

SUMMARY OF QUADWALL® / PENTAGLAS® TEST DATA AND RESULTS

| Test Description | CPI #'s | *Test Procedure | Results & Comments |
|--|--------------------|-------------------------------------|--|
| 1. Flammability | | | |
| • Self-Ignition | 211 | ASTM 1929-3 | 1058°F |
| • Smoke Density of Plastic | 210 | ASTM D-2843 | 54% |
| • Burning Extent | 212B | ASTM D-635 | CCI rating-less than 1.0” burn extent |
| • Interior Flame Spread | 213A | ASTM E-84 | Several ratings are available: |
| And Smoke Development | 215 | CAN/ULC,S102.2-M88 | Class A, B, or C (I,II,III) |
| • Exterior Class “A” Roof Construction-Optional | 214 | ASTM E-108, UL790/UBC 32-7 | A special Quadwall® configuration is listed and labeled for Class “A” rating by independent recognized laboratory. Class “B” or “C” are available |
| 2. Weathering | | | |
| • 10 yr Florida Weathering Eval | 414, 415 | ASTM E-330, E695, E-1886,1996 | Impact loading, Large missile, Uniform Air load and Cyclic wind loading shall not decrease after 10 years exposure to Florida weather |
| Weathering Evaluation | 410 | ASTM D4364-84 | Successful exposure to concentrated natural sunlight radiation of 56000 MJ/M ² (1540 MJ/M ² of U.V.) at New River Site, Arizona. |
| • Color Change | 412 | ASTM D2244 | No more than 3.0 units Delta E after 60 months. |
| • Light Transmission | 413 | ASTM D1003 | Shall not decrease more than 6% after 10 years. |
| • Heat Exposure Evaluation (weathering effect-tendency for potential failure) | 411 | 300°F, 25 mins. | The interior and exterior faces do not darken more than 0 units Delta L/ASTM D2244, and 0% Light Transmission/ ASTM D 1003. |
| 3. Water Penetration | 320, 324 | ASTM E-331 | No penetration at test pressure per AAMA 501 recommendation |
| 4. Air Infiltration | 321, 325 | ASTM E-283/NFRC 400 | Pass requirements per NFRC 400 |
| 5. Impact | 514 | ATSM E-822-81 | Panel repels hailstones of 1-3/16” at velocity 82’/sec. – no penetration |
| Missile Impact Level D | 502A/B | ASTM 1886&ASTM E1996 | Successfully tested for 350 Ft. Lbs. |
| Large Missile Impact | 512,521 520A/B, | FBC 2004, TAS 201-94 | Successfully tested per S. Florida hurricane large missile cannon test for 350 Ft-Lbs. |
| Impact Loading | 512A/B | ASTME 695 | Successfully tested for 500 Ft. Lbs. |
| 6. Accelerated Delamination | 411 | 300°F, 25 mins. & Sub-zero temp. | The faces do not become readily detached No delamination occurs under load. |
| 7. “U” Factor Quadwall- 2 Panels | 310B, | Per NFRC 100 | 0.23 to 0.08 Center of Glass (2 panel assembly) |
| “U” Factor Pentaglas- 1 Panel | 310A/C | | 0.48 to 0.38 Center of Glass (1 panel assembly) |
| 8. SHGC Quadwall – 2 panels | 412 | Calorimeter | 0.08 to 0.41 (as required)* (2 panel assembly) |
| SHGC Pentaglas - 1 Panel | 412 | Calorimeter | 0.26 to 0.74 (as required)* (1 panel assembly) |
| 9. Polycarb Expansion/Contraction | | Linear thermal expansion | 0.0000375 in/in/°F |
| 10. Code Compliance Eval. Reports | 110, 111 | ICC Evaluation Reports | ICC ER-4798; 94160 |
| | 124 | Dade Cty Hurricane Resist. | Dade County Approval #05-1207.01 |
| | 125 | Florida Building code | FL6475, FL6599, FL6600, FL8804 |
| 11. OSHA Compliance – Point Load | 515 | 29 CFR 1910,23 (e) (8) | 300 lb. Point load with no damage |
| 12. OSHA Compliance - Fall Protection/ /Walk through | 502abc 512, 520 | ASTM E 695-03 | 500 Ft. Lbs |
| 13. ISO Quality Standard | 115 | SI ISO 9002 | Pentaglas® / Quadwall® complies with Quality Management Standard SI ISO 9002 – Certificate #10700 |

The above listed test reports are available and can be submitted upon request.



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