

## Elcometer 309 Delta T Hygrometer



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### At a glance:

- Reliable  $\Delta T$  and %RH readings in a single, user-friendly gauge without the need for additional equipment.

Before painting, the coater must meet the coatings' parameters. These are clearly specified on the paint manufacturer's product data sheet.

Relative Humidity (%RH) and Delta T ( $\Delta T$ ) are the two climatic values which are specified on data sheets.

The Elcometer 309 Delta T Hygrometer provides a simple and fast measurement of these two critical characteristics.

- **Delta T ( $\Delta T$ ):** The difference between the surface temperature ( $T_s$ ) and the dewpoint temperature ( $T_d$ ).

When  $\Delta T$  is less than 3°C (5°F) painting should not occur.

- **Relative Humidity (RH):** This is the amount of water vapour taken up by air.

Expressed as a percentage, %RH, and is dependent on the air temperature.

Typical RH values, specified by paint manufacturers, are between 75% and 85%.

### Climatic Testing

The monitoring of climatic conditions such as temperature, relative humidity, dewpoint and moisture when coating is vital to the lifetime performance of the coating.

In the protective coatings industry, moisture can form on the surface when the surface temperature is low enough to cause condensation from the atmosphere. The Dewpoint Temperature ( $T_d$ ) is the point at which this occurs.

Monitoring the surface temperature ( $T_s$ ) relative to the air temperature ( $T_a$ ) and its relative humidity (%RH) allows the dewpoint temperature to be calculated and compared to the surface temperature. The difference in temperature ( $\Delta T$ ) is the key parameter dictating when it is safe to apply the coating.

Can be used in accordance with:  
BS 7079-B4  
ISO 8502-4

- **Rugged design**  
Suitable for use in extreme environments the Elcometer 309 is dustproof and waterproof with fully sealed sensors.
- **High / Low Limits**  
Displayed on screen graphically as either (✓) or (×) with flashing Red or Green LED's to indicate pass or fail.
  - **Delta T temperature:**  $\Delta T$  is pre-set at >3°C (>5°F), the industry norm.
  - **Relative Humidity:** User definable limits can be set for %RH.
- **Measurement Hold / Release function**  
With a single button press readings are 'frozen' on the screen. These can then be recorded before, simply pressing the button again to 'unfreeze' the screen and then take further readings as necessary.
- **Backlight**  
Provides clearly lit information – ideal in dark or confined spaces.

TECHNICAL SPECIFICATION	
Temperature Range (Air & Surface)	-20 to +80°C (-4 to +176°F)
Relative Humidity (RH) Range	0 to 100%RH (Default setting of 75%, user adjustable)
Resolution	0.1°C / 0.1%
Power Supply	2 x AA 1.5V Batteries or via USB Cable
Battery Life	Greater than 40 hours (Backlight off)
Dimensions	180 x 75 x 35mm (7 x 3 x 1.4")
Weight	300g (10.6oz)
Part Number	<b>G309----</b> 1 Elcometer 309 Delta T Hygrometer
Packing List	Elcometer 309 Delta T Hygrometer, wrist strap, 2 x AA batteries, protective pouch with belt clip, RH probe calibration certificate and operating instructions.

SPARES & ACCESSORIES	
Protective Carry Case / Pouch	<b>T99921192</b>
USB Cable	<b>T99921325</b>
Wrist Strap	<b>T99916063</b>
Optional Calibration Certificate	<b>TCAL-309F</b>

## Related Products



Elcometer 319

### Elcometer 319 Digital Dewpoint Meter

Available in two models; Standard and Top, the Elcometer 319 has been designed to measure and record all the relevant climatic parameters required to determine whether conditions are suitable for painting.



Elcometer 224

### Elcometer 224 Digital Surface Profile Gauge with Bluetooth®

The Elcometer 224 Digital Surface Profile Gauge provides an accurate way to measure surface profiles in microns and mils. The Elcometer 224 Model T has a large built-in memory which can store up to 50,000 readings in 999 batches and offers Bluetooth® wireless technology for cable free data transfer.



Elcometer 138/2

### Elcometer 138/2 Surface Contamination Kit:

Supplied with Elcometer 135A Bresle Samplers and various test strips, this kit provides a low cost, simple method of measuring the salt, pH, chloride and iron (ferrous ion) concentration on a test surface in accordance with ISO 8502-6.

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