This report contains the testing and test results performed on the Fuze, Grenades, Packed 1000 per fiberboard box.
I. Report Number: DOD POP HM TR/AYD 91-017

II. Title: Performance Oriented Packaging Testing for Fuze, Grenades
Packed 1000 per fiberboard box in accordance with
DWG. 8882318.

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1. Data:

   Container:
   
   Type: Box, Fiberboard  
   UN Code: 4G  
   Specification Number: PPP-B-636  
   Material: Fiberboard  
   Capacity: 29.6 Liters  
   Dimensions: 34.8cm x 30.16cm x 28.23cm  
                (13 11/16" x 11 7/8" x 11 1/8")  
   Gross Weight: 31.4kg (69lbs.)

   Product:

   Name: M219A2  
   Drawing Number: 9332611-1  
   United Nations Number: 0257  
   United Nations Packaging Group: II  
   United Nations Nomenclature: FUZES, DETONATING  
   Physical State: Solid  
   Amount Per Container: 1000 Grenade Fuzes  
   NSN: 1330-01-278-8976

   Name: M219A2  
   Drawing Number: 9332611-2  
   United Nations Number: 0257  
   United Nations Packaging Group: II  
   United Nations Nomenclature: FUZES, DETONATING  
   Physical State: Solid  
   Amount Per Container: 1000 Grenade Fuzes  
   NSN: 1330-01-278-8977

   Name: M219A1  
   Drawing Number: 9207971-1  
   United Nations Number: 0257  
   United Nations Packaging Group: II  
   United Nations Nomenclature: FUZES, DETONATING  
   Physical State: Solid  
   Amount Per Container: 1000 Grenade Fuzes  
   NSN: 1330-01-058-1643

   Name: XM224  
   Drawing Number: 9211057-1  
   United Nations Number: 0257  
   United Nations Packaging Group: II  
   United Nations Nomenclature: FUZES, DETONATING  
   Physical State: Solid  
   Amount Per Container: 1000 Grenade Fuzes  
   NSN: 1330-01-054-8875
2. Background:

This report contains the testing and test results performed on fuzes packed in a fiberboard box manufactured in accordance with PPP-B-636, Type SF, Class Weather Resistant, Grade V3S. One-thousand M219E1 fuzes were utilized to simulate the proper content weights. The weights of the three packed out boxes were 59lbs. each. The method of pack was consistent with DWG. 8882318.

3. Testing:

Note: All testing was in accordance with the referenced sections of CFR 49, except that one complete pack was used in lieu of multiple packs for each test.

Drop Test (178.603):

Procedure-

One container was dropped in the following orientations: flat on bottom, flat on top, flat on long-side, flat on short-side, and the top-right-rear corner. The height for all five drops was 1.2 meters.

Results-

There was no visible damage on the first four drops. On the corner drop the side edge of the outer box (corresponding to the corner of impact) split. The contents remained inside the container and the package was capable of being handled without danger of spillage, satisfying the passing criteria. It should be noted that this exceeded the requirements of CFR 49 since one container experienced all the drops as opposed to five separate containers experiencing one drop each.

Vibration Test (178.608):

Procedure-

One container was vibrated on a vibration table unrestrained for a one hour time period. The peak-to-peak displacement was one inch and the frequency was 210 cycles per minute. This frequency was sufficient to allow the pack to become completely airborne enabling a 1/16" piece of strapping material to be slid underneath the pack during testing.

Results-

The outer box received minor abrasions on all faces (except the top) from repetitive impacts with the side walls and base of the vibration table. The container experienced no structural damage and therefore there was no spillage of contents, satisfying the passing criteria.
Stack Test (178.606):

Procedure-

A dead load of 630 lbs. was applied to the top of a single packed container for a 24 hour period. This simulates a stack height of 10 feet of identical packages.

Results-

The container uniformly compressed a total of 1/4 of an inch and adequately supported the load, satisfying the passing criteria.

5. Referenced Material:

   A. Federal Register, "49 CFR Part 107, 1991"

6. Based on the above equivalent POP Testing, the following POP symbol has been applied to containers IAW Drawing 8882318.

\[ 4G/Y32/S/\underline{\text{__}} \]

USA/DOD/AYD

Insert last two digits of year packed