



FMC, a leading global producer of hydrogen peroxide and peracetic acid, introduces Clarity™ for aseptic food and beverage processing operations. Approved by the FDA for low acid applications, Clarity™ is an easy-to-use single component peracetic acid microbial agent that can be used for sterilization at lower temperatures and on a wide range of processing equipment, packaging materials (ie. PET, HDPE, foil etc.) and closure systems.

Clarity™ Application Uses

Clarity™ can be used on food and beverage packaging materials, and filling equipment in aseptic food and beverage processing to achieve commercial sterility.

Clarity™ can be used on products labeled as **organic** in food and beverage processing facilities.

Clarity™ Benefits

- Clarity™ is more effective at lower temperature compared to hydrogen peroxide.
- Clarity™ is more effective at lower application concentration compared to hydrogen peroxide.
- Significantly less volume of liquid chemical to be handled and stored at the plant compared to hydrogen peroxide.
- Clarity™ is the only single component peracetic acid sterilant that is approved for low acid aseptic systems.
- Clarity™ is approved for rotary spray, bath applications and aseptic filling equipment.
- Clarity™ is approved for use on all polymeric food packaging materials, for both high and low acid foods.
- Clarity™ helps maintain an antimicrobial environment on the equipment during production better than hydrogen peroxide.
- No Dept. of Homeland Security (DHS) audits -- Facilities using hydrogen peroxide at $\geq 35\%$ and ≥ 400 lbs are required to register with DHS.



FMC Corporation
Peroxygens Division
1735 Market Street, Philadelphia, PA 19103

Phone: (508)-284-0396
Email: aseptic@fmc.com
www.microbialcontrol.fmc.com

Directions for Use

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

Aseptic Food Processing Operations

This product may be used to achieve commercial sterility of food packaging prior to fill and of equipment used in aseptic food processing applications.

Food Packaging Materials

Apply Clarity™ on the exterior and interior of food containers and closure systems (caps, seals, etc.). Apply 4000 ppm peroxyacetic acid at a minimum temperature of 65°C. The solution must remain in contact with the packaging surface for a minimum of 20 seconds. Rinse containers with sterile water prior to filling with processed food; in lieu of a rinse, films may be mechanically stripped of excess sanitizing solution.

This product may be used on food packaging as an aseptic packaging antimicrobial rinse in food packaging processing operation that has a scheduled process accepted by FDA. The aseptic food processing operation must comply with all applicable FDA regulations, including but not limited to 21 CFR parts 108, 110, 113, and/or 114. Use in an aseptic food processing operation includes testing required for the process validation.

This product may be used to achieve commercial sterility of non-porous food manufacturing, packaging and filling equipment.

Food Processing Equipment

Clarity™ may be used on manufacturing, filling and packaging equipment.

1. Remove gross soil particles from equipment surfaces.
2. Clean surfaces thoroughly.
3. Rinse thoroughly with potable water.
4. Apply 4000 ppm peroxyacetic acid at a minimum temperature of 65 °C.
5. Use immersion, coarse spray or circulation techniques to apply Clarity™.
6. Allow contact time of at least 20 seconds.
7. Allow to drain dry.
8. Rinse with sterile water.

This product may be used on equipment used in aseptic packaging antimicrobial rinse in food processing operation that has a scheduled process accepted by FDA. The aseptic food processing operation must comply with all applicable FDA regulations, including but not limited to 21 CFR parts 108, 110, 113, and/or 114. Use in an aseptic food processing operation includes testing required for the process validation.

Sanitization of Non-porous Food Contact Surfaces

For use in circulation cleaning and sanitizing of previously cleaned non-porous food contact surfaces and equipment, such as pipelines, tanks, vats, fillers, evaporators, pasteurizers, and aseptic equipment in:

- Dairies, Wineries, Breweries and Beverage Plants
- Milk and Dairy Products Processing/Packing Plants
- Food Processing/Packing Plants

Clarity™ is an effective sanitizer against *Staphylococcus aureus*, *Escherichia coli*, *Listeria monocytogenes* and *Salmonella typhimurium*

Clean equipment immediately after use:

1. Remove gross particulate matter with a warm water flush.
2. Wash equipment with detergent or cleaning solution.
3. Rinse equipment with potable water.
4. Prepare Clarity™ solution by adding 0.31 to 0.45 fluid ounces to 5 gallons potable water. This provides 85 to 123 ppm peroxyacetic acid and 57 to 82 ppm of hydrogen peroxide.
5. Fill closed systems with diluted sanitizer solution for a contact time of one (1) minute.
6. If sanitizing against *Listeria monocytogenes* use 0.4 to 0.45 fluid ounces (109 to 123 ppm peroxyacetic acid and 73 to 82 ppm hydrogen peroxide) of product to 5 gallons of potable water.
7. For open or not completely closed systems, use a coarse spray, mop/wipe or flood technique to apply the solution to the surface for a contact time of at least one (1) minute. Allow surfaces to drain thoroughly before resuming operation.

Antimicrobial Rinse of Precleaned or New Returnable or Non-Returnable Containers

If non-pathogenic beverage spoilage microorganisms (for example *Byssochlamys fulva* and *Aspergillus versicolor*) are present, use up to 10 fluid oz. of product per 5 gallons of water. This provides 2700 ppm peroxyacetic acid and 1800 ppm hydrogen peroxide. After applying antimicrobial rinse, allow containers to drain thoroughly and then rinse with sterile or potable water.

Note: Before using Clarity™ to sanitize metal surfaces, it is recommended that the diluted solution be tested on a small area to determine compatibility. In all applications, always prepare a new sanitizing/disinfecting solution daily to ensure effectiveness. Do not reuse sanitizing/disinfecting solutions. Dispose of any unused sanitizing/disinfecting solution.