



# Inchcape Testing Services

Labtest

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## TECHNICAL REPORT

American Creative Team  
210 West Clary Ave.  
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NUMBER 10095

February 8, 1994

The sample was submitted and identified by the client as:

Act Foam Mats

### Summary of Results:

### Mechanical Hazards:

The submitted sample does comply with the following requirements:

Federal Hazardous Substances Act, 16 CFR 1500;  
ANSI/VPS PS 72-76 for the Bite Test

### Flammability:

The submitted sample does comply with the following requirements:

Federal Hazardous Substances Act, 16 CFR 1500.44

See pages two and three for detailed data.

Prepared by:

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Signed for the  
Company by:

  
Jeffrey D. Lipko

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February 10, 1994

## Mechanical Hazards: Simulated Use and Abuse Testing

Procedure (Summary): The submitted samples were tested for compliance with the requirements of 16 CFR 1500.48 Sharp Point, 16 CFR 1500.49 Sharp Edges and 16 CFR 1501 Small Parts, both before and after conditioning as set forth in 16 CFR 1500.50. In addition, the effect of the Bite Test was evaluated in accordance with ANSI/VPS PS 72-76.

### Labeled Age Group:

0-18 months \_\_\_\_\_                      36-96 months \_\_\_\_\_  
18-36 months \_\_\_\_\_                      \*Not age-labeled   x  

\*When not age-labeled, products are subjected to the most stringent use and abuse test conditioning.

Sample ID: Act Foam Mats

### Test Results:

	<u>Sharp Point</u>	<u>Sharp Edge</u>	<u>Small Parts</u>
As Received	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
After Impact [1500.51 (b)]	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
After Bite [1500.52 (c)] <sup>1</sup>	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
After Flexure [1500.52 (d)]	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
After Torque [1500.53 (e)]	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
After Tension <sup>2</sup> [1500.52 (f)]	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
After Compression [1500.53(g)]	<u>Pass</u>	<u>Pass</u>	<u>Pass</u>
Canadian Standards	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Conclusion: When tested as specified, the submitted sample(s) does comply with the Federal Hazardous Substances Act, 16 CFR 1500 as indicated. The sample(s) does comply with ANSI/VPS PS 72-76 requirements for the Bite Test.

<sup>1</sup> Mouth toys: 1500.53 (100 lb. load)

<sup>2</sup> Tension test applied to the same samples tested under torque

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## Flammability Test: Federal Hazardous Substances Act

### Procedure:

The method of testing was that described in 16 CFR 1500.44 of the Federal Hazardous Substances Act for rigid and pliable solids.

### Requirement:

A material is considered "flammable" if it ignites and burns with a self-sustained flame at a rate greater than 0.1 inches per second along its major axis.

**NOTE:** It is our understanding that a sample is considered as having passed the test requirement if it self-extinguishes before burning 6" and prior to the lapse of 60 seconds.

**Sample ID:** Act Foam Mats

### Test Results:

	<u>Area of Initial Flame Contact</u>	<u>Burn Length (inches)</u>	<u>Time (seconds)</u>	<u>Burn Rate (inches/second)</u>
Burn 1	End	1.75	60.58	.02
Burn 2	End	2.00	60.22	.02
Burn 3	End	1.25	60.63	.02
Burn 4	End	1.00	62.03	.01

**Conclusion:** Based upon the results of the test reported above, the submitted sample(s) does comply with the requirements of the Federal Hazardous Substances Act.

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## U.S. MECHANICAL HAZARDS SPECIFICATIONS

Detailed Procedures: The submitted samples were tested in accordance the procedures and methods of 16 CFR 1500, Hazardous Substances and Articles; Administration and Enforcement Regulations. Each specific test is detailed below.

GENERAL, Section 1500.50: Test methods for simulating use and abuse of toys and other articles intended for use by children. The test methods described in this section have been established for articles intended for the specific age groups of children.

Para.           1500.51: 18 months of age and less  
                  1500.52: over 18 months but not over 36 months of age  
                  1500.53: over 36 months but not over 96 months of age

When a toy or other article intended for children is not age labeled or inappropriately age labeled it will be subjected to the most stringent test. The most stringent test for each category is indicated by an asterisk (\*).

IMPACT TEST, Section 1500.51 (b)\*: The toy is dropped 10 times in random orientation from a height of 4.5 feet onto the impact medium. For each drop, the test sample is allowed to come to rest and is examined and evaluated before continuing for conformance to Sections 1500.48, 1500.49 and 1500.18 (a)(9).

Section 1500.52 (b): Same as Section 1500.51 (b) except that the toy is dropped 4 times from a height of 3 feet onto the impact medium.

Section 1500.53 (b): Same as Section 1500.52 (b) except requirement for Section 1500.18 (a)(9) is deleted.

BITE TEST, Section 1500.51 (c): A toy (or component or any accessible portion thereof) that has an external dimension of 1.25 inches or less and a design configuration that would permit a child to insert a portion into the mouth in any orientation up to a biting thickness of 1.25 inches for a penetration of at least 0.25 inches shall be subjected to this test.

The test article is placed in the contact mechanism in any reasonable position for a penetration of 0.25 to 0.5 inch and a test load increasing to 25 lbs. is evenly applied within 5 seconds. This load is maintained for 10 seconds.

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Section 1500.52 (c): Same as Section 1500.51 (c) except that the test load is 50 pounds.

Section 1500.53 (c)\*: Same as Section 1500.51 (c) except test load is 100 lbs. A toy or component that is a mouth toy is subjected to this test.

**FLEXURE TEST, Section 1500.51 (d):** This test applies to each component of a toy containing metal wires or other metal materials used for stiffening or for retention of form if the component can be bent through a 60-degree arc by a maximum force of 10 pounds applied perpendicular to the major axis of the component at a point 2 inches from the intersection of the component with the main body of the toy or at the end of the component if the component is less than 2 inches long.

The toy is secured in a vise equipped with vise shields that have a 0.375 inch inside radius. The component is then bent through a 60-degree arc by a force applied at a point on the component 2 inches from the intersection of the component with the main body of the toy or applied at the end of the component if the component is less than 2 inches long. The component is then bent in the reverse direction through a 120-degree arc. This process is repeated for 30 cycles at a rate of one cycle per two seconds with a 60 second rest period occurring after each 10 cycles. The toy is then evaluated for conformance to Sections 1500.48, 1500.49 and 1500.18 (a)(9).

Section 1500.52 (d)\*: Same as Section 1500.51 (d) except a force of 15 pounds is used to determine if the test applies.

Section 1500.53 (d): Same as Section 1500.52 (d) except requirement for Section 1500.18 (a)(9) compliance is deleted.

**TORQUE TEST, Section 1500.51 (e):** A toy with a projection or assembly that a child can grasp with at least the thumb and forefinger or the teeth is subject to this test.

With the toy rigidly fastened in any reasonable test position, a clamp is fastened to the test object or component. A torque of 2 inch-pounds is applied evenly within a period of 5 seconds in a clockwise direction until a rotation of 180 degrees from the original position has been attained or 2 inch-pounds exceeded. The torque or maximum rotation is maintained for an additional 10 seconds. The torque is then removed and the test component permitted to return to a relaxed condition. This procedure is then repeated in a counterclockwise direction. The toy is then evaluated for conformance to Sections 1500.48, 1500.49 and 1500.18 (a)(9).

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Section 1500.52 (e): Same as Section 1500.51 (e) except the torque is 3 inch-pounds.

Section 1500.53 (e)\*: Same as Section 1500.51 (e) except torque is 4 inch-pounds and the requirement for Section 1500.18 (a)(9) compliance is deleted.

**TENSION TEST, Section 1500.51 (f)**: Any projection of a toy that the child can grasp with at least the thumb and forefinger or the teeth shall be subject to this test. This test is to be conducted on the same toy that has been subjected to the torque test described in paragraph (e) of this section.

With the test sample fastened in a convenient position, an appropriate clamp is attached to the test object or component. A 10-pound direct force is evenly applied within a period of 5 seconds, parallel to the major axis of the test component and maintained for an additional 10 seconds. The tension clamp is then removed and a second clamp appropriate for pulling at 90 degrees is attached to the test object or component. A 10-pound tensile force is evenly applied, within a period of 5 seconds, perpendicularly to the major axis of the test component and maintained for an additional 10 seconds. The toy is then evaluated for conformance to Sections 1500.48, 1500.49 and 1500.18 (a)(9).

### **NOTE:**

**Stuffed Toys and Beanbags**: A stuffed toy or beanbag constructed of pliable materials having seams (such as fabrics) shall have the seams subjected to 10 pounds of force applied in any direction.

Section 1500.52 (f)\*: Same as Section 1500.51 (f) except tension load is 15 pounds.

Section 1500.53 (f): Same as Section 1500.52 (f) except the requirement for Section 1500.18 (a)(9) compliance is deleted.

**COMPRESSION, Section 1500.51 (g)**: Any area on the surface of a toy that is inaccessible to flat-surface contact during the impact test is subject to this test.

The loading device is a rigid metal disc 1.125 inches in diameter and 0.375 inch in thickness. The perimeter of the disc is rounded to a radius of 1/32 inch to eliminate irregular edges. The disc is attached to an appropriate compression scale having an accuracy of  $\pm 0.5$  pound. The disc is positioned so that the contact surface is parallel

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to the surface under test. A direct force of 20 pounds is evenly applied within 5 seconds through the disc. This load is maintained for an additional 10 seconds. During the test, the toy is to rest on a flat, hard surface in any convenient position. The toy is then evaluated for conformance to Sections 1500.48, 1500.49 and 1500.18 (a)(9)

Section 1500.52 (g): Same as Section 1500.51 (g) except compression force is 15 pounds.

Section 1500.53 (g)\*: Same as Section 1500.51 (g) except Compression Force is 30 pounds and the requirement for Section 1500.18 (a)(9) compliance is deleted.

SMALL PARTS, Section 1501: This procedure applies to any toy or other article intended for use by children under 3 years of age which represents a choking, aspiration, or ingestion hazard because of small parts.

No toy or other children's article shall be small enough to fit entirely within a truncated right cylinder of specified dimensions, without compressing it, before and after being subjected to the "use and abuse" tests of Sections 1500.51 and 1500.52 [excluding the bite test Section 1500.51 (c) and 1500.52 (c)].

SHARP POINTS, Section 1500.48: This procedure provides the technical requirements for determining a sharp point in toys and other articles intended for use by children under 8 years of age and applies to any point that is accessible either before or after the tests of Section 1500.51, 1500.52 and 1500.53 [excluding the bite test, paragraph (c) of each section] are performed.

The edge of the sample to be tested is held in such a manner that it does not move during the test. The Sharp Points Tester is used on all accessible points and observed for indications of sharpness.

SHARP EDGES, Section 1500.49: This procedure provides the technical requirements for determining a sharp metal or glass edge in toys and other articles intended for use by children under 8 years of age and applies to any metal or glass edge that is accessible either before or after the test of Sections 1500.51, 1500.52 and 1500.53 [excluding the bite test, paragraph (c) of each section] are performed.

The edge of the sample to be tested is held in such a manner that it does not move during the test. The Sharp Edge Tester is used on all edges and observed for indications of sharpness.