

RAMTECH LABORATORIES, INC.

14104 ORANGE AVENUE, PARAMOUNT, CALIFORNIA 90723-2019 • TELEPHONE (562) 633-4824 • FAX (562) 633-4128

Mr. Murray Scott
MATTA PRODUCTS CO., LTD.
P.O. Box 16
Otaki, New Zealand

November 12, 1999

Laboratory No. 11437-99

RE: Fire exposure testing (ASTM E108) on your Play-Matta System (playground surface system)

Dear Mr. Scott:

In accordance with your request, fire resistance tests have been conducted on your Play-Matta System. The testing was conducted in accordance with specification the of the American Society for Testing and Materials (ASTM E108) Burning Brand Procedure, Class B exposures.

Product Description

Play Matta System (rubber matting) with fire retardant additives

- A. Top mat: 500mm X 500mm X 25mm thickness (interlocking)
Nominal size (U.S. units) 20" X 20" X 1" thick
- B. Lower shock pad : 500mm X 500mm X 60mm thickness
Nominal size (U.S. units) 20" X 20" X 2 3/8" thick

The ASTM E 108 fire testing procedure was selected due to the fact that there is no specific standard relating to the fire resistance performance of playground matting. The ASTM E108 standard relates to the fire resistance of roofing and walking decks for fires originating from outside the structure, and was considered to be an appropriate method by which to evaluate the Play-Matta System.

The Play-Matta System was subjected to 2 (two) class B burning brand tests. The class B brands are 6" X 6" X 2 1/4" and are assembled with 500 grams of Douglas Fir wood constructed into a free burning crib. The brands are fully ignited with a gas burner flame, and then placed on the test mat surface. The full assembly is subjected to a continuous 12mph wind, that is supplied by a calibrated wind tunnel.

The results of the tests are detailed in attached test data tables.

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ENGINEERING • MATERIALS TESTING

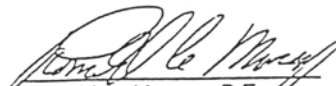
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Conclusion:

The 2 class B burning brand tests show that the Play-Matta Systems is self extinguishing. There was no lateral flame spread and no burn through of the shock pad mat. The top mats developed a heavy char layer and self extinguished early in the tests at approximately 9-10 minutes. The full Play-Matta System self extinguished at 41 minutes and 30 seconds in the first test and 43 minutes in the second test.

Respectfully Submitted,

Ramtech Laboratories, Inc.


Ronald A. Macey, P.E.
Laboratory Director

AMTECH LABORATORIES, INC.

14104 ORANGE AVENUE, PARAMOUNT, CALIFORNIA TELEPHONE NO. (562) 633-4825

TEST DATA FOR ASTM E108 (CLASS "B" BURNING BRAND)

Client: Matta Products Co., LTD. Test No.: 1 of: 2
 Date: November 10, 1999 Page No.: 1 of: 2
 Test Laboratory: Ramtech Laboratories, INC.

Description: 500mm X 500mm X 25 mm top mat (interlocking) nominal dimension: 20" X 20" X 1" thick
500mm X 500mm X 60 mm thick (lower shock pad) nominal dimension 20" X 20" X 2 3/8" thick.
 Ambient Temperature: 65.0 °F Relative Humidity: 58 %
 Brand Weight: 510 Grams Interlayment: None
 Product: Play- Matta System Fastener: None
 Deck No.: 1 Test Slope: 1/4 inches per horizontal foot

Ignition of Brand:

- A. Each 6 x 6 face for 30 seconds.
- B. Each 2-1/4" by 6 inch face for 30 seconds.
- C. Each 6 by 6 inch face again for 30 seconds.

Time Min/Sec	Test conducted by: R.A. Macey & Anthony Gonzales
	PRELIMINARY CHECK: DECK SLOPE: 1/4 "/ft.
	12mph WIND VELOCITY: 1056 ft/min. average three readings
0:00	Flaming "B" brand placed on Play -Matta Surface
00:3	Test assembly subjected to a continuous 12mph wind
1:09	Surface ignition behind brand
1:30	Light smoke
2:04	Top mat surface fully ignited behind the burning brand
3:00	Moderate smoke
4:00	Brand 15% consumed
4:30	Surface flaming receding back on top mat, heavy surface char developing
5:00	Top Mat burnt through - shock pad ignites
5:30	Brand 35 % consumed - heavy smoke as shock pad ignites
7:16	Brand 65% consumed - burning behind brand has diminished
9:15	Top mat self extinguished - moderate to heavy smoke
10:00	80% Brand consumed - brand appears to be melting through to lower shock pad
12:00	Moderate smoking as flaming continues

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1104 ORANGE AVENUE, PARAMOUNT, CALIFORNIA TELEPHONE NO. (562) 633-4824

TEST DATA FOR ASTM E108 (CLASS "B" BURNING BRAND)

Client: Matta Products Co., LTD. Test No.: 2 of: 2
 Date: November 10, 1999 Page No.: 1 of: 2
 Test Laboratory: Ramtech Laboratories, INC.

Description: 500mm X 500mm X 25 mm top mat (interlocking) nominal dimension: 20" X 20" X 1" thick
500mm X 500mm X 60 mm thick (lower shock pad) nominal dimension 20" X 20" X 2 3/8" thick.

Ambient Temperature: 66.5°F Relative Humidity: 56 %
 Brand Weight: 520 Grams Interlayment: None
 Product: Play- Matta System Fastener: None
 Deck No.: 2 Test Slope: 1/4 inches per horizontal foot

Ignition of Brand:

- A. Each 6 x 6 face for 30 seconds.
- B. Each 2-1/4" by 6 inch face for 30 seconds.
- C. Each 6 by 6 inch face again for 30 seconds.

Time Min/Sec	Test conducted by: R.A. Macey & Anthony Gonzales
	PRELIMINARY CHECK: DECK SLOPE: 1/4 "/ft.
	12mph WIND VELOCITY: 1056 ft/min, average three readings
0:00	Flaming "B" brand placed on Play -Matta Surface
00:3	Test assembly subjected to a continuous 12mph wind
1:15	Light smoke; mat surface behind brand ignited
2:00	Light smoke
2:12	Top mat surface fully ignited behind the burning brand
3:00	Brand 10% consumed - moderate smoke
4:00	Flame receding on top mat as heavy surface char is devolping
4:25	Top mat burned through, shock pad ignites
5:00	35% consumed brand - heavy smoke starting as shock pad ignites
6:00	50% consumed brand - moderate smoke
8:00	70% brand consumed moderate to heavy smoke
9:40	All flaming coming from lower shock pad - top mat self extinguished
10:00	Brand 85% consumed
11:45	Brand 95% consumed-/moderate smoke

