

New York Product Testing & Services Inc.



"Success Through Testing"

DATE:	September 10, 2002
LAB. No.:	02-107473A
CLIENT:	Fairmount Distributors, Inc 202-210 Fairmount Ave. Jersey City, NJ 07306
ATTENTION:	Melvin Lindner
CLIENT'S ORDER NO.:	Pending
MATERIAL:	Composition Panels
MARKED:	None
SUBMITTED FOR:	Smoke Density, Toxicity, Modulus of Elasticity, Shear Strength, Shear Modulus, Tensile Strength

1.0 PROCEDURE:

The submitted composition panels were sectioned as required and test coupons were prepared. The samples were tested in accordance with ASTM E662-01 and ASTM D6109-97.

2.0 RESULTS:


TEST PARAMETER	TEST DESIGNATION	RESULT (psi)
Smoke Density*	ASTM E662	None
Modulus of Elasticity	ASTM D6109	0.817x10 ⁶
Shear Strength	ASTM D6109	162
Shear Modulus	ASTM D6109	1045
Tensile Strength	ASTM D6109	205

(*) Three flaming and three non-flaming samples are required by ASTM E662. The samples did not burn so the required flaming/toxicity samples are not applicable.

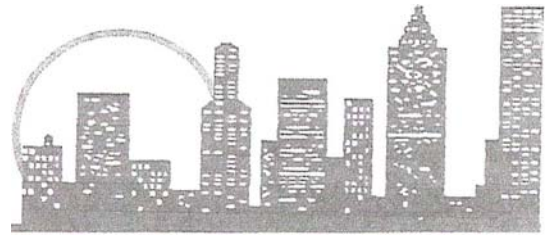
3.0 CERTIFICATION AND SIGNATURES:

We certify that this report is a true report of results obtained from tests of this material.

Respectfully submitted,
New York Product Testing & Services, Inc.


Al Barbera, Project Engineer

New York Product Testing & Services Inc.



“Success Through Testing”

DATE:	November 18, 2004	
LAB. No.:	02-107473B	
CLIENT:	Fairmount Distributors, Inc	
	202-210 Fairmount Ave.	
	Jersey City, NJ 07306	
ATTENTION:	Melvin Lindner,	
CLIENT'S ORDER NO.:	Pending	
MATERIAL:	Composition Panels	
MARKED:	None	
SUBMITTED FOR:	Modulus of Elasticity, Shear Strength, Flexural Strength	

1.0 PROCEDURE:

The submitted composition panels were sectioned as required and test coupons were prepared. The samples were tested in accordance with ASTM D6109-97.

2.0 RESULTS:


	WET CONDITION	
TEST PARAMETER	TEST DESIGNATION	RESULT (psi)
Modulus of Elasticity	ASTM D6109	0.67 x 10 ⁶
Shear Strength	ASTM D6109	277
Flexural Strength	ASTM D6109	8,935

	DRY CONDITION	
TEST PARAMETER	TEST DESIGNATION	RESULT (psi)
Modulus of Elasticity	ASTM D6109	0.93 x 10 ⁶
Shear Strength	ASTM D6109	391
Flexural Strength	ASTM D6109	8,935

3.0 CERTIFICATION AND SIGNATURES:

We certify that this report is a true report of results obtained from tests of this material.

Respectfully submitted,
New York Product Testing & Services, Inc..


Al Barbera, Project Engineer

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New York Product Testing & Services Inc.



"Success Through Testing"

DATE:	October 24, 2002
LAB. No.:	02-107499 Rev. A
CLIENT:	Fairmount Distributors, Inc. 204-212 Fairmount Avenue Jersey City, NJ 07306
ATTENTION:	Melvin Lindner, P.E.
CLIENT'S ORDER NO.:	Verbal
MATERIAL:	Composition Construction Panels, 10mm and 14mm thick, referred to as "Dragon Board" by client 1/2" and 5/8" thick gypsum wallboard
SUBMITTED FOR:	Fire Resistance per ASTM E119 (Modified) Smoke Toxicity per ASTM E662, (Modified, Gas Extraction Method)

1.0 PROCEDURE:

The Composition Construction Panel samples, two (2) 2' x 2' x 10mm thick and two (2) 2' x 2' x 14mm thick, were tested for fire resistance as follows:

Each sample was placed horizontally on top of a 16" x 16" (inside dimension) square fixture constructed of standard 2" x 4" framing lumber. A thermocouple was placed on the backside center, directly beneath the point of the flame application. Another thermocouple was placed backside 3" from the center of the flame application. A flame was applied to the top center of the samples using an acetylene-oxygen torch rendering a 2" diameter flame. After each 5 minute increment, the flame was removed and a 2" diameter load of 10 pounds was applied for 30 seconds. If no break-through occurred, an additional 10 pounds was applied for 30 seconds (20 pounds total). If no break-through occurred, the load was removed and the flame was again applied for an additional period of five minutes. This procedure was repeated until break-through occurred, recording temperatures at data points.

For comparison purposes, the procedure was repeated using gypsum board with thicknesses of 1/2" and 5/8" (1/2" gypsum being compared to the 10mm samples and 5/8" gypsum being compared to 14mm samples).

NOTE: A new sample was used after each 5 minute increment on the 10mm Composition Construction Panel samples and after each 10 minute increment on the 14mm Composition Construction Panel samples.

2.0 RESULTS:

2.1 1/2 Inch Gypsum wallboard vs. 10mm Composition Construction Panel samples:

Flame Temperature: 1558 °F to 1577 °F.

Elapsed Time (minutes)	Temperature, directly opposite side of flame application (°F)		Temperature, 3" from opposite side of flame application (°F)		Results with 10 lb. load		Results with 20 lb. load	
	1/2" Gypsum Board	10mm sample	1/2" Gypsum Board	10mm sample	1/2" Gypsum Board	10mm sample	1/2" Gypsum Board	10mm sample
5: sample-1	680	425	195	97	OK	OK	OK	OK
10: sample-2	812	547	224	126	OK	OK	Failure	Failure

2.2 5/8 Inch Gypsum wallboard vs. 14mm Composition Construction Panel samples:

Flame Temperature: 1558 °F to 1577 °F.

Elapsed Time (minutes)	Temperature, directly opposite side of flame application (°F)		Temperature, 3" from opposite side of flame application (°F)		Results with 10 lb. load		Results with 20 lb. load	
	5/8" Gypsum Board	14mm sample	5/8" Gypsum Board	14mm sample	5/8" Gypsum Board	14mm sample	5/8" Gypsum Board	14mm sample
5:sample-3	548	200	144	89	OK	OK	OK	OK
10:sample-3	757	312	177	122	OK	OK	OK	OK
15:sample-4	824	410	198	134	OK	OK	Failure	OK
20:sample-4	N/A	554	N/A	274	N/A	Failure	N/A	N/A

3.0 SMOKE TOXICITY, reference ASTM E662, modified for gases as stated.

3.1 Procedure:

One (1) test specimen was cut from a 10mm sample and one (1) test specimen was cut from a 14mm sample of the "as manufactured" panels. The test specimens were placed in front of the specific heat source, ten (10) minutes after the start of the test, the combustion products were collected in gas collection tedlar bags. The combustion products were then, separately, injected into a gas chromatograph with a mass spectrometer. Results were recorded at 4 minutes after the start of the tests.

3.2 Results:

Combustion by product Tested For:	Results, 10mm sample (PPM)	Results, 14mm sample (PPM)
Hydrogen Chloride	<0.01	<0.01
Hydrogen Bromide	<0.01	<0.01
Hydrogen Cyanide	<0.01	<0.01
Hydrogen Sulfide	<0.01	<0.01
Vinyl Chloride	<1.0	<1.0
Ammonia	<1.0	<1.0
Aldehydes	<1.0	<1.0
Nitrous oxides	<10	<10
Carbon Dioxide	<10	<10
Carbon Monoxide	<10	<10

(<) denotes minimum detection limit was reached.

NOTE: No combustion actually occurred.



4.0 CERTIFICATION AND SIGNATURES:

We certify that this report is a true report of results obtained from tests of this material.

Respectfully submitted,
New York Product Testing & Services, Inc.



Al Barbera, Project Engineer

