside Length = 37.99 in. max.

Closure (Method/Type) : Cover shaft is locked into slots on container rim.

Tare Weight: 8.86 kg (19.5 lbs)

**b. PRODUCT**

Name: Charge, Propelling, 155 MM, M203A1 for HOW M198  
United Nations Proper Shipping Name: Charges, Propelling, for Cannon  
United Nations Number: 0242  
Drawing Number: 9345103  
Physical State: Solid  
United Nations Packing Group: II  
Amount Per Container: 1

**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 PA103 Square Rim Metal Ammunition Container, reference 1a, is used as the shipping container for the Propelling Charge, 155 MM Projectile, M203A1, which has total gross weight of 52 pounds, packed in accordance with drawing 9354642.

Reference the following documents:

- a. Code of Federal Regulations, Title 49, Dated Oct. 1 1992.
- b. POP Report DOD POP HMTR/AYD 92-003

Instead of testing the specific container used for the Propelling Charge, 155 MM Projectile, M203A1 in accordance with drawing 9354642, the metal container is certified to meet the requirements of the Code of Federal Regulations (CFR), Title 49, based on a previously tested PA116 Square Rim Metal Ammunition Container, used to package the Cartridge, 120 MM , HEAT-MP-T, M830, which has total gross weight of 75.4 pounds. The PA116 container has the following weight and dimensions:

Container Weight: 7.09 kg (15.6 lbs)

Dimensions:

Inside Diameter = 6.75 in. min.  
 Outside Diameter = 7.75 in. max.  
                           at Flat Side  
                           Inside length = 41.50 in. min.  
                           Outside Length = 44.50 in. max.

Stacking Test, Loose Cargo Test and Four Foot Drops were conducted in accordance with Reference 2b. The results indicated no leakage or spillage of contents from the metal container following any of the tests, thus satisfying the requirements of the 49 CFR. This falls within the guidelines for analogy IAW Variation 3 of Para. 178.601(g)(3) of Reference 2a.

**3. CONCLUSION:**

Based upon the above POP testing, the following UN POP marking symbol has been applied to the PA103 Square Rim Metal Ammunition Container in accordance with drawing 9354642.

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\*\* Last two digits of year packed.

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