

Blue Earth Products®

# General Surface Cleaning Guidelines

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Essential instructions for the planning and implementation of general surface cleanings

## Table of Contents

Surface Cleaning Procedure..... 3  
Final Surface Disinfection..... 4  
Quality Control Measures ..... 4  
Benefits and Results..... 5

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## Surface Cleaning Procedure

1. See “Quality Control Measures” for some quality control suggestions.
2. Mix cleaning chemistry of choice [CSR Plus<sup>®</sup>, CSR Plus LF, Top Ultra<sup>®</sup>, Floran<sup>®</sup> Biogrowth Remover, Floran<sup>®</sup> Biodegreaser] as directed by your Blue Earth Products representative, with Floran<sup>®</sup> Catalyst at a 10:1 ratio
  - Only mix one container at a time.
  - Use the entire mixed amount even if the tank looks clean. **[IMPORTANT: CLEANERS THAT HAVE BEEN MIXED WITH FLORAN CATALYST MUST NEVER BE RECLOSED]**
  - If Floran Biodegreaser<sup>™</sup> is used; it must be applied prior to application of acid based cleaner of choice.
3. Spray surfaces, use jet nozzle for difficult to reach areas. Allow solution to react for 1-10 minutes before rinsing off – foaming is common. Repeat as needed for heavily contaminated areas. [NOTE: Do not let foam and solution dry on tank surfaces. Use a test patch when treating bare metal surfaces such as stainless steel or aluminum. When applying to bare metal always rinse as quickly as possible]
4. Flush surface with rinse water.
5. If final disinfection is required, perform per AWWA Standard and state regulatory requirements.
6. Clean up site and bring equipment back online as needed.

## Final Surface Disinfection

### Disinfection according to AWWA Standard C 652-92

1. Prepare a chlorine solution of at least 200 ppm free chlorine. This is equal to 1 cup of 10% (available chlorine) NSF Standard 60 bleach in 15 gallons of water. Bleach (same as sodium hypochlorite solution) can be obtained in different strengths. Make sure to adjust bleach dosage to strength (e.g. double the dosage for 5% bleach).
2. Spray the mixture onto every surface that comes into contact with water.
3. The surface should sit empty for 30 minutes before use.
4. Sample and report Bacteria Testing (BacT) as required by regulatory agencies.

## Quality Control Measures

1. Take photos of the surface before and after treatment.
2. Determine chlorine demand of surface before and after cleaning.
3. Compare water quality data upstream and downstream of surface before and after cleaning.
4. Perform complete laboratory analysis of rinsate and solids.

## Benefits and Results

1. Complete removal of surface deposits from surface materials
  - Removes disinfectant demand and contribution to disinfection byproduct (DBP) generation and improves finished water quality
  - Water quality improvement from elimination of water-borne surface contamination
  - Reduction or elimination of risk of microbiological corrosion (MIC) and under deposit corrosion
2. Improved surface inspection:
  - Early detection of paint coating failure and corrosion, extended paint coatings lifetime, clearly visible surfaces features.
  - No surface damage from high-pressure spray applications and brushing of surfaces.
3. Low labor and downtime for cleaning
  - Treatment of all surface areas without need for scaffolding (large surfaces).
  - Reduces out of service time.