

**AQUAGUARD 665
COMMERCIAL MICROBIOCIDE**

A microbiocide for controlling slime-forming bacteria, sulfate-reducing bacteria, fungi, yeast and algae in air washers and recirculating cooling water systems; service water and auxiliary systems; heat transfer systems; industrial wastewater systems; aqueous metalworking fluids; paper mills and paper mill process water systems; water based coatings, pigments and filler slurries for paper and paperboard; oil well drilling, oil field processing applications, gas production and transmission systems; and general preservation of aqueous based industrial, institutional and consumer in-can processes and products.

READ THE LABEL BEFORE USING

GUARANTEE:

Glutaraldehyde.....50%

**REGISTRATION NO: 27838
PEST CONTROL PRODUCTS ACT**

DANGER

POISON

CORROSIVE

NET CONTENTS:

UN3265

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

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**PRECAUTIONS: HAZARDOUS TO HUMANS
DANGER: KEEP OUT OF REACH OF CHILDREN**

Corrosive. Causes irreversible eye and skin damage. Causes skin burns. Harmful or fatal if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes asthmatic signs and symptoms in some hyper-reactive individuals. Do not get in eyes, on skin, or on clothing. Do not inhale fumes or vapour. Do not swallow. Wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks, chemical-resistant footwear, and eye protection during mixing, loading, application, clean-up and repair. 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: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin IMMEDIATELY with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control centre or doctor for further treatment advice.

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Corrosive. This product may produce a sensitization response or allergic reaction in some individuals. Treat symptomatically.

ENVIRONMENTAL HAZARDS: Toxic to aquatic organisms.

STORAGE

To prevent contamination store this product away from food or feed.

AQUAGUARD 665 solutions are corrosive to 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, stainless steel, or reinforced epoxy equipment. This product freezes at approximately -20°C (-4°F). Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage (1 month) temperatures up to 38°C (100°F) can be tolerated; however, the preferred maximum storage temperature is about 27°C (80°F). Keep away from fire and open flames. A stainless steel centrifugal pump is suggested for transfer service.

DISPOSAL

Triple or pressure-rinse the empty container. Add rinsings to the treatment site. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. 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.

SPILLAGE

Absorb onto sand, earth or inert material. Sweep up and remove the spillage to a polyethylene lined container for subsequent correct disposal. Clean up the area with detergent and water.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

DIRECTIONS FOR USE

DO NOT open pour more than 20 L of concentrate per day. Use an automatic addition system if using more than 20 L of concentrate per day. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans, or other waters.

GENERAL PRESERVATIVE USE

AQUAGUARD 665 is recommended for use in aqueous or water containing products and systems, including industrial, institutional and consumer in-can processes and products, to control the growth of bacteria and fungi. For effective preservation, add AQUAGUARD 665 to the product formulation at a rate of 0.02 to 0.2% (200 to 2000 ppm) based on the water content of the product (200 to 2000 ml of AQUAGUARD 665 per 1000 litres water content). Mix uniformly. The maximum application rate for paint preservation is 100 ppm.

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS, RECIRCULATING COOLING AND PROCESS WATER SYSTEMS

This product may be used only in industrial air washer systems which have mist-eliminating components.

AQUAGUARD 665 should be added at the application rates described below, to a water treatment system at a convenient point of uniform mixing such as the basin area.

Additions may be made intermittently (slug dose) or continuously. Badly fouled systems can be shock treated with AQUAGUARD 665. Under these conditions blowdown should be discontinued for up to 24 hours.

AQUAGUARD 665 can be used in industrial process water systems that contain ultra filtration units and non-medical reverse osmosis membranes (where approved for compatibility by the membrane manufacturer) and associated distribution systems.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably fouled, apply 100-400 ml (100-400 ppm) of AQUAGUARD 665 per 1000 litres of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 30-100 ml (30-100 ppm) of AQUAGUARD 665 per 1000 litres of water in the system weekly, or as needed to maintain control.

Badly fouled systems must be cleaned before treatment begins.

CONTINUOUS FEED SYSTEM

Initial Dose: When the system is noticeably fouled, apply 100-400 ml (100-400 ppm) of AQUAGUARD 665 per 1000 litres of water in the system.

Subsequent Dose: Maintain these treatments by starting a continuous feed of 15-300 ml (15-300 ppm) of AQUAGUARD 665 per 1000 litres of water in the system per day.

Badly fouled systems must be cleaned before treatment begins.

SERVICE WATER AND AUXILIARY SYSTEMS

AQUAGUARD 665 should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point that will allow for uniform mixing throughout the system.

HEAT TRANSFER SYSTEMS

(Evaporative Condensers, Hydrostatic Sterilizers and Retorts, and Pasteurizers and Warmers)

AQUAGUARD 665 should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other reservoir collecting area from which the treated water will be circulated uniformly throughout the system.

INDUSTRIAL WASTEWATER SYSTEMS

(Wastewater Systems, Wastewater Sludge, and Wastewater Holding Tanks)

AQUAGUARD 665 should be added to a wastewater system or sludge at a convenient point of uniform mixing such as the digester. Add 450 to 2250 ml (450 to 2250 ppm)

AQUAGUARD 665 per 1000 litres of wastewater or sludge.

AQUEOUS METALWORKING FLUIDS

AQUAGUARD 665 should be added to a metalworking fluid system at a point of uniform mixing such as the fluid collection tank. Additions may be added intermittently (Slug dose) at intervals of one week or less.

Initial Dose: When the system is noticeably fouled apply 180-540 ml AQUAGUARD 665 per 1000 litres of metalworking fluid to the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 70-360 ml of AQUAGUARD 665 per 1000 litres of metalworking fluid to the system weekly, or as needed to maintain control. Badly fouled systems should be cleaned before treatment is begun.

Compatibility of AQUAGUARD 665 with a sterile sample of metalworking fluid should be checked for background demand.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

AQUAGUARD 665 should be added to paper making systems at a point of uniform mixing, such as the head box, beaters, broke chest pump, save-all tank, or white water tank.

Initial Treatment: When the water is noticeably contaminated, add 0.25-1.5 kg per metric tonne of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems should be cleaned out prior to initial treatment.

Subsequent Dose: When microbial control is evident add 0.15-1.0 kg per metric tonne to pulp or paper (dry basis) as a slug dose as necessary to maintain control.

WATER BASED COATINGS, PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD

Add sufficient quantities of AQUAGUARD 665 to produce a concentration of 100-600 ppm by weight of the formulation slurry (0.1-0.6 kg of product per metric tonne of slurry).

OIL WELL DRILLING, OIL FIELD PROCESS APPLICATIONS, GAS PRODUCTION AND TRANSMISSION SYSTEMS

Water Floods

AQUAGUARD 665 should be added to a water flood system at a point of uniform mixing.

Initial Treatment: When the system is noticeably contaminated, add 100-5000 ppm AQUAGUARD 665 (0.1 to 5 litres per 1000 litres of flood water). Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 20-5000 ppm AQUAGUARD 665 (0.02 to 5 litres per 1000 litres flood water) to the system weekly or as needed to maintain control.

Drilling Muds/Drilling Completion, Workover Fluids

AQUAGUARD 665 should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.

Initial Treatment: Add 50-1000 ppm AQUAGUARD 665 (0.8 to 15.1 litres AQUAGUARD 665 per 100 barrels of fluids) to a freshly prepared drilling fluid, depending on the severity of the contamination.

Maintenance Dosage: Maintain a concentration of 50 to 1000 ppm AQUAGUARD 665 by adding 0.8 to 15.1 litres AQUAGUARD 665 per 100 barrels of fluid, as needed, depending on the severity of contamination.

Packer Fluids

AQUAGUARD 665 should be added to a packer fluid at a point of uniform mixing such as circulating holding tank. Add 50-600 ppm (0.8 to 9.5 litres per 100 barrels of fluid) of AQUAGUARD 665 to a freshly prepared fluid, depending on the severity of contamination. Seal the treated packer fluid in the wall between the casing and the production tube.

Gas Production and Transmission Pipelines and Systems

AQUAGUARD 665 should be added to a gas production or transmission line via direct injection. The application should be conducted to ensure maximum distribution of AQUAGUARD 665 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 AQUAGUARD 665 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 system should be made in a weekly basis, or as needed to maintain control.

Gas Storage Wells and Systems

Individual injection wells should be treated with sufficient quantity of AQUAGUARD 665 to produce a concentration of 500 to 5000 ppm AQUAGUARD 665 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 sufficient quantity of AQUAGUARD 665 to produce a concentration of 200 to 2000 ppm AQUAGUARD 665 when diluted by 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 (0.1 to 4 litres per 1000 litres water) of AQUAGUARD 665, depending on water quality and length of time the equipment will remain idle.

Pipeline Pigging and Scraping Operation

Add AQUAGUARD 665 to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and trailing pig). Sufficient AQUAGUARD 665 should be added to produce a concentration of 0.1 to 1.0% (0.1 to 1.0 litres AQUAGUARD 665 per 100 litres water), depending on the length of the pipeline and the severity of biofouling.

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