

# How to Clean a Cistern

## Cleaning the Cistern

1. Clean the catchment area (for example, rooftop and gutters) and remove all debris.
2. Remove all debris and water from the cistern.
3. Scrub the inside with a stiff brush and a solution of 1 cup (about 0.25 liter) of unscented liquid household bleach (5%-6%) mixed with 10 gallons (about 38 liters) of water.
4. Rinse cistern with clean, safe water, then drain.
5. Refill the cistern with clean, safe water.

## Disinfecting the Cistern

1. If the cistern is connected to any water treatment units, close valves to those units. Follow manufacturer recommendations for treatment system disinfection.
2. Add 3 cups (a little less than 1 liter) of 5%-6% unscented liquid household bleach for every 100 gallons (about 380 liters) of water in the holding cistern. This should give you a chlorine concentration of about 100 parts per million (ppm) <sup>3</sup>. Table 1, below, shows cistern capacity volumes.

Table 1. Amount of Bleach to Add for Cistern Capacity

<b>Cistern Capacity</b>	<b>Unscented Household Bleach (5%-6%)</b>
100 gallons	3 cups
200 gallons	6 cups
300 gallons	9 cups
400 gallons	12 cups
500 gallons	16 cups

If you do not know the cistern capacity, use one of the following formulas to determine the amount of water it will hold.

### **For a rectangular cistern:**

- Volume (gallons) = depth (ft) X length (ft) X width (ft) X 7.5.
- Metric: Volume (liters) = depth (m) X length (m) X width (m) X 1,000.

### **For a round cistern:**

- Volume (gallons) = depth (ft) X [3.14 X radius squared (ft)] X 7.5.
- Metric: Volume (liters) = depth (m) X [3.14 X radius squared (ft)] X 3,140.

Note: radius = half of cistern diameter.

## Maintaining the Cistern

Maintaining water quality in cisterns can be difficult. Consider installing a treatment system to improve the quality and safety of cistern water. Contact your local health department or a water treatment specialist for more information.

Measure the chlorine residual regularly; chlorine test kits can be found at most swimming pool supply stores. Maintain a free chlorine residual between 0.2 ppm to 2.0 ppm to prevent microbial growth.