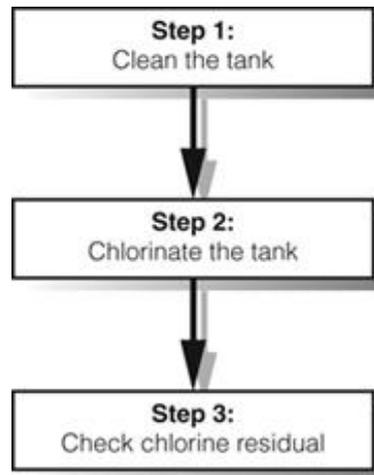


CLEANING AND STORAGE OF DRINKING WATER IN STORAGE TANKS



Delivered water should be potable (safe for human consumption) and obtained from an approved source. It is necessary to clean / disinfect your water holding tank(s) at least once a year or more often, if required. This is to remove the algae (plant growth which produces bad tastes and odours), silt, and bacteria which may be harmful.



Large quantities of clean water will be required to clean and treat storage tanks before it can be used to store water.

Step 1 Cleaning the Tank

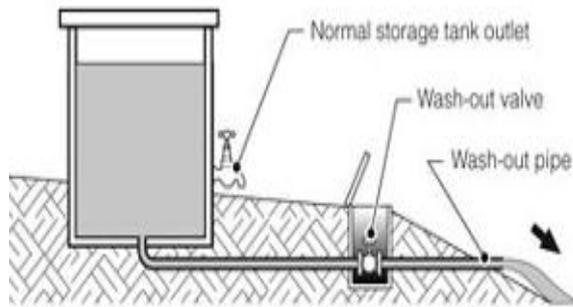
The tank must be cleaned to ensure that water stored in the tank does not become contaminated by dirt or traces of the substance the tank previously held. This can be achieved by following the three steps below.

- **Drain/empty the tank.** Open the outlet valve/tap and drain out any remaining liquid. Collect the liquids so that they can be safely disposed of.
- **Clean/Scrub all internal surfaces.** Use a mixture of detergents and water (household laundry soap powder will do) to clean all internal surfaces of the tank. This can be done with a stiff brush. Take special care to clean corners and joints so that no small amounts of the original liquid remain. Even minute amounts of some liquids can give water a bad taste and people will refuse to drink it.
- **Wash all internal surfaces to remove all traces of detergents.** This is most easily done with a high pressure hose pipe if it is not available the tank can be filled with water and left to stand for a few hours. Drain all the water from the tank and collect for safe disposal as before. Continue flushing the tank until there are no longer traces of detergent in the water

Step 2 Disinfecting the Tank

- To effectively disinfect the tank, fill it with clean water up to $\frac{1}{4}$ level only. It is important to not fill the tank too much as this will reduce the concentration of the chlorine solution and limit the effectiveness of cleaning. To estimate $\frac{1}{4}$ of the tank, use a stick with graded markers to indicate the water level.
- Prepare a concentrated chlorine solution to disinfect the tank. The best source of chlorine to use is High Test Hypochlorite (HTH) granules or powder as this normally contains 50% to 70% chlorine. Box 1 below outlines methods for calculating the appropriate chlorine dose to disinfect a tank using HTH granules





- Pour solution slowly into the tank, mixing as you pour and then fill the tank up to full capacity with clean water.
- Let the chlorine stand in the tank for 24 hours to ensure that the tank is fully disinfected. If the tank has a cover (which is recommended) it should be closed.
- If the tank is required for use urgently double the quantity of chlorine added to the tank. This will reduce the standing time from 24 to 8 hours.
- Completely empty the tank and carefully dispose of the disinfecting water as it will contain a high concentration of chlorine
- Remember to also clean and disinfect any pipes or hoses connected to the tank. Use the same procedure as described above.

Calculate the total volume of the tank (let us assume the tank holds 8m³).
 Fill a 20l bucket with clean water.
 Add 50g of HTH to the water and stir until dissolved.
 Add 10 litres (half a bucket) of the chlorine solution to the water in the tank for every (m³) of the tank volume.
 Remember 1 m³ = 1000litre.
 Therefore add four, 20litre buckets of chlorine solution as you fill the tank with clean water.

Step 3 Chlorine Testing

- Refill the tank with clean water and allow standing for 30 minutes. Test the residual chlorine left in the tank using a colorimeter
- If the residual chlorine concentration is 0.5 or less the tank is safe to use for water storage. If the concentration is greater than 0.5mg/l, empty the tank again and refill with clean water. Re test to check that the chlorine concentration is 0.5 mg/l or less.

Visit www.reservoir.co.za for further information on water quality in your area.

