1649 St Clair Ave W
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TruNorth Deck
Accuspan Deck Board

Confirmation of Professional Design and Test review

Prepared for:

TruNorth Composites Inc
55 Plant Farm Blvd
Brantford, ON

Prepared by:

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Project No: 102-25-3456

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BACKGROUND

MXL Engineering & Associates Inc has been engaged to provide structural engineering review of the Accuspan Deck Board manufactured by TruNorth Composites Inc. The Accuspan decking is a Wood Plastic Composite product comprised of high-density polyethylene (HDPE) and rice huls which is to be used as deck board. Accuspan deck board to be fastened using Slide & Go Hidden Fastening Clip. This report addresses the structural adequacy of using this product as an exterior residential deck board for any location in Ontario.

COMMENTS

TruNorth Composites Inc has provided MXL Engineering a summary of material test results from independent testing laboratory Intertek Testing Services NA LTD. The results are based on tests completed using standard test methods described by ASTM D7032-21, Flexural Performance and Creep-Recovery and Duration of Load Test in accordance with section 3.11 of ICC-ES AC174, signed by Igor Radovic, P.Eng.

Results are given APPENDIX A: Test Data in the attached report.

Figure 1 – Trunorthdeck Composite Deck Boards – Grooved Edge

Figure 2 - Trunorthdeck Composite Deck Boards – Square Edge

SUMMARY OF RESULTS

Grooved Edge
Max Load = 789.1 Lbs
Deflection = 2.04 mm
MOR (Modulus of Rupture) = 18.4 Mpa
MOE (Modulus of Elasticity)= 1846.7 Mpa.

The structural analysis was based on the assumption that the boards are supported by structural framing spaced at 12”o.c. as indicated TruNorth Composites Inc Installation Instructions (see attached). Based on the mechanical properties provided by Trunorth Composites Inc and Intertek Testing Services NA, LTD and our structural analysis, it is our opinion that the Accuspan deck boards are structurally adequate to support a maximum specified occupancy load of 1.9 kPa (40 psf) or a maximum specified roof snow load of 2.9 kPa (61 psf) in Ontario, Canada as specified in the Ontario Building Code 2024 Clauses 9.4.2.2 and 9.4.2.3. respectively. Undersigned hereby makes known to be responsible for the field review for above mentioned building insulation components as indicated by design and make this report available to the authority having jurisdiction

CONCLUSIONS

This report is based on test results determined by independent testing companies and forwarded to MXL Engineering by TruNorth Composites Inc. No test have been performed by MXL Engineering. No attempt to verify the accuracy of the test results has been performed by MXL Engineering. MXL Engineering has not investigated the long term effects of outdoor exposure to the deck material. TruNorth Composites Inc assumes all liability for material deterioration in their product warranty.

The Undersigned hereby makes known to be responsible for the field review for above mentioned building insulation components as indicated by design and make this report available to the authority having jurisdiction.

Bruno Lopes, P.Eng

Registered Professional

Encl: Intertek Testing Services NA, LTD Report