



OzKem Australia Pty Ltd  
810 Princes Highway  
Tempe 2044 NSW  
Australia

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**ASTM G87 Moist SO<sub>2</sub> Testing of ECRA-SH, Super Hydrophobic (LME)  
coated aluminium panels**

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Results of the above testing: as per attached report

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This report was prepared and reviewed by:

Thomas Wagner

Technical Director, OzKem Pty Ltd

Date: 01/3/2011



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## Test Report

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**Client** : Pole Star Coils Pvt. Ltd  
**Contact/Reported to** : Mr Viveck Varma  
**Date** : 01/03/2011  
**Test requirement** : ASTM G87 Moist SO<sub>2</sub>  
**Reference** : G87/S1-5/BC030186  
**Sample details** : ECRA-SH, Jade Green, Super Hydrophobic  
**Substrate** : Standard aluminium plates, 152 x 75 mm  
**Sample number** : 5 plates

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**Test details** : ASTM G87 Moist SO<sub>2</sub>  
**Exposure Duration** : 50 Cycles  
**Exposure Conditions** : as per ASTM G87 Moist SO<sub>2</sub>  
**Cycle definition** : 1 cycle, being defined as 8 Hours at a concentration of 0.67% V/V and 100%RH @ 40°C, followed by 16 hours drying at ambient temperature  
**Sample Evaluation** : in accordance with ASTM D714 (blistering), ASTM D1654 (adhesion) and ASTM D610 (general corrosion)

### Abstract

Pole Star Coils Pvt. Ltd has provided 5 green coated samples on standard aluminium test plates for ASTM G87 Moist SO<sub>2</sub> testing.

The coating was identified as ECRA-SH (LME). LME is understood to stand for 'Liquid mercury effect'. The samples supplied indicated 20µl water droplet contact angle to painted substrate of 160 to 165°. Coating thickness range was within 9 to 10 microns.

Two samples were exposed to the salt spray at an angle of 5° off horizontal, due to the unusually rapid salt spray condensate run off.

### Test Results

Parameter	Blistering	Adhesion	General corrosion
10 cycle exposure	Nil	100%	Nil
25 cycle exposure	Nil	100%	Nil
50 cycle exposure	Nil detected	100% remaining	Nil detected

### Test rating

All samples tested satisfied the specification requirements after the 15 cycles of exposure. Slight colour fading change was detected after 15 cycles. However, this appearance does not appear to have any effect on the overall performance of these coated panels on exposure to the sulphur dioxide test conditions.

### Conclusion

The 5 panels coated with ECRA-SH met the pass criteria of the ASTM G87 Moist SO<sub>2</sub> test.