

	Efficacy	Microbial Range	Contact Time	Concentration	pH	Corrosion	Toxicity	Bio-degradable	Other	Cost	Comments
Hydrogen Peroxide	Low	Unless used at high concentration- relatively ineffective	Generally 15 minutes to several hours	Usually % range	Neutral at use concentration	High on aluminium, iron and zinc	May be extremely irritating to skin and tissues at use conc.	High	Used as a chemical oxidant, particularly for H ₂ S control and wastewater treatment	Relatively low - higher concentrations require expensive storage and handling procedures	Stability is a problem at higher concentrations or contamination with metals
Dry Chlorine Compounds	Moderate	Relatively ineffective against certain moulds & spore formers	30 minutes to several hours or more	Usually % range	Moderately to strong alkaline	Higher pH products corrosive to aluminium, iron and may cause bluing of some stainless steel	Many not fully assessed, although most are known to be irritating at use conc.	Low to moderate, particularly if chlorinated by-products are produced	Use as emergency water sanitisers, primarily in surface sanitation applications	Relatively Low	High pH of some products may restrict sewer disposal unless pH is adjusted
Ozone	High	Broad spectrum, effective against all types of micro-organisms	Seconds to minutes	0.1ppm - 10 ppm	Neutral	marginally corrosive to iron and some grades of stainless steel at higher concs.	Likely to be negligible at use concs.	High	Drinking & wastewater disinfection, with some chemical oxidation applications	Very High, in all regards	Powerful chemical oxidant and biocide, but offers no residual protection
Phenol	High	Effective against most micro-organisms, except certain spore formers such as Giardia	Minutes to an hour or more, depending on target organisms	100 ppm to % range	Mildly acidic to neutral	Higher concs. more acidic, and cause corrosion to iron and certain grades of stainless steel	Extremely toxic, chronic exposure can cause kidney, liver neurological damage	Relatively low	Limited to surface sanitisers and as ingredient in sanitiser lubricant formulations	Moderately High	Very hazardous, and use is tightly regulated
Quaternary Ammonium	Moderate - High depending on target organisms	Relatively ineffective against certain bacteria and spore formers	Minutes to several hours	100 ppm to % range	Acid to neutral depending on formulation	Acidic products corrosive to iron, copper and brass	May cause severe skin irritation	Poor for most formulations	Primarily used in surface sanitation (non-food). Also cooling tower treatment	Moderately High	High foaming and characteristic odour may cause problems in certain areas