

## V-GEN™ HPLUS

### Chlorine Dioxide Precursor

#### Product Description

V-GEN HPLUS chlorine dioxide precursor is an acid-based reagent specifically designed and only to be used in conjunction with V-GEN 511 in one of Visentia's chlorine dioxide generators in order to safely generate chlorine dioxide. Chlorine dioxide can be used as a biocide or as a chemical oxidant and is recommended in a number of applications:

- Sterilization of wash water in food processing plants as an alternative to chlorine or peracetic acid (PAA).
- In contaminated cooling towers where traditional oxidizing biocides have very high product demand resulting in poor biofilm control or unacceptable AOX levels.
- As a chlorine alternative in once-through cooling systems to control micro and macro fouling.
- As a chemical oxidant to reduce/remove contaminants such as sulphides, mercaptans, phenols, tertiary amines, etc.
- As an odour control agent.

#### Product Benefits

Chlorine dioxide produced from V-GEN HPLUS has the following benefits:

- Less reactive with organic materials than traditional halogens like chlorine and bromine, therefore, can be more cost effective in heavily fouled systems.
- No halogen odour from treated water.
- Environmentally friendly: will not result in chlorinated by-products such as trihalomethane (THM) or absorbable organic halogens (AOXs), as is the case with chlorine and bromine treatments.
- Very effective at penetrating biofilms and dislodging deposits.

#### Product Application

V-GEN 511 should be used only in conjunction with V-GEN HPLUS and only in one of Visentia's generators. In order to select the appropriate Visentia generator, a chlorine dioxide demand study should be performed. Depending on the application chlorine dioxide should be fed continuously or intermittently. In certain applications

chlorine dioxide can be fed at sub-demand levels. Ask for more details with your Visentia water treatment consultant.

#### Physical Properties

<b>Form:</b>	Liquid
<b>Odour:</b>	Sharp, acidic
<b>Colour:</b>	Clear, colourless
<b>pH (25°C):</b>	<1.0
<b>Melting/Freezing Point:</b>	NA
<b>Boiling Point:</b>	100°C
<b>Solubility (water, 25°C)</b>	Miscible
<b>Flammability:</b>	NA
<b>Relative Density:</b>	1.10
<b>Viscosity:</b>	NA

#### Regulatory & Handling

**MPI Dairy:** V-GEN HPLUS is recognised by the Ministry of Primary Industries New Zealand as a Dairy Maintenance Compound; approved for treatment of potable and process water in dairy factories when used in accordance with recommended operating conditions/guidelines.

**MPI Non-Dairy:** V-GEN HPLUS is approved by the Ministry of Primary Industries New Zealand as a Non-Dairy Maintenance Compound for treatment of potable and process water in food and beverage processing plants when used in accordance with recommended operating conditions/guidelines (C 61).

**FDA:** Under US Food and Drug Administration regulations, chlorine dioxide (CAS Reg. No. 10049-04-4) may be safely used in food for human consumption (21CFR 173.300). A sanitizing solution that may be safely used on food-processing equipment and utensils and on other food-contact articles (21CFR178.1010).

**EPA:** US Environmental Protection Agency's Office of Drinking Water approves the use of chlorine dioxide for disinfection.



### Packaging

V-GEN 511 Chlorine Dioxide Precursor is available in 20L pails, 200L drums and 1,000L IBCs.

### Further Information

If you require any further details on Visentia's products or services, please call your local Visentia water treatment consultant or directly to our Auckland head office on +64 9 216 9824.