Australian Standard™

Paints and related materials—Methods of test

Method 452.2: Resistance to corrosion—Salt droplet test

1 SCOPE

This Standard sets out a method for determining the susceptibility to rust of a coated low carbon (mild) steel panel under high humidity and intermittent deposition of salt droplets.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS		
1580	Paints and related materials—Methods of test	
1580.101.1	Method 101.1:	Conditions of test—Temperature, humidity and airflow control
1580.102.1	Method 102.1:	Sampling procedure
1580.102.2	Method 102.2:	In-process sampling
1580.103.1	Method 103.1:	Examination and preparation of samples for test
1580.104.1	Method 104.1:	Recommended materials for test panels
1580.105.2	Method 105.2:	Pretreatment of metal test panels—Sanding
1580.481.3	Method 481.3:	Coatings—Exposed to weathering—Degree of corrosion of coated metal substrates
ASTM		
D1654	Method for evaluation of painted or coated specimens subjected to corrosive environments	

3 PRINCIPLE

Once each day throughout the test period, painted and unpainted steel test panels are removed from a storage rack, sprayed with droplets of salt solution and then returned to the storage rack. The storage rack is placed under a cover and located above a water tray to provide a humid environment for the test specimens. After the 14 d test period the test panels are assessed for visible corrosion and corrosion of the substrate.

4 APPARATUS

4.1 Rack

An arrangement whereby test panels may be positioned vertically on a non-corrodible slotted rack, over large dishes partly filled with water. The distance between the surface of the water and the lower edge of the test panels shall be 50 mm to 80 mm. The panels shall be a convenient distance (approximately 25 mm) apart in each row to prevent them from touching when being moved. There shall be a removable box-like cover of suitable non-absorbent material to cover the test panels after spraying. A transparent cover is preferred because this permits observation of specimens during the test without disturbance. A suitable arrangement of the rack and cover is shown in Figures 1 and 2. Clear acrylic or polyvinyl chloride sheet is a suitable material of construction.

4.2 Atomizer

An atomizer capable of producing fine droplets, not a mist, of the salt solution.