CHLORINE BASED DISINFECTANTS



BIOFILM

• Chlorine is **ineffective** at penetrating and removing biofilms.

EFFICACY

• Chlorine is an oxidiser <u>unable to effectively</u> penetrate biofilms. Chlorine is also <u>ineffective</u> against amoebae.

IRRITANT

• Even at low dose levels chlorine is **irritating** to the nose, throat and skin.

HEALTH CONCERNS

- When chlorinated products mix with acids or acidic liquids then <u>toxic chlorine gas</u> is released.
- When chlorine reacts with organic matter it creates Trichloromethanes (TCM) and Trihalomethanes (THM).
 Studies suggest that THM's are <u>carcinogenic</u> to animals and humans.
- The EPA regulates that there must be a THM presence of less than 80ppb in water systems.
- Chlorine vapours can be very <u>aggravating</u> to asthma sufferers.

CORROSION

• Chlorine is <u>corrosive</u> to metals, rubbers and fabric. This can cause an increase in repair and maintenance costs and requirements over time.

pН

 Outside of a neutral pH range Chlorine <u>decreases in</u> <u>efficacy</u>.

TEMPERATURE

• Chlorine <u>decreases in efficacy</u> at higher temperatures and becomes unstable above 45°C.

TAINT

Chlorine has an <u>obvious taint</u>. It has a noticeable strong odour and taste.

DISPOSAL

 Chlorine <u>requires neutralisation</u> before disposal. Incorrect neutralisation can be toxic to aquatic life.

BIOFILM

EndoSan is <u>highly effective</u> at penetrating and removing biofilms.

Stabilised Hydrogen Peroxide

EFFICACY

 EndoSan is a <u>powerful</u> oxidiser that <u>effectively</u> penetrates and destroys biofilms. EndoSan is bactericidal, virucidal, sporicidal, fungicidal, algaecidal and amoebicidal.

IRRITANT

• At dose levels EndoSan causes <u>no irritation</u> to the nose or throat.

HEALTH CONCERNS

- EndoSan releases <u>no toxic gasses</u>.
- EndoSan produces <u>no TCM's or THM's</u>.
- EndoSan is biodegradable, creating <u>no harmful</u> <u>by-products</u>.
- EndoSan simply degrades into water and oxygen.

CORROSION

• EndoSan is <u>non-corrosive</u> at dose rates. This results in lower repair and maintenance costs and requirements over time.

рН

 EndoSan is <u>effective at a wide pH range</u>. Outside of a neutral pH range EndoSan continues to be effective.

TEMPERATURE

EndoSan is <u>stable and effective</u> at a wide range of temperatures.

TAINT

EndoSan has <u>no taint</u>. It has no colour, taste or odour at dose levels.

DISPOSAL

• EndoSan has <u>no neutralisation</u> requirements at dose levels.

@EndoSanUK