



# Quorum™ Clear V

**PRODUCT DESCRIPTION** Quorum™ Clear V is a liquid, fifth generation quaternary ammonium sanitizer formulated for use in food processing facilities. Quorum Clear V is a blend of quaternary ammonium compounds.

**BENEFITS**

**Saves Money**

- ▲ Effectively controls odors.
- ▲ Non-corrosive to hard surfaces at recommended use dilution.

**Saves Time and Labor**

- ▲ Convenient to use – easily proportioned through sprayers or injection meters.

**Promotes Quality Assurance**

- ▲ Helps enhance finished product quality assurance when used in a total Ecolab product and professional services program.
- ▲ Fifth generation quat is low foaming and has increased tolerance to soil loading and hard water conditions.
- ▲ EPA registered as a no-rinse sanitizer for use on pre-cleaned hard, non-porous food contact surfaces at a concentration of 150-400 ppm active quaternary.
- ▲ The non-corrosive formula enables its use on hard, non-porous food contact surfaces such as food processing equipment and utensils.
- ▲ Useful for a wide variety of applications.

**Environmental Implication**

- ▲ Formula ingredients contain no phosphorus.

**PROPERTIES**

**ACTIVE INGREDIENTS:**

Alkyl (C <sub>14</sub> , 50%; C <sub>12</sub> , 40%; C <sub>16</sub> , 10%)	
dimethyl Benzyl Ammonium Chloride.....	3.00%
Octyl decyl dimethyl ammonium chloride.....	2.25%
Didecyl dimethyl ammonium chloride.....	1.35%
Dioctyl dimethyl ammonium chloride.....	0.90%
<b>OTHER INGREDIENTS:</b> .....	<u>92.50%</u>
<b>TOTAL:</b> .....	100.00%

Form.....	liquid
Color.....	clear
Odor .....	disinfectant
Spec. Grav. @ 68°F (20°C).....	0.9920
Pounds per gallon.....	8.26 (3.75 kg)

EPA Reg. No. 1677-198

Formula ingredients contain no phosphorus.



# Quorum™ Clear V

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Apply Quorum Clear V with a cloth, mop or mechanical spray device. When applied with a mechanical spray device, surface must be sprayed until thoroughly wetted. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface; rub with brush, sponge or cloth. Do not breathe spray. Fresh solution must be prepared daily or when the use solution becomes visibly dirty.

**GENERAL DISINFECTION/VIRUCIDAL\* DIRECTIONS:** At 3 fl. oz. per 1 gallon of water, this product is an effective general disinfectant that can be used to disinfect floors, walls, finished woodwork, sink tops, garbage pails, telephones, rest rooms, bathroom fixtures, and other hard, nonporous surfaces. A pre-cleaning step is required prior to disinfection. Apply disinfecting solution to surface by flushing, mopping, sponging or hand pump spraying so as to thoroughly wet surface. Allow surface to remain wet for 10 minutes. Remove solution with a clean mop, cloth, or wet vacuum pickup or allow to air dry. Prepare fresh solution at least daily or when use solution becomes visibly dirty. Any food contact surfaces that have been disinfected must be thoroughly rinsed with potable water. Do not use this product as a disinfectant on glasses, dishes or utensils.

Before use in federally inspected meat and poultry food processing plants and dairies, food products and packaging materials must be removed from the room or carefully protected.

Quorum Clear V is effective against: \*Avian Influenza Virus and \*Newcastle's Disease Virus.

### Poultry and Swine Premise Disinfection:

1. Remove all poultry and feeds from premises, vehicles and enclosures such as coops and crates.
2. Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with a detergent and rinse with water.
5. Saturate hard, non-porous surfaces with 12 fl. oz. per 4 gallons of water Quorum Clear V solution for a period of 10 minutes. Wipe or allow to air dry.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels and scrapers used for removing litter and manure. Wipe or allow to air dry.
7. Ventilate buildings, cars, trucks, coops and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set or dried.
8. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with a detergent and rinse with potable water before reuse.

See your Ecolab representative for specific recommendations for all cleaning and rinsing requirements.

**Poultry Hatchery Disinfection:** Use to treat hatchers, setters, trays, racks, carts, sexing tables, delivery trucks and other hard nonporous surfaces. Clean out any remaining eggs and chicks. Remove gross soils, such as litter, down, shell fragments or other hatching related debris. Empty all racks and other equipment. Thoroughly wash all surfaces, including floors, walls, conveyors, trays and water systems with a detergent. Rinse thoroughly with water. Apply 12 fl. oz. per 4 gallons of water solution of Quorum Clear V with a mop, cloth, brush or coarse spray. Apply to hatchers, setters, trays, racks, sexing tables, delivery trucks and other hard surfaces. Wet surfaces and allow to remain wet for 10 minutes. Ventilate buildings and other closed spaces. Allow to dry before reintroducing eggs.

### Farm Premise Disinfection Directions:

1. Remove all animals and feed from premises, vehicles, and enclosures.
2. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean surfaces with soap or detergent by manual, foam, or spray application and rinse with water.
5. Saturate hard, non-porous surfaces with a use-solution of 12 fl. oz. of Quorum Clear V per 4 gallons of water (or equivalent dilution) and allow to remain wet for a period of at least 10 minutes. Wipe or allow to air dry.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels and scrapers used for removing litter and manure. Wipe or allow to air dry.
7. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse.

**Vehicles:** Clean all vehicles including mats, crates, floors, doors, cabs and wheels with water and Quorum Clear V. Use 12 fl. oz. per 4 gallons of water. Apply use solution to treat all vehicles. Leave treated surfaces wet for 10 minutes. Allow to air dry.

**Deodorizing Directions:** This product deodorizes garbage storage areas, garbage bins, toilet bowls and any other hard non-porous surfaces in odor causing areas. Mix 1/2 fl. oz. per gallon of water and apply solution to surfaces. Thoroughly wet surfaces, allow to air dry.

**Cleaning:** For general cleaning, use 12 fl. oz. per 4 gallons of water. Apply use solution with a cloth, mop, sponge, sprayer or by immersion to thoroughly wet the surfaces. Wipe or rinse with potable water or allow to air dry. A potable water rinse is required when used on food contact surfaces as a cleaner. For heavily soiled surfaces, pre-clean first. Prepare a fresh solution for each use or more often if solution becomes visibly diluted, clouded or soiled.

**Non-Food Contact Surface Sanitizing:** Add 0.34 - 0.68 fl. oz. of Quorum Clear V per 1 gallon of water (200-400 ppm active quat) to sanitize pre-cleaned hard, nonporous non-food contact surfaces against *Staphylococcus aureus* and *Enterobacter aerogenes*. Apply sanitizer use-solution with a cloth, mop, sponge, sprayer or by immersion. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Do not breathe spray. Treated surfaces must remain wet for 5 minutes. Wipe dry with a sponge, mop, or cloth or allow to air dry.

**Entryway Sanitizing Systems:** To prevent cross contamination on treated surfaces from area to area, set the system to deliver sanitizing solution at 0.68 - 2.04 fl. oz. per gallon of water (400-1200 ppm active quat). The foam (or spray) must cover the entire path of the doorway. Set the system so that a continuous wet blanket of sanitizer solution is delivered to the floor. Do not mix other foam additives to the sanitizing solution.

**Shoe Bath Sanitizer Directions:** To prevent cross contamination on treated surfaces into animal areas and the packaging and storage areas of food plants, shoe baths containing one inch of freshly made solution must be placed at all entrances to buildings and hatcheries. Scrape waterproof work boots (shoes) and place in solution of 0.34 oz. of Quorum Clear V per 1 gallon of water (200 ppm) (or equivalent dilution) for 60 seconds prior to entering area. If there is a heavy soil load or excessive traffic, place work boots (shoes) in a use-solution of 0.68 - 1.4 fl. oz. per 1 gallon of water (400 - 800 ppm active quat)(or equivalent dilution) for 60 seconds prior to entering area. Change the solution in the bath daily or more often if solution appears diluted or soiled.

**Shoe Foam Sanitizer Directions:** Quorum Clear V can be used to prevent cross contamination on treated surfaces into animal areas and packaging and storage areas of food plants. Apply a foam layer approximately 0.5 to 2 inches thick made from a solution of 1.4 to 2 fluid ounces per gallon of water (or equivalent use dilution) (800 to 1200 ppm active) at all entrances to buildings, hatcheries, production and packaging rooms by using a foam generating machine or aerator to apply foam layer. Follow the foaming directions as specified by the manufacturer of the foam generator/aerator. Scrape waterproof shoes. Stand and/or walk through foamed area for 60 seconds prior to entering area. Foam area must be washed and replaced daily or when it appears dirty.

Quorum Clear V can be used to sanitize hard, non-porous food contact surfaces such as tables, counters, utensils and food processing equipment.

Quorum Clear V is an effective sanitizer against *Escherichia coli* and *Staphylococcus aureus* on food contact surfaces when used at 0.26 - 0.68 fl. oz. per 1 gallon of 400 ppm hard water (150 ppm to 400 ppm active quat).

Quorum Clear V is an effective sanitizer against *Escherichia coli*, *Staphylococcus aureus*, *Campylobacter jejuni*, *Escherichia coli* O157:H7, *Klebsiella pneumoniae*, *Listeria monocytogenes*, *Salmonella enterica*, *Shigella sonnei*, *Yersinia enterocolitica* and *Enterobacter sakazakii* on food contact surfaces when used at 0.34 fl. oz. - 0.68 fl. oz. per 1 gallon of 500 ppm hard water (200 ppm to 400 ppm active quat).

**To Sanitize Food Contact Surfaces, Food Processing Equipment and Other Hard Surfaces in Food Processing Locations, Dairies, or Restaurant:** Use Quorum Clear V to sanitize pre-cleaned hard non-porous surfaces of food processing equipment, dairy equipment, food utensils, dishes, silverware, glasses, sink tops, countertops, refrigerated storage areas and display equipment and other hard non-porous surfaces in federally inspected meat and poultry plants or restaurants. Prior to application, remove gross food particles and soil by a pre-flush, pre-scrub or when necessary, a pre-soak. Then thoroughly wash or flush objects with a good detergent or compatible cleaner followed by a potable water rinse before application of the sanitizing solution. Apply a use-solution of 1.04 fl. oz. to 2.72 fl. oz. of Quorum Clear V per 4 gallons of 400 ppm hard water (150 - 400 ppm active quat) or 1.36 fl. oz. to 2.72 fl. oz. of Quorum Clear V per 4 gallons of 500 ppm hard water (200 - 400 ppm active quat). Expose all surfaces to the sanitizing solution for a period of not less than 1 minute. Allow equipment to drain thoroughly and air dry.

In dairy processing facilities and restaurants in Wisconsin, clean equipment with a good detergent and follow with a potable water rinse, then rinse equipment with a sanitizing solution of 1.36 fl. oz. to 2.72 fl. oz. of Quorum Clear V per 4 gallons of 500 ppm hard water (200 - 400 ppm active quat).

**NOTE: FOR MECHANICAL OPERATIONS:** A prepared use solution may not be reused for sanitizing, but may be reused for other purposes such as cleaning.

**FOR MANUAL OPERATIONS:** Prepare a fresh sanitizing solution as soon as it becomes diluted or soiled.

**Sanitizing Hard, Non-Porous, Non-Edible Outside Surfaces Of Airtight, Sealed Packages Containing Food Or Non-Food Products:** Quorum Clear V may be used as a final sanitizing rinse for hard, non-porous non-edible outside surfaces of airtight, sealed packages containing food or non-food products at a use-solution of 1.04 fl. oz. to 2.72 fl. oz. of Quorum Clear V per 4 gallons of 400 ppm hard water (150 - 400 ppm active quat) or 1.36 fl. oz. to 2.72 fl. oz. of Quorum Clear V per 4 gallons of 500 ppm hard water (200 - 400 ppm active quat). The treated hard, non-porous, non-edible packaging, such as food wraps and meat casings, must be removed and discarded before packaged food products are further processed or consumed. All surfaces must be exposed to the sanitizing solution for a period of not less than 1 minute. Drain thoroughly. No rinse necessary. This is not to be used on porous surfaces.

**For Continuous Treatment of Conveyors:** Remove gross food particles and excess soil by a pre-flush or pre-scrub. Wash with a good detergent or compatible cleaner. Rinse equipment thoroughly with potable water, then rinse equipment with a sanitizing solution. During processing, apply Quorum Clear V at a 150 to 400 ppm quat level to conveyors with MIKRO MASTER® or other suitable feeding equipment. Controlled volumes of sanitizer are applied to return portion of conveyor through nozzles so located as to permit maximum

drainage of sanitizer from equipment and to prevent puddles on top of belt. During interruptions in operation, coarse spray equipment, peelers, collators, slicers and saws with MIKRO MASTER® dispensed Quorum Clear V solution of 150 to 400 ppm quat. Conveyors and other equipment must be free of product when applying this coarse spray. Use 200 ppm to 400 ppm quat level in Wisconsin dairy processing facilities.

**Sanitizing Shell Eggs Intended for Food:** To sanitize previously cleaned food-grade eggs in shell egg and egg product processing plants, spray with a solution of 1.04 fl. oz. to 2.72 fl. oz. of Quorum Clear V in 4 gallons of warm water (150 to 400 ppm). The solution must be warmer than the eggs, but not to exceed 130°F. Wet eggs thoroughly and allow to drain. Eggs sanitized with Quorum Clear V shall be subjected to a potable water rinse only if broken immediately for use in the manufacture of egg products. Eggs must be reasonably dry before casing or breaking. Do not reuse solution for sanitizing eggs.

**Note:** Only clean, whole eggs can be sanitized. Dirty, cracked or punctured eggs cannot be sanitized.

**Sanitizing - Non-Porous Gloved Hands:** To prevent cross contamination on treated surfaces into animal areas and the packaging and storage areas of food plants, dip, soak or spray pre-washed (plastic, latex or other synthetic rubber) gloved hands so that there is enough sanitizing solution to cover the gloved area. For sprayer applications, use a coarse spray device and spray the glove surfaces until thoroughly wetted. Do not breathe spray. **Do not let sanitizing solution come in contact with exposed skin.** Make up the sanitizing solution by adding 1.04 to 2.72 fluid ounces of product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active quat). Dip, soak or spray in solution and allow gloved hands to remain wet for at least 60 seconds. Allow them to air dry. No potable water rinse is allowed. Change the sanitizing solution at least daily or when solution appears dirty.

### FOGGING - NON-PUBLIC HEALTH PESTS ONLY

**(This product can be applied by fogging to control the growth of non-public health microorganisms that can cause decay and/or spoilage in dairies, beverage and food processing plants including meat and poultry processing facilities. Fogging application can only be used for non-public health pests. All surfaces must be cleaned and disinfected in accordance with label directions prior to fogging.)**

**Non-public Health Fogging in Hatchery Rooms:** Prior to fogging, remove all animals and feed from premises, vehicles and enclosures. Remove all litter and manure from floors, walls, and surfaces of the room to be treated. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Fog desired areas using one quart per 1000 cu. ft. of room area with a solution of 4 fl. oz. per 1 gallon (in up to 200 ppm hard water). A dust mist respirator must be worn when applying the product. Do not house livestock or employ equipment until treatment has been absorbed or dried. **Do not allow people or animals to contact or breathe this saturate for a minimum of 2 hours.** Thoroughly clean all surfaces with soap or detergent and rinse with water. Fogging is to be used in addition to acceptable manual cleaning and disinfecting of room and machine surfaces.

**Non-Public Health Fogging of Device Incubator and Hatchers:** Prior to fogging, remove all animals and feed from premises. Fog desired areas using one quart per 1000 cu. ft. of room area with a solution of 4 fl. oz. per 1 gallon (in up to 200 ppm hard water). Saturate by dipping, soaking, fogging or spraying (as appropriate) this mixture into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. It is acceptable to saturate setters and hatchers with a 4 fluid ounces per gallon solution of Quorum Clear V on an hourly or every other hour basis. If this is done, saturate for 30-90 seconds once per hour or once every two hours. When the saturation process is completed, ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed or dried. **Do not allow people or animals to contact or breathe this saturate for a minimum of 2 hours.** Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse. Fogging is to be used in addition to acceptable manual cleaning and disinfecting of room and machine surfaces.

**Note:** The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH, goggles, long sleeves, and long pants.

Consult your Ecolab Representative for specific use instructions and recommended dispensing equipment.

For cautionary and first aid information, consult the Safety Data Sheet (SDS) or product label.

## STATEMENT OF ASSURANCE

This product is effective under the intended conditions of use as outlined on the product label or specified in a Sanitation Standard Operating Procedure (SSOP).

A Letter of Guaranty as indicated in USDA's Sanitation Performance Guideline is available from your Ecolab representative.

Consult EPA approved label for all approved directions for use.