



## Plumbing in Your Rainwater Tank for Safe Drinking Water

When it comes to having fresh-tasting rainwater many consider the safety of the water storage materials without much thought to actual plumbing in of their tank. To make certain your water remains of a high quality you need to be on top of your tank fittings, connections and pipes.

### Safe Tank Fittings and Piping

Ensuring safe plumbing starts with hiring a plumber experienced with installing rainwater tanks used for drinking water. They will be aware of common issues, what should be avoided and accessories that should be included as part of your rainwater harvesting system to ensure a high water quality.

When you purchase a rainwater tank it is also either fitted with inlets and outlets by the manufacturer before delivery or onsite by your tank installer.

So some things to be aware to when your rainwater tank is installed and plumbed include:

- **PVC piping can leak lead.** Lead is toxic to our bodies and is especially harmful to the development of young children if consumed. To prevent lead poisoning, ensure that any piping used when installing your tank is of “drinking water” grade and not “stormwater” grade.
- **Use quality stainless steel and brass fittings.** These will also last longer and not corrode.
- **All pipes and fittings should comply with AS/NZS 4020 – Products for use in contact with drinking water.** Obviously, this applies to fittings on your rainwater tank as well as pipes used to supply rainwater to your tank and then into your home.
- **Protect against leaves, mosquitoes and insects.** All tank and pipe inlets and outlets should have stainless steel strainers and mesh to keep out debris, leaves, mosquitoes and insects.
- **Protection against algae.** Light encourages algae growth if the sun can penetrate your tank to reach the water inside. Ideally you should purchase a water tank made from materials that block out sunlight, but alternatively you can cover or shade your tank.
- **Tightly sealed covers and lids.** Water tanks have a top opening that provides access for inspection and cleaning purposes. Your tank should have a tightly sealed strainer cover and lid to stop mosquitoes



and animals getting in. Underground tanks should have *water sealed* covers that prevent stormwater seeping in.

- **Leaf strainers and water diverters.** [Rainwater diverters](#) and [leaf strainers](#) improve rainwater quality by preventing debris, droppings, and leaves from entering your tank.
- **Tank self-cleaning system.** There are [tank cleaning options](#) available that automatically removes sludge build-up at the bottom of your tank, providing you with fresher rainwater.

## Copper Pipes and Rainwater

Your rainwater tank might be correctly installed and plumbed in, but it is also important understand that rainwater is quite acidic and can react with certain metals.

While rainwater is itself safe to consume, if it is left sitting in copper pipes for a long period of time then copper can leach into the water. Copper is a mineral required by our bodies, but it quickly becomes toxic in high doses causing brain and liver damage.

Since copper pipes usually distribute water throughout a house, it is recommended that people flush the first 2 to 3 minutes of rainwater each day. You can optionally install filtration at your tap – filtration of 1 micron or less should be sufficient and also removes most bacteria.

## Need more information?

For more information you may want to look at these following articles:

- [Choosing a Safe Water Tank for Drinkable Rainwater](#)
- [Collecting Safe and Drinkable Rainwater from Your Rooftop](#)
- [Proper Water Tank Maintenance for Drinkable Rainwater](#)

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