

LABORATORY TEST REPORT

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Customer: Fort Mill Ornamental
Date: 2/22/2019
Project: 100276 / CLE02218
Product: ZS311N107, Z series, Super Durable
Material Standard: AAMA 2604-05

Evaluation: 7.8.2 Salt Spray Resistance
Test Methods: ASTM B117, Salt Spray Cabinet Conditions
ASTM D1654, Scribe & blister rating
Specimens: 4 Parts (aluminum fencing pieces)
Parts were cleaned and pretreated with Calvary Chemical's Zirconium.
Exposure: 3000 Hrs. - Remove & wipe sample dry and Immediately apply tape (Permacel 99 or equivalent).
Test Chamber: Singleton 22
Scribed Lines: One Straight Line
Scribing Tool: Straight Shank, Tungsten Carbide Tip
Examinations: Measure and rate creepage from scribe plus rate appearance of unscribed area
Requirements: Minimum rating of 7 on scribe or cut edges, and a minimum blister rating of 8 within the test specimen field, accordance with Table 1 and 2 (Reference ASTM D1654).

Representative Mean Creepage From Scribe		
Millimeters	Inches (Approx.)	Rating Number
Zero	0	10
Over 0 to 0.5	0 to 1/64	9
Over 0.5 to 1.0	1/64 to 1/32	8
Over 1.0 to 2.0	1/32 to 1/16	7
Over 2.0 to 3.0	1/16 to 1/8	6
Over 3.0 to 5.0	1/8 to 3/16	5
Over 5.0 to 7.0	3/16 to 1/4	4
Over 7.0 to 10.0	1/4 to 3/8	3
Over 10.0 to 13.0	3/8 to 1/2	2
Over 13.0 to 16.0	1/2 to 5/8	1
Over 16.0	Over 5/8	0

TABLE 1: Rating of Failure at Scribe (Procedure A)

Area Failed, %	Rating Number
No Failure	10
0 to 1	9
2 to 3	8
4 to 6	7
7 to 10	6
11 to 20	5
21 to 30	4
31 to 40	3
41 to 55	2
56 to 75	1
Over 75	0

TABLE 2: Rating of Unscribed Areas (Procedure B)

Results:

Panel ID	Creepage Form Scribe in mm		Blistering	
	Mean	Rating No.	Area Failed, %	Rating No.
1	0	10	No Failure	10
2	<0.5	9	>3%?	8
3	0	10	<3%	8
4	<0.5	9	<1%	9

Conclusions: Parts 1 and 4 both passed for scribe creepage and blistering in the test specimen field. Parts 2 and 3 both passed for scribe creepage and blistering in the test specimen field. The bottom area of Parts 2 and 3 produced a very blistered appearance. This contamination is most probably due to the observed handling of the parts prior to coating and is not representative of the pretreatment or substrate.

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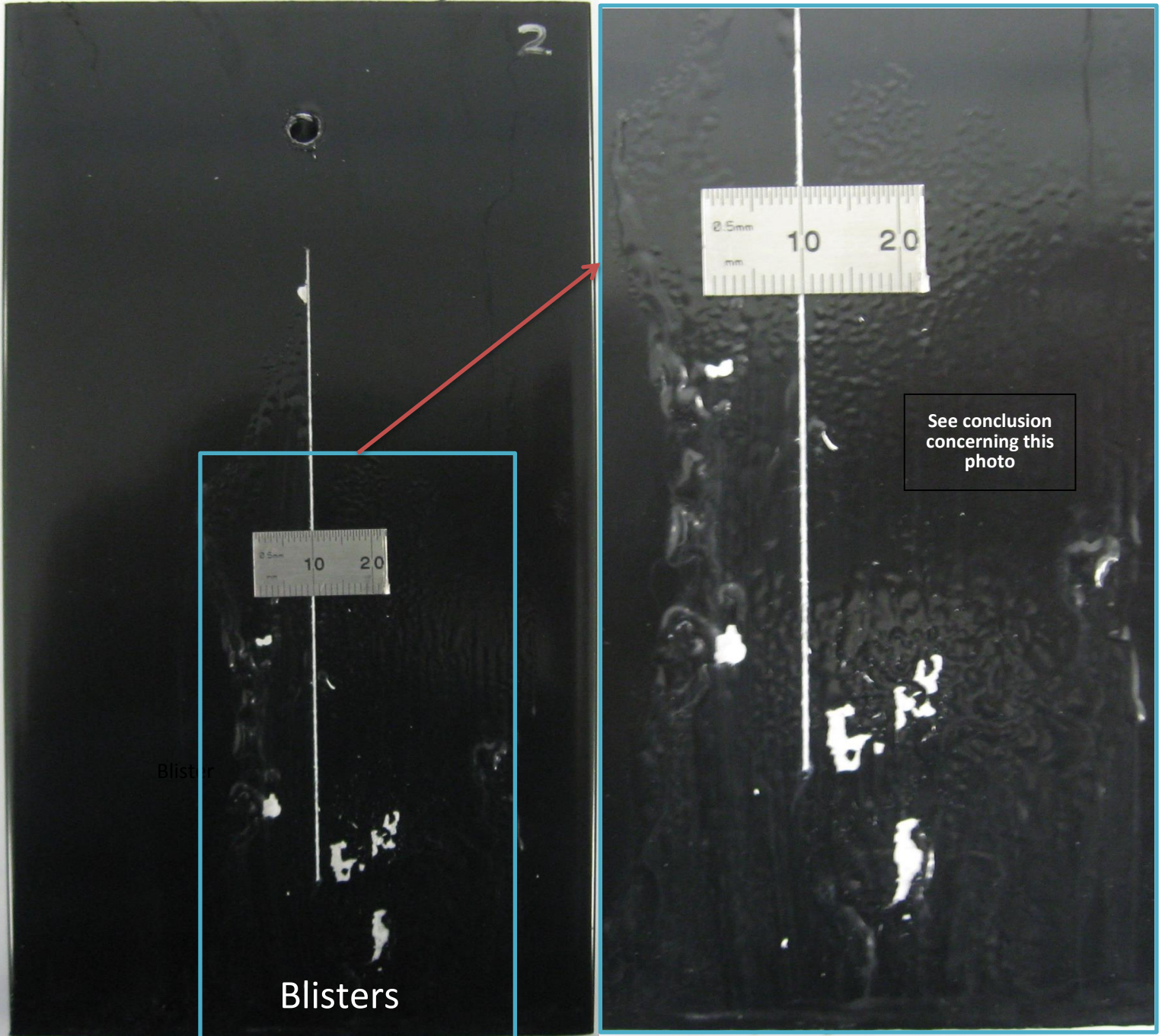
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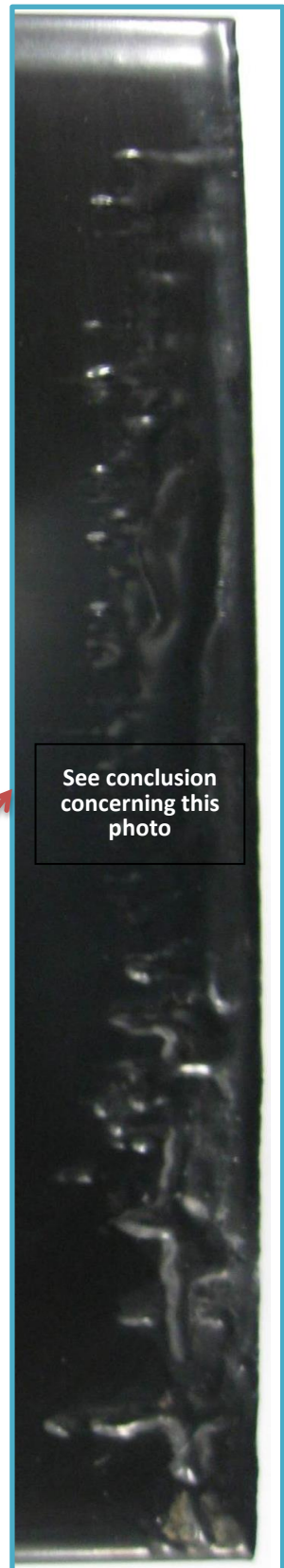
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Panel ID # 2



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