# TEST REPORT

BlueScope Steel Limited - Port Kembla Laboratory
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## PURPOSE & PRODUCT

Corrosion performance comparation in QFog (CCT) testing between bare metallic-coated steel substrate:

- **4 phases protection technology AM150 (150g/m²)** (Aluminum/ Zinc/ $MgZn_2$/ $Mg_2Si$ substrate)
- **2 phases protection technology AZ150 (150g/m²)** (Aluminium/ Zinc alloy coated substrate)

## PROCEDURE: QFOG - CYCLIC CORROSION TEST

### 1 Sample Description

Metal parts do not contain passivation and resin-coating.

### 2 Test Method

AS2331.3.13-2006 Cycle-E, AS1580.408.4-2004 & AS/NZS1580.481.1.9-1998

### 3 QFog Cyclic corrosion (CCT) test condition

- Step-1: Salt fog at 35±2°C for 4h
- Step-2: Dry off at 60±2°C for 2h
- Step-3: 40±2°C, 0.5h
- Step-4: Humidity 50°C, >95%RH for 2h
- Step-5: Go back to Step-1
- **Total test duration: 2,350 hours**

## PICTURES

Photographs of bare metallic-coated steel comparing **4 phases protection technology AM150 (150g/m²)** vs **2 phases protection technology AZ150 (150g/m²)** substrate in the QFog Cyclic corrosion (CCT) machine.

| Weather Lab jobs | Substrate | Base Metal Thickness | Grade | Passivation | Resin |
|---|---|---|---|---|---|
| 2006232-5 | **4 phases protection technology AM150 (150g/m²)** | 0.42mm | G550 | Nil | Nil |
| 2006232-7 | **2 phases protection technology AZ150 (150g/m²)** | 0.42mm | G550 | Nil | Nil |

- **Listed coating masses are nominal, actual coating masses of tested samples may differ from the nominal coating masses**
- The external edges of the panels were sealed, but not the triangular coupon attached to each panel

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| | 4-PHASES PROTECTION TECHNOLOGY AM150 (150g/m²) | 2-PHASES PROTECTION TECHNOLOGY AZ150 (150g/m²) |
|---|---|---|
| **1 Week** (~150 Hours) |   |   |
| **9 Weeks** (~1,500 Hours) |   |   |
| **14 Weeks** (~2,350 Hours) |   |   |