

## PRODUCT DATA SHEET:

# “EXPEL™ HIGH STRENGTH”

## **A VIRUCIDE / DISINFECTANT containing EXPEL™ (Stabilized Chlorine Dioxide).**

**EXPEL INC.** has developed a new technology for stabilizing Chlorine Dioxide and has produced a formulation for a unique new biocide, virucide, fungicide and algaecide. The product also acts as a deodoriser.

**Stabilised Chlorine Dioxide** is a unique aqueous blend of chemicals that destroys bacteria and virus microorganisms within seconds to minutes at dosage levels between 2 – 200 ppm. **EXPEL™** works by denaturing the protein molecules, which are the basis of these microorganisms. This results in their destruction by oxidation. Because of this method of destruction, it is impossible for the microorganism to form any resistance to the product.

No added activation is required, as **Stabilised Chlorine Dioxide** is already in an active state. The product is safe, convenient and ready to use as a disinfectant, sanitiser or odour neutraliser. Once applied, it has an extended working period depending on the conditions it is being used under. In some circumstances it will still be working for up to 42 days. It has a known shelf life of four years in its original concentrated form.

The base product is called **EXPEL™**.

### **The Problem.**

Many of the disinfectants on the market at present are derived from Quaternary Ammonium Compounds or Gluteraldehyde. These products are toxic and not very safe for the people using them. They also require reasonably strong concentrations to work successfully and tests show that they take some time to work properly. They are also ineffective against some bacteria and spore formers. These products are not environmentally or operator friendly.

### **“EXPEL™ High Strength”.**

**“EXPEL™ High Strength”** contains **Stabilised Chlorine Dioxide**. Unlike other chlorine-based products, which use free chlorine as their oxidising agent, **Stabilised Chlorine Dioxide** uses **Ozone** as the active oxidising agent. **Stabilised Chlorine Dioxide** works in seconds to minutes and is effective against a Broad Spectrum of bacteria, virus, mold, fungi and spore formers.

**The Stabilised Chlorine Dioxide used in “EXPEL™ High Strength” has been obtained from EXPEL INC.**

**EXPEL™** has been approved by AgriQuality NZ Ltd. for food/beverage use, including dairy farms and factories etc. For food contact surfaces and food rinse where permitted by legislation (ref H1394B/C) dated 11/4/2001. It complies with the Dairy Industry Regulations 1990 and is MAF approved for farm dairies as a sanitiser and odour control agent. It is approved for food/water contact surfaces and a food rinse. It is also approved under USAFDA21CFR 178.1010 (34), USA FDA 21 CFR 173.300, USDAG5, USDA 3D and USDA P1.

Efficacy data provided by an independent laboratory, shows that **EXPEL™** is effective against the following:

Listeria Monocytogenes;  
Salmonella Typhimurium;  
Pseudomonas Aeruginosa;  
Staphylococcus Aureus;  
Clampylobacter Jejuni;  
Ecoli;  
Trychophyton Mentagrophytes;  
Legionella Pneumophila.

Efficacy data provided to the United States Environmental Protection Agency, for Registration Number 1839-83, shows the **EXPEL™** is effective against:

Poliovirus Type 1 strain Brunhilde;  
HIV strain HTLV-111;  
Canine Parvovirus;  
Aspergillus Niger and;  
Tuberculosis Type Mycobacterium Bovis.

Chlorine Dioxide has a high efficacy against all bacteria, virus, mold, fungi, algae and spore formers. It kills these in seconds to minutes. There is negligible corrosivity for most metals when used at concentrations to effect kills on the above organisms.

Chlorine Dioxide has far greater efficacy than traditional products like chlorine, hypochlorite, quaternary ammonium compounds and peracetic acid. Chlorine Dioxide is known to kill the following and technical data is being sought to ensure that **EXPEL™** (chlorine dioxide) in a completely stabilised form, has the same properties:

Aspergillus Fumigatus Spores;  
Candida Albicans;  
Hepatitis B Virus;  
Proteus Mirabilis;  
Aeruginosa;  
Rotavirus;  
Saccharomyces Cerevisiae;  
Streptococcus Faecalis;

Streptococcus Faecium;  
Foot & Mouth Disease;  
Biofilm.

**Product Benefits:**

**“EXPEL™ High Strength”** is a powerful aqueous based broad-spectrum biocide, virucide, fungicide, algaecide and odour neutraliser.

Ready to use with no added activation required.

Can be applied directly at full strength.

Requires no wash down after use.

**“EXPEL™ High Strength”** is formulated for use in those areas where infection is known to exist. It will effectively sanitise benches and work areas within minutes. It is safe for use in Clinics, Surgeries and in the home where a safe effective sanitising agent is required.

**“EXPEL™ High Strength”:**

Can be safely released into the atmosphere using spray, fogging or misting equipment for reduction of airborne contamination and to reach hard to treat areas.

Cannot be overdosed.

Used as a standard application is safe for humans and animals, including treatment to occupied and confined spaces.

Achieves maximum performance at a low dose rate.

Is environmentally safe for use and produces no undesirable by-products.

Reduces the hazard and risk associated with the storage and handling of dangerous and toxic chemicals.

Is safe to handle and offers no health risks to users.

Is biodegradable.

Has a shelf life of four years in its concentrated form.

Is a colourless and odourless liquid.

Does not taint contact surfaces with colour, taste or smell.

Is effective at reasonably high temperatures.

Has a low corrosion potential.

Operates over a wide PH range. 1 – 12.

**“EXPEL™ High Strength”** has a wide range of uses.