**Title:** Performance Oriented Packaging testing of Escapement Assembly for M550 Fuze (U)

**Personal Author(s):** Ronald Prybylowski

**Description:**

Performance Oriented Packaging (POP) testing was successfully completed on the package design for the Escapement Assembly F/M550 Fuze. Four-foot drops and stacking tests were conducted with six packages.

The POP marking, 4CI/Y22/Sxx, has been assigned to this item.

USA/DOD/AYD (xx is the last two digits of the year package)
REPORT COVER

I REPORT NUMBER

II TITLE: Performance Oriented Packaging Testing of Escapement Assembly for M550 Fuze

AUTHOR: Ronald Prybylowski

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army
Armament Research, Development and Engineering Center
HQ-US-Army Armament, Munitions and Chemical Command
Picatinny Arsenal, NJ 07806-5000
SMCAR-AEP

DATE August 1988

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1. DATA:
   CONTAINER:
   TYPE: Wood Box
   UN CODE: 4C1
   NOMENCLATURE: Box, Wood
   SPECIFICATION NUMBER: MIL-B-2427
   DRAWING NUMBER: 12598465
   MATERIAL: Wood
   CAPACITY: 14 kgs (31 lbs)
   DIMENSIONS: 18 1/8 X 14 5/16 X 9 11/16
   TARE WEIGHT: 22kgs (47 lbs)

   PRODUCT:
   NAME: Escapement assembly for M550 Fuze
   DRAWING NUMBER: 8886357
   UNITED NATIONS NUMBER: n/a
   UNITED NATIONS PACKING GROUP: II
   PHYSICAL STATE: Solid
   AMOUNT PER CONTAINER: 1280

2. BACKGROUND:
   The escapement assembly for the M550 fuze was provisional packed in a fiberboard box/barrier bag/wood box. Due to the success of the pack in protecting the assembly, a technical data package (TDP) was prepared to implement the pack as a permanent pack. As part of the TDP, a United Nations Performance Oriented Packaging (UN POP) marking is required. The following test plan was completed to obtain a UN POP marking for the pack.

3. TEST PLAN:
   Testing was conducted in accordance with section 9.7 of "Transport of Dangerous Goods", third edition. Paragraph 9.7.3, Drop Test, and paragraph 9.7.6, Stacking Test, were the only tests required for this pack.

3a. Drop Test
   Sample size: 5 boxes
   Temperature: Ambient
   Drop Orientation (one box for each drop):
   1. Bottom
   2. Top
   3. Long End
   4. Short Side
   5. A Corner

3b. Stacking Test
   Due to the limited number of samples, the height of actual containers stacked on the bottom container was 1.5 meters instead of 3 meters, however, a weight equivalent to a 3 meter stack was placed on top to simulate.

4. RESULTS:
   The boxes passed all tests. The contents of the containers were not discharged. The packs are considered safe for international transportation in accordance with the United Nations Performance Oriented Packaging Regulations.

REFERENCE MATERIAL: