

## **Acuren Group Inc.**

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A Higher Level of Reliability



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SAMRAT TRADE LTD. UNIT 111 19110 24 AVENUE SURREY, BC V3Z 3S9

Attention: Paramjit Singh

Re: Salt Spray Testing of Drywall Screws

### 1.0 INTRODUCTION

Ten 6x1-¼ coarse threaded drywall screws were submitted to Acuren for salt fog spray testing in accordance with ASTM B117-19 Standard Practice for Operating Salt Fog Spray Apparatus. The screws were coated with a black phosphate coating.

### 2.0 SALT FOG TEST

Testing was carried out in a HARSHAW Environmental Chamber Model 22 S/N: 224029 under the operating conditions shown in Table 1.

**Table 1: Testing Conditions in Salt Spray Chamber** 

Cabinet Temp. °C	Collection Rate ml/hour/80cm²	%NaCl	рН	
35	1.24	4.8	6.8	

The screws were attached to a Teflon rope and positioned upright in the chamber at an angle of 25° from vertical. The screw arrangement before the start of the test is shown in Figure 1 in the Appendix. The salt fog exposure was carried out for 48 hours with the interim inspection of the screws performed after 24 hours of exposure. On completion of testing, the screws were rinsed with warm water, dried, and the principal inclined area was examined for the presence of corrosion marks.

The photograph of the screws after removal from the salt spray chamber after 48-hour exposure is shown in Figure 2. The results of the visual inspection of the tested screws are summarised in Table 2.



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# **Table 2: Salt Spray Test Results**

Type of Drayall Screw	Total	After 24h		After 48h		Failure
Type of Drywall Screw	tested	Pass	Fail	Pass	Fail	Rate %
Black Phosphate: 6x1-¼ Coarse Thread	10	10	0	10	0	Pass

The 6x1-1/4 Black Phosphate Coarse Thread screws pass the test and did not show any corrosion marks over the principal surface of any of the tested screws.

Yours truly,

**ACUREN GROUP INC.** 

Maria Kincer, MSc

Enclosure

Jason Light, P.Eng.

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#### NOTES

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**APPENDIX** 

FIGURES 1 – 2





Figure 1 Drywall screws setting before commencement of testing.



Figure 2 Black Phosphate 6 x 1-% Coarse Thread drywall screws after 48-hour exposure to salt fog.