

## STANDARD: ISO 6270-2:2005

## EQUIPMENT: All Ascott Corrosion Chambers

### 1. Scope

**1.1** This methodology is to be used to perform the ISO 6270-2:2005 Condensation humidity test standard in an Ascott corrosion chamber.

This should be used in conjunction with the ISO 6270-2:2005 standard document. The test standard takes precedence over this method statement and this method may need to be altered in order to follow/comply with the standard.

**1.2** This method is based on ISO 6270-2:2005 which consists of:

- Three condensation test atmospheres.
- CH - Condensation atmosphere with Constant Humidity.
- AHT - Condensation atmosphere with Alternating Humidity and air Temperature
- AT - Condensation atmosphere with Alternating air Temperature.

**1.3** The chamber will be loaded with test samples as required by the customer (Or in accordance ISO 6270-2:2005).

### 2. Instrumentation

**2.1** All measuring equipment must be calibrated. The recalibration renewal date must not fall within the test duration.

**2.1.1** The Ascott corrosion chamber should be calibrated for chamber air temperature and relative humidity as a minimum.

If required, the following 'chamber' items may also be calibrated:

- Relative humidity sensor.
- Chamber air saturator temperature. (Calibration is not required for as this is not in use during humidity testing).

- Chamber air pressure gauge (atomiser pressure). (Calibration is not required for as this is not in use during humidity testing.)

**2.2** Peripheral devices also should be calibrated prior to use and may include the following:

- **Conductivity meter** is calibrated using standard solution, used for checking the conductivity of the water used for the salt solution.

**2.3** The chamber temperature and relative humidity may be continuously monitored if required, using an independently calibrated data logger or Ascott's logging software (ACC120). For constant conditions testing, it may be satisfactory to record the chamber temperature manually on a daily basis, using the Ascott chamber temperature display as the reference.

### 3. Salt Solution Preparation

**3.1** Pre-test evaluation. Refer to the test standard document in order to create the test profiles for the chamber.

- **CH** - Run a 24 hour cycle of the test with the chamber empty, record the temperature and ensure it remains in tolerance of  $40\text{C} \pm 3\text{C}$ .
- **AHT** - Create and run a cycle of 8 hours condensation humidity at  $40\text{C} \pm 3\text{C}$ , followed by 16 hours of ventilated humidity (controlled humidity or canopy open function) at  $23\text{C}$  ( $18\text{-}28\text{C}$ ) (ambient RH) and ensure that the temperatures remain in tolerance.
- **AT** - Create and run a cycle of 8 hours condensation humidity at  $40\text{C} \pm 3\text{C}$ , followed by 16 hours of condensation humidity at  $23\text{C}$  ( $18\text{-}28\text{C}$ ) and ensure that the temperatures remain in tolerance.

#### 3.2 Starting the test profile

##### 3.2.1 Test Exposure Conditions

- Position samples within the chamber in accordance of the test standard. (Samples at an angle of 60 degrees or more from the horizontal and able to radiate heat)

- Ensure that no samples 'shadow' or touch other samples and that droplets from one sample cannot fall onto other samples.
- Start the test cycle and record test parameters at start.
- Exceptions to continuous testing are permitted in order to examine the test specimens. They may be removed briefly from the chamber before the start of a new cycle, but shall be replaced within 30 min.
- Photographs to be taken prior to starting the test and at customer specified times.

### 3.3 Quality Control

- Daily checks to ensure the standard is being followed with variable parameters within limits - Record all parameters.
- Check that the chamber temperature is within acceptable limits (for each part of the cycle if applicable)
- Record the conductivity of the DI water when used.

### 3.4 After Exposure

- The handling of the tested specimens varies depending upon their material. Refer to the test standard and agree the correct handling procedure with the customer.
- Photographs of the samples should be taken.

## 4. Sample Preparation

- 4.1 The test samples should be thoroughly cleaned before testing commences. This should not include the use of abrasives or solvents. This process should be agreed with the customer.

Latex gloves must be worn at all times when handling samples.

Photographs should be taken of each sample prior to starting the test.

For further information, please contact us.

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### Typical Daily Checks

Hours	Chamber Temp °C	Air Sat Temp °C	Collected ml/hr (2 vessels per atomiser)		Collected Solution pH	Reservoir Salinity %	Pump Speed	Atomiser Air Pressure PSI	Initials	Photos Taken
			1	2						