

ROK-ON™ Product Testing

ROK-ON™ trademark owned by MagBoard LLC
 Testing done by Intertek, NTA, QAI and TCNA for MagBoard LLC
 Testing documents available upon request

Color Code

ROK-ON™ FRCC
 ROK-ON™ SIS
 ROK-ON™ SIP



| TEST AND PERFORMANCE REQUIREMENTS | TEST STANDARD | REQUIREMENTS | TEST RESULTS |
|---|---|----------------------------------|---|
| PHYSICAL PROPERTIES TESTING - ROK-ON™ FRCC Board (12mm 1/2 inch) | | | |
| Non Combustible | ASTM E136-09a | No flaming under test parameters | Rated as Non Combustible |
| Surface Burning Characteristics | ASTM E84 ANSI 2.5 NFPA 255 UBC 8-1 UL 723 | 5 smoke 10 flame contribution | 0 smoke 0 flame contribution |
| Surface Burning Characteristics over Foam Plastics | CAN/ULC-S124/M85 | 15 minutes | Class A rating 30 min |
| Flexural Strength | ICC-ES AC386 ASTM C1185-08 | min 580 psi both wet and dry | Dry parallel 1576 psi, dry perpendicular 2251 psi, wet parallel 1291 psi, wet perpendicular 2041 psi |
| Humidified Deflection | ICC-ES AC386 ICC-ES AC378 ASTM 473-07 | < 0.3125" (ceiling) | .053 in. |
| Shear Bond Strength | ICC-ES AC386 ANSI 118.1 ANSI 118.4 | >50 PSI | 53.698 Average Dry-set Strength 53.634 Average Latex-Portland Strength |
| Water Absorption | ICC-ES AC386: ASTM C1185-08 | | 29.80% |
| Water Vapour Transmission | ASTM E96/E96M-05 | | 2.46 perms |
| Compression Indentation | ICC-ES AC386 ASTM D2394 | >1250 psi <.05 inch | Pass 1736 PSI |
| Nail Head Pull Through | ICC-ES AC386 ASTM D1037-99: | >90 lb. | 292 lb - pass |
| Screw Pull Out Test | ICC-ES AC386 ASTM D1037-99: | >90 lb. | 220.9 lb - pass SDS screw |
| Lateral Nail Resistance | ICC-ES AC378 ASTM D1037-99: | >90 lb. | Pass dry 1/4" 115 lb, wet 1/4" 41lb, dry 3/8" 196lb, wet 3/8" 113 lb, dry 1/2" 261lb, wet 1/2" 157lb, dry 3/4" 337 lb, wet 3/4" 209lb |
| Falling Ball Impact | ICC-ES AC386 ASTM D1037-99: | no damage at 12" drop | Pass |

| ROK-ON™ ASSEMBLY and PANEL STRUCTURAL TESTING - | | | |
|---|-------------------------|--|--|
| Structural ROK-ON™ FRCC with 2x6 Wood Frame | ASTM E72-05 | Transverse Load, Wet Racking Shear 1/8 in deflection | Positive pressure 260psf recorded (Assembly exceeded test frame capabilities) Negative Pressure 201 psf 5270 lbs 658.8plf 1483 lbs 185.4 plf |
| Structural ROK-ON™ FRCC with 2x4 Steel Frame | ASTM E72-05 | Transverse Load, Wet Racking Shear Deflection | Positive pressure 237psf Negative Pressure 102psf 7494 lbs 936.67plf See report performance tables |
| Structural 4ft x 8ft x 6.5inch ROK-ON™ Structural Insulated Panel (SIP) | ASTM E72-02 ASTME564 | Transverse Axial load Racking Shear | 161 psf 55,741 lbs 10,869 lbs 1/8in deflection 3,773 lbs 453 lbs 1/8in. deflection 472 lbs |
| Structural 4ft x 8ft x 8.5inch ROK-ON™ Structural Insulated Panel (SIP) | ASTM E72-02 ASTME564 | Transverse Axial load Racking Shear | 188.7 psf 66,246 lbs 10,063 lbs 1/8in deflection 3,020 lbs 419 lbs 1/8in. deflection 371 lbs |
| Structural 4ft x 9ft x 6.5inch ROK-ON™ Structural Insulated Panel (SIP) | ASTM E72-02 ASTME564 | Transverse Axial load | 182 psf 43,247 lbs |
| Structural 4ft x 9ft x 8.25inch ROK-ON™ Structural Insulated Panel (SIP) | ASTM E72-02 ASTME564 | Transverse Axial load | 224psf 51,888 lbs |
| Structural ROK-ON™ 2.75" SIS with Steel Frame (Several different configurations - see report) | ASTM E72-05 | Wind Seismic Nominal Flexural Strngth Axial Loading | Contact ROK-ON™ representative for report detail. |

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| TEST AND PERFORMANCE REQUIREMENTS | TEST STANDARD | REQUIREMENTS | TEST RESULTS |
|--|---|---|--|
| ROK-ON™ ASSEMBLY and PANEL FIRE TESTING | | | |
| Fire Rated Assembly ROK-ON™ FRCC 12mm - 2x6 Wood Frame | E119-08a | Per assembly | 2 Hour Fire Endurance Rating |
| Fire Rated Assembly ROK-ON™ FRCC 12mm - 2x4 Steel Frame | E119-08a | Per assembly | 2 Hour Fire Endurance Rating |
| Fire Rated Assembly ROK-ON™ FRCC 6mm- 2x6 Steel Frame | E119-08a UL 263 CAN/ULCS101 | Per assembly | 1 Hour Fire Endurance Rating |
| 6.5 in. Structural Insulated Panel | E84-10 UL 723 UBC 8-1 NFPA 255 | Per Assembly | 0 Flame spread 0 Smoke generation (1/2 hour test) |
| 6.5 inch Structural Insulated Panel | E119-10a UL 263 NFPA 251 CAN/ULC S101-07 UBC 7-1 | Per assembly | 2 hour fire endurance rating w/ 1 layer standard Drywall. 47 minutes with no additional layers |
| 6.5 inch Structural Insulated Panel | E119-10a UL 263 NFPA 251 | Per assembly | 2 hour fire endurance rating w/ 1 layer standard Drywall. 47 minutes with no additional layers |
| 2.75" ROK-ON™ Structural Insulated Sheathing (SIS) | NFPA 285 | Per assembly | Wall did not combust - 0 flame spread. Heat transfer was 30% below the requirement |
| 2.75" ROK-ON™ Structural Insulated Sheathing (SIS) | ASTM-E119 CAN/ULS S101 | Per Assembly | 2 hour fire endurance rating - Contact ROK-ON™ representative for report detail. |
| WET AREA UNDERLAYMENT AND BACKER BOARD TESTS (6mm 1/4 inch) | | | |
| Dimensional Tolerances | ASTM C1185 | Length (in.) =/-.25 Width (in.) =/-.25 Thickness (in.) =/-.25 Square Straightness (in.) =/-.25 Edge Straightness (in.) =/-.25 | Pass Pass Pass Pass Pass |
| Flexural Strength | ASTM C1185 | >1450 PSI | 2800 PSI |
| Fastner Pull Through | ASTM D1037 | >.90 | Pass |
| Compressive Strength | ASTM C1325 ASTM D3295 | >1250 PSI | Pass |
| Surface Burning Characteristics | ASTM E84 | 5 smoke 10 flame contribution | 0 smoke 0 flame contribution |
| Non Combustible | ASTM E136-09a | No flaming under test parameters | Rated as Non Combustible |
| Mold and Mildew | ASTM G21 ASTM D3272 | Non Nutrient | Pass Non Nutrient |
| Fungus Testing | ASTM D3273 | Pass | No evidence of fungal growth ASTM rating of 10 |
| Linear Variation With Change In Moisture Content | ASTM D1037 | Less than or equal to .07% | 0.07% |
| Moisture Movement % Linear Change. | ASTM C 1185 | Less than or equal to .07% | 0.07% |
| Modulus of Elasticity | ASTM D1037 ANSI 208.1-99 | 398,900 | 456,100 |
| Modulus of Rupture | ASTM D1037 ANSI 208.1-99 | 2,393 | 3,071 |
| Modulus of Rupture Retention | ASTM D1037 ANSI 208.1-99 | retain min of 50% MOR | Pass |
| Weight | ASTM 1037 | Weight per Sq. Ft. | 1.4 lbs. |
| Thickness Swell | ASTM 1037 | 24 hour thickness swell | 3.5% - 4% |
| 7 day Shear Bond Strength Portland Cement | ANSI A 118.1 | 50 PSI at 7 day curing | 98 PSI |
| 7 Day Shear Bond Strength Organic Mortar | ANSI 136.1 | 50 PSI at 7 day curing | 189 PSI |
| Latex Portland Cement Mortar | ANSI A 118.4 | 50 PSI at 7 day curing | 201 PSI |
| Organic Mortar | ANSI 136.1 | 50 PSI at 7 day curing | Pass |
| Humidified Deflection | ICC-ES AC386 ASTM C473-07 ICC-ES AC378 | <.3125 in. (ceiling) | .053in. |