



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
- Stabilized Bromine Products (requires the use of our specialized stabilized bromine sensors)
- 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:

- 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.