

PORTACOOOL PORTABLE EVAPORATIVE COOLERS WITH KUUL COMFORT™

A DISCUSSION ON LEGIONNAIRES' DISEASE



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A Discussion on Legionnaires' Disease

What is Legionnaires' Disease?

Legionnaires' Disease is a type of pneumonia caused by inhaling bacteria from a misting source that has been contaminated by Legionella. Legionella bacteria is found in warm, stagnant water environments like hot tubs and larger plumbing systems. This is further explained by the Centers for Disease Control and Prevention (CDC) at <https://www.cdc.gov/legionella/index.html>.

Background on Legionnaires' Disease:

According to the CDC, outbreaks are most commonly associated with "buildings or structures that have complex water systems, like hotels, hospitals, long-term care facilities, and cruise ships." (<https://www.cdc.gov/about/facts/cdcfastfacts/legionnaires.html>) While Legionnaires' Disease can be deadly in extreme cases, it is important to note that most healthy people do not become infected after exposure. Those affected typically have compromised immune systems or are battling underlying health issues. The disease can be treated with antibiotics and most cases are successfully treated. The most expansive outbreak happened in 1976 at an American Legion conference, and it is where the disease got its name.

Prevention of Legionnaires' Disease:

The CDC points out: "The key to preventing Legionnaires' Disease is maintenance of the water systems in which Legionella grow, including drinking water systems, hot tubs, decorative fountains, and cooling towers."

Do Portacool portable evaporative coolers pose a concern for spreading Legionella bacteria?

Portacool portable evaporative coolers that are maintained correctly on a regular basis are less susceptible to legionella bacteria. Here's why:

- Our portable evaporative coolers are **NOT** misters, atomizers, foggers or vaporizers.
- Our coolers utilize water to naturally cool the air via evaporation. The water's evaporation takes place within the evaporative media, preventing dispelled moisture.

- Our products do not fog, produce any mist or spray water when maintained correctly, therefore, they are not a conducive product for transmitting legionella bacteria.
- You can stand directly in front of a Portacool evaporative cooler and will not walk away damp or wet. This also goes for surfaces around the cooler. They should be dry assuming proper maintenance and operation.
- Typically, tap water is used to fill our coolers. Municipality maintained tap water and treated freshwater are less likely to harbor legionella bacteria.

If you see or feel a spray of water that collects on people, objects, equipment or floors, that is not a portable evaporative cooler. Mistifiers, atomizer fans, foggers and vaporizers operate in a converse method that causes wet conditions. These systems require sterile water to operate safely as they deliver aerosols that are big enough to carry bacteria.

Additionally, portable evaporative coolers are not classified, nor considered to be the same, as a cooling tower or evaporative condensers. Those are part of bigger building operations and not portable.

Any confirmed cases caused by this kind of cooler?

Portacool portable evaporative coolers have not been indicated or linked to any case of Legionnaires' Disease. Neither has the Kuul Comfort™ evaporative media (a type of rigid evaporative media), which is utilized to absorb the water and facilitate water molecule evaporation into the air to generate cool air from the portable cooler.

Is there a guarantee against the development of Legionella bacteria with this portable evaporative cooler or Kuul Comfort™ evaporative media?

To eliminate any concern for harboring any kind of bacteria in the cooler's water reservoir, proper operation and proactive maintenance of the Portacool portable evaporative cooler is of utmost importance.

In use operation:

Given the nature of operation necessary for achieving optimal cooling with Portacool portable evaporative coolers and its evaporative media (Kool Comfort - a type of rigid evaporative media), there is reduced proclivity and overall reduced likelihood of creating a conducive environment for Legionella bacteria growth. Why? Portable evaporative coolers do not use mist or aerosols of water in the cooling process. In addition, the water flows constantly by means of a pump when in use in Portacool portable evaporative coolers.

Maintenance:

View our online instruction video at <https://www.youtube.com/watch?v=9KS2NxO2rCY&feature=youtu.be>

Daily usage maintenance:

Allow evaporative media to dry completely once every 24 hours. Turn off the pump approximately 15 minutes before shutting the fan down each day to allow the media to dry all the way through and prevent the growth of any bacteria or algae on the Kool Comfort media.

Weekly usage maintenance:

The portable evaporative cooler should be drained each week when in usage on a regular basis. All Portacool evaporative coolers have a drainage plug. (Portacool models manufactured since 2017 come with a 2" drain on the bottom.) Locate the drain, unscrew the cap and allow water to drain. Ensure the Kool Comfort evaporative media is completely dry, then remove and wipe down the inside of the evaporative cooler. It is best to use a shop vac to remove any remaining water, and at the same time, get any dust/dirt that may have settled inside the reservoir.

As needed maintenance:

To prevent any algae or bacteria from being present on the Kool Comfort evaporative media, you can shock dose the reservoir with an appropriate amount of household bleach (Sodium Hypochlorite - NaClO) into the system sump/reservoir taking care to utilize the correct amount - ranging from 1/2 tablespoon of NaClO for 8 gallons of water in the Portacool Cyclone 110, all the way up to 2.25 oz for reservoirs up to 75 gallons in the Portacool Hurricane 370 - following this chart.

Evaporative cooler	Size of reservoir (gallons)	Household bleach
Portacool Cyclone™ 110	8	1/2 Tablespoon
Portacool Cyclone™ 120	10	1/2 Tablespoon
Portacool Cyclone™ 130	16	1 Tablespoon
Portacool Cyclone™ 140	40	2 1/2 Tablespoon
Portacool Cyclone™ 160	40	2 1/2 Tablespoon
Portacool Jetstream™ 220	20	1 1/4 Tablespoons
Portacool Jetstream™ 230	30	1 oz
Portacool Jetstream™ 240	50	1.5 oz
Portacool Jetstream™ 250	55	1.5 oz
Portacool Jetstream™ 260	60	1.75 oz
Portacool Jetstream™ 270	65	2 oz
Portacool Hurricane™ 360	70	2 oz
Portacool Hurricane™ 370	75	2.25 oz
Note: Reservoir water must be between 6.5 and 7.5 pH for the chemistry to work properly.		

What is the key takeaway for ensuring Legionella bacteria is not a concern when using a Portacool portable evaporative cooler and its Kool Comfort™ evaporative media?

Proper and proactive maintenance is key not only to achieve optimal cooling, but also to eliminate any concern for harboring potentially harmful bacteria in a Portacool portable evaporative cooler or its Kool Comfort evaporative media. Installation of the proper methods of flushing and dosing noted above will help combat the growth of any unwanted bacteria in an evaporative cooling setting.

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