

BIODEX MEDICAL SYSTEMS, INC.
20 Ramsey Road
Shirley, New York 11967-4704

D.O.T. SPECIFICATION 7A, TYPE A
PACKAGING TEST RECORD

DATE: AUGUST 2, 2004 Page 1 / 4
PACKAGE IDENTIFICATION: BEXXAR CAPPED SYRINGE, AMMO CAN,
SHIPPING SYSTEM, MODEL #001-880

Testing was performed at: Biodex Medical Systems, Inc., 20 Ramsey Road, Shirley, New York 11967-4704

PACKAGE	DESCRIPTION	SIGNED OFF BY
Outer Package: construction material wall strength, lb test dimensions, inches closure internal cushioning	Ammo Case N/A 12" x 6" x 13.5" (h) hinged lid, 1 clasp 2.2 lb/ft ³ closed cell polyethylene foam	
Lead Insert Shielding Package: material insert support	cast lead in a contoured shape to supply appropriate shielding to inner pig - open top metal plate to hold and position lead	
Unit Dose Pig: material closure cushioning dimensions, "	painted lead in polycarbonate outer shell Lead: body 0.25" top 0.57" bottom 0.50" plastic screw threads between top and bottom sections N/A 10.3" long x 2.5" diameter	
Lead Shielding Combined:	bottom: 0.84" top: 0.57" sides: varies depending on location from 0.88 to 1.02"	
Weight: lead insert and case unit dose pig Total Weight	24.5 lb 6.5 lb 31 lb	
Primary Container Unit Dose Pig: syringe nominal volume ml closure content simulation absorbent materials	60 ml B-D syringe 30 ml luer cap water, colored absorbent sheet (001-771)	
Examination of test sample before tests: Describe: defects distortions deterioration printing imperfections	none none none none	

DATE:

AUGUST 2, 2004

Page 2 / 4

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TESTS	NOTES	SIGNED OFF BY
TEST RECORD:	Perform tests in order and attach a photographic record	
WATER SPRAY TEST: 49 CFR 173.465 (b) (must be performed before remaining tests) Spray Package: from 1 or 4 sides rate approx. 2 inches / hour time at least 1 hour Describe Results:	Two (2) cases were sprayed. Case 1 and 2 at the same time. A nozzle was placed on each side of the cases and water sprayed for more than one (1) hour at a rate greater than two (2) inches per hour. A hose was connected to the pipe for a shower head was run and then split into four (4) hoses – each with a nozzle on the end. The hose nozzles were on the four(4) sides of the cases. spray from 4 simultaneously greater than 2 inches / hour sprayed for 1+ hours The water spray did not affect the metal shipping container. The inside of the case was dry. NOTE: If the package was sprayed from 4 sides simultaneously, the compression test may begin up to 2 hours after the water is turned off. If the spray is from 1 direction on each side sequentially, the compression test must begin within 1 hour.	

DATE:

AUGUST 2, 2004

Page 3 / 4

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TESTS	NOTES	SIGNED OFF BY
<p>COMPRESSION TEST: 49 CFR 173.465 (d) (CASE 2) performed December 1999</p> <p>24 hours compression: weight in lbs. clock time - start clock time - finish</p> <p>Describe Results:</p>	<p>greater than 600 pounds N/A timer, 24 hours</p> <p>NOTE: Compression test was performed by placing a sheet of plywood with lead bricks onto the top of the plastic case. The heaviest system weighs 31 lbs. The stacking test is (2 lb./in² x vertical projected area of package, which would be 144 lbs or 5x's the weight of the package) which is 155 lbs. We used over 600 lbs. of lead bricks on top of the shipping system.</p> <p>There was no damage or effect to the plastic container. None of the inner shields were damaged during this test.</p>	
<p>FREE DROP TEST: onto flat concrete surface</p> <p>Drop Test 1 foot onto 8 corners: 49 CFR 173.465 (c) (2) (CASE 2)</p> <p>Describe Results:</p> <p>Drop Test 4 feet for maximum damage: 49 CFR 173.465 (c) (1) (CASE 2)</p> <p>Describe Results:</p> <p>Drop Test 30 feet: 49 CFR 173.466 (a) (1) (CASE 1)</p> <p>Describe Results:</p>	<p>dropped in sequence</p> <p>corners are scratched and slightly dented metal can has dent part way up side pig & insert are OK – no leakage</p> <p>drop onto latch side on top corner of can</p> <p>can stayed closed – no damage – no leaks – pig unscrews and is OK</p> <p>case taken to top of building and dropped 30 feet onto concrete</p> <p>Ammo Can bent on bottom pig & insert are OK – pig lifts out no leakage into case absorbent material is dry bottom section of pig has a hairline crack threads are OK top of case opens and closes</p> <p>PASSES TEST</p>	

DATE:

AUGUST 2, 2004

Page 4 / 4

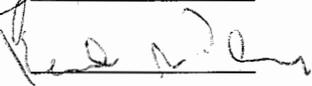
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TESTS	NOTES	SIGNED OFF BY
PENETRATION TEST: using 1.25 in. diameter bar with hemispherical end weighing 13.2 lbs. 49 CFR 173.466 (a) (2) and IATA 10.6.3.5.2 (CASE 2) Drop from 67 inches: strike point clock time Describe Results:	 center of long side of case N/A Rod bounced off Side indented slightly Pig is OK Syringe did not leak PASSES TEST	
ACCEPTANCE CRITERIA:	1. Damage to the packaging may not cause loss or dispersal of simulated contents. 2. Damage to the packaging may not cause an increase in calculated surface radiation exposure. 3. The test record must be complete and accurate, and the photographic record attached.	

Tests performed by:



Initials CS



Initials IA

Date: 9/27/2018

Note:

Additional tests were performed by Dayton T. Brown. These tests were for compliance to:

Temperature Test IATA 10.6.2.4.1.4 and 49CFR 178.608

Pressure Test IATA 10.6.1.3; IATA 5.0.2.9 and 49CFR 173.410(c)

Vibration Test IATA 5.0.4.3 (also 49CFR 178.608 and 173.24 (a) (a) (5))

These tests are available from Biodex upon request.

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