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Client: Crown Building Products of Florida, LLC
 6018 S.W. Highway 72
 Arcadia, Florida 34266
 Att. Mr. Juan Prestamo

Report Date: 9/12/14
 ATLSF Report #: RT0912.01-14

Re: Calculations for Aerodynamic Multiplier per FBC, Section 1518.8.4.5
 Calculations for Weight and Restoring Moment Due to Gravity per TAS 101-95
 Sections 10.2 & 10.2, TAS 102-95 & 102A-95 Sections 9.1 & 9.2.

Service Authorized by:	Juan Prestamo
Manufacturer:	Crown Building Products of Florida, LLC
Model:	Windsor, Flat, Concrete Roof Tile
Imprint:	WINDSOR CROWN
Nominal Dimensions (in.), (l x w x h), provided by supplier:	17.0 x 13.0 x N/P
Nominal Thickness (in.), provided by Supplier:	0.59
Nominal Weight (lbf): as provided by supplier:	11.7
Classification per TAS 112- 95:	Type 3a- Flat Profile, Interlocking
Purpose:	New Product Approval
Comments:	Attachment Resistance Expressed as a Moment Data to be obtained from Tile Roof Institute data on file.

ATLSF Accreditations & Certifications:	Miami-Dade: 13-0228.09 A2LA: 2650.01 testing FBC Organization #: TST3782
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Calculations:

1. Weight (W):

$$W = m \times 1 \text{ lbf s}^2/\text{ft} \times 32.2 \text{ ft/s}^2$$

$$32.174 \text{ lbf}$$

$$W = 11.7 \times 1.0008$$

$$W = 11.709 \text{ lbf}$$

2. Restoring Moment Due to Gravity (M_g):

$$M_g = W \times \cos(\theta - \alpha) \times L_g$$

Direct Deck Application

Pitch	Equation	Restoring Moment Due to Gravity (M_g)
2:12	$M_g = 11.709 \times \cos(9.462 - 4.412) \times 0.708$	$M_g = 8.26$
3:12	$M_g = 11.709 \times \cos(14.036 - 4.412) \times 0.708$	$M_g = 8.17$
4:12	$M_g = 11.709 \times \cos(18.435 - 4.412) \times 0.708$	$M_g = 8.04$
5:12	$M_g = 11.709 \times \cos(22.620 - 4.412) \times 0.708$	$M_g = 7.87$
6:12	$M_g = 11.709 \times \cos(26.565 - 4.412) \times 0.708$	$M_g = 7.67$
7:12	$M_g = 11.709 \times \cos(30.256 - 4.412) \times 0.708$	$M_g = 7.46$

Batten Application

Pitch	Equation	Restoring Moment Due to Gravity (M_g)
2:12	$M_g = 11.709 \times \cos(9.462 - 5.119) \times 0.708$	$M_g = 8.27$
3:12	$M_g = 11.709 \times \cos(14.036 - 5.119) \times 0.708$	$M_g = 8.19$
4:12	$M_g = 11.709 \times \cos(18.435 - 5.119) \times 0.708$	$M_g = 8.07$
5:12	$M_g = 11.709 \times \cos(22.620 - 5.119) \times 0.708$	$M_g = 7.91$
6:12	$M_g = 11.709 \times \cos(26.565 - 5.119) \times 0.708$	$M_g = 7.72$
7:12	$M_g = 11.709 \times \cos(30.256 - 5.119) \times 0.708$	$M_g = 7.50$

3. Aerodynamic Multiplier (λ): Direct Deck Application

$$\lambda = 0.156 \times b \times l^2$$

$$\lambda = 0.156 \times 1.000 \times 1.417^2$$

$$\lambda = .313$$

4. Aerodynamic Multiplier (λ): Batten Application

$$\lambda = 0.144 \times b \times l^2$$

$$\lambda = 0.144 \times 1.000 \times 1.417^2$$

$$\lambda = .289$$

The calculations provided in report ATLSF #: RT0912.01-14 has been performed in full accordance with the requirements of Miami-Dade County, with no deviations.

Disclaimer: This test report was prepared by American Test Lab of South Florida, (ATLSF), for the exclusive use of the above named client and does not constitute certification of this product. The results relate to the particular specimens tested and does not imply that the quality of similar or identical products manufactured or installed from specifications or shop drawings identical to the product tested. ATLSF is an independent testing laboratory and assumes that all information provided by the client is accurate and does not guarantee or warrant any product tested or installed.

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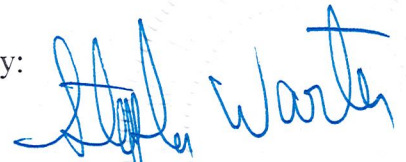
End of report.

Prepared by:



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