



## Cleaning Kit

For a video tutorial go to:

<https://www.turtletoughsensors.com/support/sensor-care>

### Contents:

- 50ml Cap Storage & Conditioning Solution
- 50g Glass Cleaning Compound
- 125ml 15% HCl Cleaning Solution
- Brush for Glass Cleaning
- 100ml beaker
- Carry bucket

This kit has been specially formulated to provide optimal care for the sensing element and reference components to enhance sensor life and performance.

### Instructions:

1. Use brush to remove large solids and contaminants from sensor tip while rinsing under tap water.
2. Soak in HCl solution for a minimum of 10 minutes, longer if required to dissolve deposits.
3. Rinse thoroughly with water.
4. Use blade to scrape the reference material clean, avoiding contact with the glass or sensing element. (blade not included in Cleaning Kit)
5. Empty a small amount of glass cleaning powder (1/4 tsp) into the beaker. Wet a cotton bud tip and make a paste with the powder. Apply the paste to the glass with cotton bud and polish the glass tip to remove any film or coatings.
6. Rinse thoroughly with water.
7. Soak sensor in conditioning solution for at least 10 minutes, longer if required to improve sensor response.

### Conditioning for Calibration:

After the sensor has been cleaned, it must be thoroughly rinsed with deionised water to remove any residual cleaning reagents. The sensor can then be soaked in pH 4 buffer to recondition the pH and reference elements. Some sensors will also require conditioning in saturated potassium chloride if the reference junction has been depleted of the ions in the solid-state conductive polymer (typical for clean water applications). Condition the sensor in saturated potassium chloride and/or pH 4 buffer for whatever period-of-time is required to achieve optimal calibration results.

### Avoiding Thermal Shock:

For high temperature applications where process liquid exceeds 70°C you will prolong the life of the sensor by avoiding thermal shock. Thermal shock occurs when you rapidly change the temperature of the sensor from hot to cold or vice versa. This rapid expansion/contraction of sensor components can damage internal elements and cause micro-cracking that will accelerate the rate of deterioration. In extreme cases it will crack the sensing element causing a total failure. To avoid this, the sensor should be heated or cooled slowly during removal/insertion and cleaning and calibration processes. Consult your Turtle Tough representative for techniques to avoid thermal shock.