

Test Report

Report Number: 160316008SHF-BP-1

Applicant Name: FACTORY OF UNITED MINING INDUSTRIES **Report Date:** 2016.4.18

Applicant Address: AL-RAZI STREET, LIGHT INDUSTRIAL AREA, YANBU AL-SINAYAH, YANBU-KSA

Attn: MR. SHAKEER HUSSAIN

Sample Description:

Product: Fiber cement board
Model: 6mm
Sample Quantity: 15 pieces
Sample ID: S160316008SHF.001
Date Received: 2016.2.24
Date Test Conducted: 2016.3.16~2016.4.18

Tests Conducted:

As requested by the applicant, for details refer to attached pages(s).

Conclusion:

For details refer to attached page(s).

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | | | Test Results | Verdict |
|-------------------|---------------------|-------------------|-----------|-------------------|--|---------|
| Flexural strength | ASTM C1185-08(2012) | Grade | Wet (Mpa) | Equilibrium (Mpa) | Wet: 5.7 Mpa Equilibrium: 8.7 Mpa | Grade I |
| | | I | ≥4 | ≥4 | | |
| | | II | ≥7 | ≥10 | | |
| | | III | ≥13 | ≥16 | | |
| | | IV | ≥18 | ≥22 | | |

Note:

1. The requirements was for Type A sheets in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|------------|---------------------|---|--|---------|
| Density | ASTM C1185-08(2012) | Comply with the value stated by the manufacturer. | Stated: no claimed Tested: 1270 kg/m ³ | NA |

Note:

1. The requirements was in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|-------------------|---------------------|---|--|---------|
| Length and width | ASTM C1185-08(2012) | Tolerance: $\pm 0.5\%$ & max. variation $\pm 6\text{mm}$ | Norminal: Length: 2400 mm Width: 1200 mm Tested: Length: 2397 mm Tolerance: -0.1 % Max. Variation: -3 mm Width: 1200 mm Tolerance: 0 % Max. Variation: 0 mm | Pass |
| Thickness | | ± 1.0 mm | Norminal: 6 mm Tested: 6.5 mm | Pass |
| Squareness | | $\leq 2.6\text{mm/m}$ | 0.8 mm/m | Pass |
| Edge Straightness | | $\leq 2.6\text{mm/m}$ | Length: 0.3 mm/m Width: 0.8 mm/m | Pass |

Note:

1. The requirements was in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|-------------------|---------------------|--|---|---------|
| Mositure movement | ASTM C1185-08(2012) | The linear variation with change in moisture content shall be stated in length based on a relative humidity change from 30 to 90%. | Length change: 0.10 % Width change: 0.07 % | NA |

Note:

1. The requirements was in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|------------------|---------------------|--|--------------------|---------|
| Water absorption | ASTM C1185-08(2012) | Submersion time: 48 hour Room temperature Increase in weight | Absorption: 37.9 % | NA |

Note:

1. The requirements was in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|------------------|---------------------|--|--------------|---------|
| Mositure content | ASTM C1185-08(2012) | Equilibrium condition: 23°C, 50% R.H. Dry condition: 90°C in oven | M: 10.3 % | NA |

Note:

1. The requirements was in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|-----------------|---------------------|--|---|---------|
| Water Tightness | ASTM C1185-08(2012) | Not prohibited from showing traces of moisture on the underside of the sheet, but in no instance shall there be any formation of drops of water. | There was no drops of water but showing traces of moisture on the underside of the sheet. | Pass |

Note:

1. The requirements was for Type A sheets in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|------------------|---------------------|--|---------------------------------------|-----------|
| Frost Resistance | ASTM C1185-08(2012) | For 50 cycles, specimens shall not show visible cracks or structural alteration such as to affect their performance in use. The ratio of retained strength shall be at least 80% | Visible check: Retained ratio: | Pass/Fail |

Note:

1. The requirements was for Type A sheets in accordance with ASTM C1186-08(2012).


Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|-----------------------|---------------------|--|---------------------------------------|-----------|
| Warm Water Resistance | ASTM C1185-08(2012) | After 56 days submersion at 60° C, specimens shall not show visible cracks or structural alteration such as to affect their performance in use. The ratio of retained strength shall be reported. | Visible check: Retained ratio: | Pass/Fail |

Note:

1. The requirements was for Type A sheets in accordance with ASTM C1186-08(2012).

Test Items, Method and Results:

| Test Items | Test Method | Test Requirements | Test Results | Verdict |
|----------------------|---------------------|---|--|-----------|
| Heat Rain Resistance | ASTM C1185-08(2012) | For 25 cycles, specimens shall not show visible cracks or structural alteration such as to affect their performance in use. | Visible check:  | Pass/Fail |

Note:

1. The requirements was for Type A sheets in accordance with ASTM C1186-08(2012).

Appendix A: Sample received photo



Approved by:

The End of Report

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