

EcoDecking



Roofing Systems

Date: January 16th, 2007

Project Number: WPC0516012007

Description: WPC (wood-plastic composite) Density Test

Sample Selection: Samples were randomly selected from inventory on December 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with ASTM D792

- Sample Dimension: 10MM×10MM×10MM
- Test environment 77±1°F, relative humidity 50 + 5%

Observations:

Product

Density (g/cm³)

Meixin A

1.18

Meixin B

1.19

Meixin C

1.20

Average value

1.19

Conclusion: The density was calculated by specific value between weight in air and in water and the value 1.19g/cm³ meets the pre-requirements.

Reported By: Cathy Wang

Polymer Engineer

Reviewed By: Ji Jian Ren

R & D Chief Engineer

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Date: January 16th, 2007

Project Number: WPC0116012007

Description: WPC (wood-plastic composite) Four Points Bend Strength Test

Sample Selection: Samples were randomly selected from inventory in December 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with **ASTM D6109**

- Sample Dimension: 500MM × 50MM × 25MM
- Test environment 77 ± 1°F, relative humidity 50 ± 5%
- Test speed 1.18mm/min

Observations: Product	Bend Strength (psi)	Bend Modulus (psi)	Drop Down Displacement (mm)
Meixin A	2871	297119	26.5
Meixin B	2898	298967	25
Meixin C	2846	310010	22.6
Average	2872	302032	24.7

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Date: January 16th, 2007

Project Number: WPC0616012007

Description: WPC (wood-plastic composite) Hardness Test

Sample Selection: Samples were randomly selected from inventory in December, 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with **GB2411-80**

- Sample Dimension: 30 MM × 30MM × 10MM
- Test environment 77 ± 1°F, relative humidity 50 ± 5%

Observations: Product	Shore D Hardness
Meixin A	68
Meixin B	68
Meixin C	67
Average	68

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Date: January 16th, 2007

Project Number: WPC0716012007

Description: Meixin WPC HDT Test

Sample Selection: Samples were randomly selected from inventory in December, 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with **ASTM D648**

- Dimension: 125MM × 13MM × 6MM
- Test environment $77 \pm 1^{\circ}\text{F}$, relative humidity $50 \pm 5\%$
- Compressive stress: 264psi
- Medium: Silicon Oil

<u>Observations: Product</u>	Bend Strength (psi)
Meixin A	214
Meixin B	214
Meixin C	208
Average Value	212

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Date: January 16th, 2007

Project Number: WPC0316012007

Description: WPC (wood-plastic composite) Nail Withdrawal Test

Sample Selection: Samples were randomly selected from inventory in December 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with **ASTM D1761**

- Sample Dimension: 380 MM × 25MM × 65MM
- Nail Diameter: 5.7mm, L: 49.54mm, thickness that nail in mm
- Test environment $77 \pm 1^{\circ}\text{F}$, relative humidity $50 \pm 5\%$
- Test Speed 2.5mm/min
- At first, use a small nail to pre-drill a 20mm hole, then nail in.

<u>Observations:</u> Product	Nail Withdrawal (lbs)
Meixin A	810
Meixin B	800
Meixin C	796
Average	802

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Date: January 16th, 2007

Project Number: WPC0416012007

Description: WPC (wood-plastic composite) Tensile Strength Test

Sample Selection: Samples were randomly selected from inventory in December, 2006. The product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with ASTM D638

- Sample Dimension: 165MM×13MM×3MM, dumbbell shape
- Test environment 77±1°F, relative humidity 50 + 5%
- Test speed 100mm/min

Observations:

Product

Tensile Strength

(psi)

Meixin A

1787

Meixin B

1821

Meixin C

1810

Average

1806

Conclusion: Under these testing conditions, Meixin products show their excellent tensile strength property and meet the pre-requirements.

Reported By: Cathy Wang

Polymer Engineer

Reviewed By: Ji Jian Ren

R & D Chief Engineer

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Date: January 16th, 2007

Project Number: WPC0216012007

Description: WPC (wood-plastic composite) Three Points Bend Strength Test

Sample Selection: Samples were randomly selected from inventory in December, 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China.

Methods and Results: The test method is in accordance with **ASTM D790**

- Sample Dimension: 128MM × 13MM × 3MM
- Test environment 77 ± 1°F, relative humidity 50 ± 5%
- Test speed 2mm/min

Observations: Product	Bend Strength (psi)	Bend Modulus (psi)
Meixin A	3084	275181
Meixin B	3100	278201
Meixin C	3065	274462
Average	3083	275948

Conclusion: Under these testing conditions, Meixin products show their excellent bend strength toughness and they meet the necessary requirements.

Reported By: Cathy Wang

Polymer Engineer

Reviewed By: Ji Jian Ren

R & D Chief Engineer

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Date: January 05th, 2007

Project Number: WPC05012007

Description: WPC (wood-plastic composite) Water Absorption Test

Sample Selection: Samples were randomly selected from inventory in December, 2006. The Product was manufactured at Meixin Manufacturing, Guangdong Province, PRC China, the surface treatment is non gross.

Methods and Results: The test method is in accordance with ASTM1037: samples are separately put in the oven till the weight kept unchanged and then dipped in water for 24 hours.

- Dimension: 50MM×50MM×23MM;
- Distilled water temprature 77±1°F;
- Test environment 77±1°F, relative humidity 50 + 5%;
- Oven temprature: 194°F.

Observations:

Product

Water absorption after 24hours

Meixin A

1.327

Meixin B

1.192

Meixin C

1.204

Average

1.241

Conclusion: After 24 hours, the average water absorption of non-gross WPC board from Meixin manufacturing is 1.241%

Reported By: Cathy Wang

Polymer Engineer

Reviewed By: Ji Jian Ren

R & D Chief Engineer