Performance Oriented Packaging Report for M7 Non-Electric Blasting Cap

This POP report is for the M7 Non-Electric Blasting Cap which is packaged 480/Mil-B-2427 wood box. This report describes the results of testing conducted.

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I. REPORT NUMBER: DOD POP HMTR/AYD 92-014

II. TITLE: Performance Oriented Packaging Report for Cap, Blasting, Non-Electric: M7

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army
ARDEC, SMCAR-AEP
HQ, U.S. Army Armament, Munitions, and Chemical Command
Picatinny Arsenal, NJ 07806-5000

DATE: 2 Nov 92

Approved for public release; Distribution is unlimited
1. DATA SHEET

CONTAINER
Type: Box
UN Code: 4C1
Nomenclature: Box, Ammunition, Packing: Wood, Nailed
Specification Number: Type II, Class 2, Grade A, Mil-B-2427
Drawing Number: N/A
Material: Wood
Gross Weight: 70
Outside Dimensions: 12 5/8 x 15 x 12 1/4
Inside Dimensions: 9 1/2 x 13 1/4 x 9 3/4

PRODUCT
Name: Cap, Blasting, Non-Electric: M7
Drawing Number: 8830948
Specification Number: Mil-C-45469
United Nations Number: 0029
Physical State: Solid
Amount per Container: 480

2. BACKGROUND, TESTS, AND RESULTS
Reference the following document:
a. 49CFR, October 1, 1991 Edition

Instead of testing with the actual item, three wooden boxes built to the same specification but packed with a fiberboard box loaded with sand to a gross weight of 70 pounds were tested.
A Stacking Test was conducted on one container with a weight of 910 pounds for 72 hours in lieu of three containers for 24 hours. This weight exceeds the minimum requirement for a 10 foot stack height which is 686 pounds.
A Loose Cargo Test was conducted on three containers for one hour. The packages were tested at a vibration table frequency such that the bottom of the packages were raised 1/4 inch from the platform, which exceeds the requirement of 1/16 inch.
A Four Foot Drop Test was conducted on one of the containers that was subjected to the Loose Cargo Test. One container was dropped five times at different orientations as follows: top, bottom, long side, short side, and a top corner at the closure. This exceeds the requirement of one drop per container.
Test results indicated no leakage or spillage of the contents from the containers following any of the tests conducted, meeting the requirements of the 49 CFR.