

## Cool Cell Pad Maintenance Tips

To keep the pads and media lasting long and performing at top efficiency, the following recommendations should be utilized.

1. Install the pads according to the system manufacturer's instructions.
2. Maintain the pH of the water between 6 and 8.
3. Check and clean the distribution headers for obstructions or clogged holes.
4. Dry the pads completely over 24 hours to prevent algae build-up.
5. Maintain a 3%-5% water bleed-off rate.
6. Shade the pads and the sump from direct sunlight.
7. Keep a steady, even water flow over the pads to help prevent mineral build-up.
8. Use a soft bristled brush to clean debris and then flush the system afterward.
9. Drain and disinfect the entire water distribution system quarterly or as needed.
10. Do not cycle the pump with ON and OFF timers which will shorten pad life.
11. Regularly inspect the pads for bowing, sagging or dry streaks.
12. Remove any debris from the sump and cooling system.
13. Algae and scale treatments, if needed, must follow manufacturer's instructions. Refer to Scale and Algae Control Suggestions [on Pages 1-2](#).
14. Do not allow the bottom of the pads to sit in water.
15. Avoid outside contaminants that provide nutrients for algae growth.

## Scale and Algae Control Suggestions

### Algae or Bacteria Control

1. Control without Chemicals:
  - Most organisms thrive in the presence of water, sunlight and nutrients.
  - Allowing the media to dry at the end of each cooling day eliminates the moisture problem and the organisms become flaky or powdery. When the system is started the next day, the small dry flakes are washed out and trapped in the filter. Large flakes or deposits can be brushed or vacuumed from dry pads. This method is used to control algae in most agricultural operations.
  - To solve the sunlight problem, use dark louvers or curtains to shade the pad. Make sure the airflow is not impeded.
  - All nutrients and fertilizers should be kept away from the pad. In greenhouse applications, never spray liquid fertilizer on the pad. Most chemicals that contain phosphorus or phosphate compounds will promote organism growth.



# Evaporative Cooling Pad Maintenance and Algae Control

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## Algae or Bacteria Control (Continued)

### 2. Control with Chemicals:

- There are numerous products and methods available for chemical control of organisms. This section covers some basic ideas about their application.
- Always exercise extreme caution when using any chemicals to control the growth of organisms. Harsh chemicals can damage the media and other system components and can be harmful to humans. Handle chemical defoliants carefully. Start with very low concentrations and gradually increase application amount to effective levels. Overuse of chemicals can damage the system.
- The most commonly used chemical for organism control is chlorine. It is readily available and inexpensive, but it is also potentially dangerous. The only effective way to apply chlorine is to introduce it into the system on a continual basis on the pressure side of the pump. This can be done using a chemical injection pump that meters and adds a controlled amount each time the water re-circulates. Another application method is a basket type tablet holder installed on the pressure side of the pump.

**NOTE:** *In final solution, 1 PPM to 4 PPM free chlorine adequately controls organism growth. Higher rates of application may cause damage to the system and/or components. Use chlorine only if you can meter in these amounts. Up to three times this concentration may be used in a garden type sprayer for an occasional shock treatment. Spray directly on the pad face, but only when organism growth is a serious problem and other methods are impractical. Always wear protective clothing and use proper eye and respiratory protection when spraying chlorine, or any other chemical. Incorrect application of chemicals voids pad warranties. Therefore, any chemical control program should be a coordinated effort that includes the system user, the chemical supplier, and AP/Cumberland sales technicians.*

## Descale Product Names

1. Cool-N-Klean
2. JR's Evaporative Cooling Treatment
3. Proxy Clean Brand Triple-C
4. DeVere Powder Descaler
5. Cooler Guard Scale-Stop

## Algae Control Product Names

1. Casco CWT Cooling Water Treatment
2. Algae Guard Bio-Stop
3. Synergize Cool
4. Virocid
5. Green-Shield II
6. Triathlon
7. Phyan 20

**NOTE:** *The above product information is provided as a resource only. Do not exceed recommended dosage provided by chemical manufacturers. Water pH must be maintained between 6-8 to ensure maximum longevity.*