



Many different chlorine- or bromine-based chemicals are used in the disinfection of water. This article will provide some guidelines on when to apply the Walchem sensors in an application.

**The first thing to consider is what chemical is being used. The Walchem sensors have been successfully used with the following chemicals:**

- Chlorine gas
  - Sodium Hypochlorite
  - Calcium Hypochlorite
  - Electrolytically-generated chlorine
  - Sodium Bromide + Sodium Hypochlorite
  - BCDMH
  - Trichloroisocyanuric Acid\*
  - Other chlorine mentioned above + cyanuric acid\*
- \*Requires the use of the extended pH range sensor

**The following chemicals will not work with our sensors:**

- Stabilized Bromine Products
- Organic chlorine

**Next, make sure that the application meets the standard specifications of the sensor:**

- Chlorine/Bromine concentration range
- Temperature range
- Pressure (Less than 1 bar and stable)
- pH range (for the non-extended pH range sensors, the pH must be in range AND stable)
- The sensor must be kept wet at all times
- The sensor must be powered at all times
- The sensor must not be in oxidizer-free water for more than a day at a time
- Salt water is not a problem, up to 4%

**Lastly, make sure that there is nothing in the water that will interfere with proper operation of the sensor:**

- Oil will foul the membrane and cause low readings
- Air bubbles will interfere with the diffusion through the membrane
- Surfactants will damage the membrane of the non-extended pH range sensors
- High solids can coat the membrane
- Sulfides will contaminate the silver/silver chloride electrode
- Phenols will attack the membrane
- The sensor specifications list other oxidizers that the sensor will detect, and how much error they will introduce.