

30-JAN-2002

**AQUAGUARD  
660  
ANTIMICROBIAL**

**WATER TREATMENT  
MICROBIOCIDES**

A microbiocide for use in controlling sulfate reducing bacteria and slime-forming bacteria in oil well drilling, oil field processing applications, and oil field water systems, gas production and transmission pipelines and systems, and gas storage fields and equipment, such as steam-injection water holding tanks, flood water, injection water, holding pond water, disposal-well water, water holding tanks, fuel storage tanks, and related refinery and oil field closed industrial recirculating water handling systems.

**COMMERCIAL  
READ THE LABEL BEFORE USING**

**GUARANTEE:**

Glutaraldehyde ..... 50.0%

**REGISTRATION NO: 27063  
PEST CONTROL PRODUCTS ACT  
DANGER**

POISON                      CORROSIVE

NET CONTENTS:

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**PRECAUTIONS  
HAZARDOUS TO HUMANS**

**DANGER  
KEEP OUT OF REACH OF CHILDREN**

Corrosive. Causes irreversible eye damage. Causes skin burns. Harmful if inhaled. Harmful or fatal if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes asthmatic signs and symptoms in hyper-reactive individuals.

Do not get in eyes, on skin, on clothing.

Do not inhale fumes or vapour. Do not swallow.

When handling the concentrate and during cleaning, maintenance and repair activities on contaminated equipment, wear goggles and face shield, chemical resistant gloves, protective clothing (i.e., long sleeve shirt, long pants and apron) and boots. Wash thoroughly with soap and water after handling. Use only in well ventilated area. Remove contaminated clothing and shoes and wash them before reuse.

#### **FIRST AID**

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Do not remove contact lenses, if worn. Get immediate medical attention.

IF ON SKIN: Immediately wash with plenty of soap and water. Get medical attention.

IF INHALED: Remove to fresh air. If breathing is difficult, administer oxygen. If symptoms persist, call a physician.

IF SWALLOWED: DO NOT INDUCE VOMITING. Do not give anything to drink. Seek medical advice with urgency or call Poison Control Centre. Take container, label, or product name and Pest Control Product Registration Number with you when seeking medical attention.

#### **TOXICOLOGICAL INFORMATION:**

Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

#### **STORAGE AND DISPOSAL**

AQUAGUARD 660 solutions are incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc. These solutions can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about -21EC. Therefore, unless the storage is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be

avoided. For short storage times (up to about 1 month) temperatures up to 38 C can be tolerated by the preferred maximum storage temperature is about 27 C. A stainless steel centrifugal pump is suggested for transfer service. Spiral wound stainless steel with TEFLON is suitable for gaskets and packing.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offense under the Pest Control Products Act to use a control product under unsafe conditions.

**NOTICE TO BUYER:** Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

UN3265  
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Glutaraldehyde)

**DIRECTIONS FOR USE**  
**WATER FLOODS**

FLOWGUARD 660 should be added to a water flood system at a point of uniform mixing.  
Initial treatment: When the system is noticeably contaminated, add 100 to 5000 ppm FLOWGUARD 660 to the system (0.1 litres to 5 litres FLOWGUARD 660 per 1000 litres flood water). Repeat until control is achieved.  
Subsequent dose: When microbial control is evident, add 20 to 5000 ppm FLOWGUARD 660 (0.02 to 5 litres FLOWGUARD 660 per 1000 litres flood water) to the system weekly, or as needed to maintain control.

**DRILLING MUDS/DRILLING, COMPLETION, WORKOVER FLUIDS**

FLOWGUARD 660 should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.  
Initial treatment: Add 50 to 1000 ppm FLOWGUARD 660 (0.8 to 15.1 litres FLOWGUARD 660 per 100 barrels of fluid) to a freshly prepared drilling fluid, depending on the severity of contamination.  
Maintenance dosage: Maintain a concentration of 50 to 1000 ppm FLOWGUARD 660 by adding 0.8 to 15.1 litres of FLOWGUARD 660 per 100 barrels of fluid, as needed, depending on the severity of contamination.

### **PACKER FLUIDS**

FLOWGUARD 660 should be added to a packer fluid at a point of uniform mixing such as circulating holding tank. Add 50 to 600 ppm FLOWGUARD 660 (0.8 to 9.5 litres FLOWGUARD 660 per 100 barrels of fluid) to a freshly prepared fluid, depending on the severity of contamination. Seal the treated packer fluid in the well between the casing and production tube.

### **GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS**

FLOWGUARD 660 should be added to a gas production or transmission line via direct injection. The application should be conducted to ensure maximum distribution of FLOWGUARD 660 through the entire internal surface of the pipeline by adding an amount of biocide which eventually comes out the other end of the pipeline. Criteria for success of the treatment will be reduction in bacterial count and/or corrosion rates. To facilitate application it may be desirable to dilute the FLOWGUARD 660 with the appropriate solvent immediately before use. The concentration in the solvent should not fall below the 500 to 5000 ppm range. Injections to the systems should be made on a weekly basis, or as needed to maintain control.

### **GAS STORAGE WELLS AND SYSTEMS**

Individual injection wells should be treated with sufficient quantity of FLOWGUARD 660 to produce a concentration of 500 to 5000 ppm FLOWGUARD 660 when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections should be repeated yearly, or as needed to maintain control. Individual drips should be treated with a sufficient quantity of FLOWGUARD 660 to produce a concentration of 200 to 2000 ppm FLOWGUARD 660 when diluted by the water present in the drip. Injections should be repeated yearly, or as needed to maintain control.

### **HYDROTESTING**

Water used to hydrotest pipelines or vessels should contain 100 to 4000 ppm FLOWGUARD 660 (0.1 litres to 4 litres FLOWGUARD 660 per 1000 litres water), depending on water quality and length of time equipment will remain idle.

### **PIPELINE PIGGING AND SCRAPING OPERATION**

Add FLOWGUARD 660 to a slug of water immediately following the scaper (ideally this water volume can be kept to a minimum and contained between the scaper and a trailing pig). Sufficient FLOWGUARD 660 should be added to produce a concentration of 0.01 to 1% (0.1 to 1.0 litres FLOWGUARD 660 per 100 litres water), depending on the length of the pipeline and the

severity of biofouling.

**DISPOSAL**

- 1) Triple or pressure-rinse the empty container. Add the rinsings to the treatment site.
- 2) Follow provincial instructions for any required additional cleaning of the container prior to it's disposal.
- 3) Make the empty container unsuitable for further use.
- 4) Dispose of the container in accordance with provincial requirements.
- 5) For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

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