

2395 SPEAKMAN DRIVE, MISSISSAUGA, ONTARIO CANADA L5K 1B3 • TEL: (905) 822-4111 • FAX: (905) 823-1446

July 2, 2002

Director of Engineering
GSW Thermoplastics Company
 26 Lorena Street
 Barrie, ON
 L4N 4P4

Re: Yardcrafters™ Vinyl Railing System – Strength Testing

- 10' system (42" high with square balusters) tested with the following anchorage:
- 4" x 4" posts, fixed points, BMTC Inc. Report No. 02-06-M0088

This letter confirms that the Yardcrafters™ Vinyl Railing System, manufactured by GSW Thermoplastics Company has been tested for structural compliance with the design load requirements for guardrail systems specified in the 1995 National Building Code of Canada and the 1997 Ontario Building Code sections 4.1.10.1.1(c), 4.1.10.1.2, 4.1.10.1.4 entitled "Loads on Guards".

Testing was performed by Bodycote Materials Testing Canada Inc. at our Bodycote Ortech Laboratory.

The following table summarizes the test results for the Yardcrafters™ Vinyl Railing System

NBCC / OBC 4.1.10.1 – Loads on Guards				
Criteria	Specified Load	Minimum Design Load Required	1.5 x Factored Load Required	Test Result
Section 4.1.10.1.1(c) – 0.75kN.m or 1.0kN applied at any point				
Uniformly distributed load applied in horizontal direction	0.75 kN/m	2.35 kN	3.53 kN	Pass
Concentrated load applied at the midpoint and end of the rail in horizontal direction	1.0 kN	1.0 kN	1.5 kN	Pass
Concentrated load applied at the midpoint and end of the rail in vertical down direction	1.0 kN	1.0 kN	1.5 kN	Pass
Section 4.1.10.1.2 – 0.5 kN applied to elements within the guard				
Concentrated load applied to individual balusters	0.5 kN	0.5 kN	0.75 kN	Pass
Section 4.1.10.1.4 – 1.5 kN/m applied vertically at the top of every guard				
Uniformly distributed load applied in vertical down direction	1.5 kN/m	4.71 kN	7.06 kN	Pass

These test results confirm that the Yardcrafters™ Vinyl Railing System complies with the structural requirements listed in the 1995 National Building Code of Canada and the 1997 Ontario Building Code sections 4.1.10.1.1(c), 4.1.10.1.2, 4.1.10.1.4 entitled "Loads on Guards".

Details of the test procedure and results for the Yardcrafters™ Vinyl Railing System can be found in the report noted above.

The system tested was a 10'4" rail system. It is expected that an 8' system using the same gauge and type of reinforcing steel would also meet the requirements noted above.

For further information, please contact the Building Performance Group at the Bodycote Materials Testing Canada Inc., Ortech Laboratory.

Sincerely,

Prepared by:



Paul Chisholm, M.A.Sc., P.Eng.
Project Engineer
Building Performance

Reviewed by:



David W. Bailey, P.Eng.
Operations Manager
Material Technologies

