



PERFORMANCE TEST REPORT

Rendered to:

EUROCON BUILDING INDUSTRIES (F.Z.E.)

**PRODUCT: 3 mm Alubond
Metal Composite Material**

Report No: 72990.01-106-31
Report Date: 06/08/07
Expiration Date: 05/30/11

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PERFORMANCE TEST REPORT

Rendered to:

EUROCON BUILDING INDUSTRIES (F.Z.E.)
P.O. Box 4819
Ajman, Freezone
Ajman, U.A.E

Report No: 72679.01-106-31
Test Dates: 05/04/07
Through: 05/30/07
Report Date: 06/08/07
Expiration Date: 05/30/11

Product: 3 mm Alubond Metal Composite Material

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Eurocon Building Industries (F.Z.E.) to determine the adhesion and tensile strength of their 3 mm Alubond Metal Composite Material. The average test results are listed in the table below.

ASTM D 1781 Climbing Drum Peel Resistance

Aluminum Panels	Torque Averages	
	in·lb/in	N·mm/mm
Machine Direction	54.1	240.9
Cross Direction	50.5	229.7

Test Methods: The test specimens were evaluated in accordance with the following:

ASTM D1781-98 (2004), *Standard Test Method for Climbing Drum Peel for Adhesives*.

ASTM E 8-04 *Standard Test Methods for Tension Testing of Metallic Materials, Section 6.1.2.1*

Product Description and Conditioning: Alubond USA 3 mm thick aluminum composite panels are manufactured using a hot roller lamination process of two 0.3mm aluminum skins bonded with thermally applied Bynel adhesive film from DuPont Germany to a 2.4mm thick LDPE core.

ATI received 20 aluminum composite test panels (10 machine direction, 10 transverse direction) and six aluminum skin samples. For the samples to achieve thermal equilibrium, they were stored at laboratory temperature of 70°F (21°C) and 50% RH for seven days before testing.

ASTM F 1781 Climbing Drum Peel

The aluminum composite panels were prepared for testing by kerfing out a nominal one inch strip of panel along the entire length of each sample, fastening the sample in the climbing drum assembly and testing each sample at 1.0 ±0.10 inch per minute on a SATEC Model 50UD Universal Test Machine. The test apparatus was calibrated using the faces of a test specimen. The average load to overcome the resisting torque of the drum assembly was found to be 6.17 lbs for the machine direction and 5.75 lbs for the transverse direction.

Machine Direction							
Sample	Width (in)	Min. Load (lbs)	Peak load (lbs)	Avg. Load (lbs)	Torque (in·lb/in)	Torque (N·mm/mm)	Failure Type
1	1.016	88.6	93.6	97.4	45.4	201.8	Adh. to core
2	1.006	84.0	123.5	81.6	37.9	168.5	Adh. to core
3	1.016	81.0	113.6	83.2	38.3	170.3	Adh. to core
4	1.008	81.3	104.3	85.7	39.8	177.2	Adh. to core
5	1.004	99.5	107.0	95.7	45.0	200.3	Adh. to core
6	1.004	84.5	105.5	87.7	41.0	182.3	Adh. to core
7	1.009	84.5	89.7	87.3	40.6	180.5	Adh. to core
8	1.009	85.8	90.2	87.3	40.6	180.6	Adh. to core
9	0.997	81.3	81.3	83.3	39.1	173.7	Adh. to core
10	1.006	84.9	115.9	87.6	40.9	181.7	Adh. to core
Average	1.008	85.5	102.5	87.7	40.9	181.7	Adh. to core

Note: "Adh. to core" stands for adhesive maintained adhesion to the core material during testing.

Test Results: (Continued)


ASTM F 1781 Climbing Drum Peel

Transverse Direction							
Sample	Width (in)	Min. Load (lbs)	Peak load (lbs)	Avg. Load (lbs)	Torque (in·lb/in)	Torque (N·mm/mm)	Failure Type
1	1.007	75.7	124.4	80.9	37.7	167.6	Adh. to core
2	1.006	83.3	164.4	95.5	45.0	200.3	Adh. to core
3	1.000	81.8	86.9	84.5	39.7	176.8	Adh. to core
4	1.000	78.7	148.5	92.6	43.9	195.2	Adh. to core
5	0.997	74.1	78.9	76.7	36.0	159.9	Adh. to core
6	1.004	74.3	81.4	77.3	36.0	160.1	Adh. to core
7	1.000	80.2	85.5	83.1	39.0	173.7	Adh. to core
8	1.000	82.8	101.6	84.9	40.0	178.0	Adh. to core
9	1.002	79.5	85.3	81.6	37.5	167.0	Adh. to core
10	1.010	82.6	87.3	83.7	39.0	173.3	Adh. to core
Average	1.003	79.3	104.4	84.1	39.4	175.2	Adh. to core

Note: "Adh. to core" stands for adhesive maintained adhesion to the core material during testing

Data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are tested values and were secured by using the designed test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:



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Claudia Hacker
Technician I - Component/Materials Testing



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Todd Burroughs
Director - Component/Materials Testing

CH:ch/nlb

Attachments (pages) This report is complete only when all attachments listed are included.
Appendix A - Photographs (2)



Photo No. 1
Climbing Drum Peel Test - Front View



Photo No. 2
Climbing Peel Drum Test - Side View