

# Eco-friendly Compost Toilets



A **waterless composting toilet** is installed in this tiny house. It uses no chemicals, does not pollute the environment and is designed to compost, save water and preserve the local environment.

The compost toilet uses aerobic composting - a natural biological process that helps to break down faeces and urine into stable, odourless end products. The by-products of aerobic decomposition are heat, water and carbon dioxide. The heat produced in aerobic composting would kill off the harmful bacteria and pathogens.

Optimal conditions for aerobic composting process to occur are:

## 1. Carbon : Nitrogen

The ratio of Carbon to Nitrogen is 30:1. Urine and faeces are high in Nitrogen. Bulking materials that are high in Carbon (e.g. untreated wood shavings or other carbon rich materials) have to be added to the toilet to achieve the right ratio of Carbon to Nitrogen levels.

## 2. Air

The microorganisms responsible for the composting process require air to survive. Without air, they will die and be replaced by anaerobic microorganisms that will slow the composting process and generate odour. Therefore for the compost toilet to work effectively, a 12V ventilation fan is connected to aid in the composting process and eliminate any odours.

This is why the ventilation fan in the toilet should be switched on **24 hours a day**.

## 3. Moisture

Optimum moisture levels for aerobic microorganisms are between 35 - 65%.

## 4. Temperature

Optimum temperature range is 18°C to 45°C.

### References:

Clivus Multrum CM2 Waterless Toilet with Chamber Screen : <https://www.clivusmultrum.com.au/products/CM2-White-with-Chamber-Screen-Complete-System-p55447462>

Brochure : <https://www.ecoflo.com.au/cms/index.php/clivus-murum/31-cm2-ver170215-compressed/file>

FAQs : <https://www.clivusmultrum.com.au/support/frequently-asked-questions-faqs>

# How to use the Compost Toilet

1. The chamber screen only opens when you sit down, so please sit down to do your business
2. Please throw all used toilet paper into the toilet
3. After urinating, just close the toilet seat cover
4. After every solid deposit,
  - Wet a piece of toilet paper thoroughly with the enzyme solution from the spray bottle and cover your waste with it
  - Next, scoop some bulking material to cover your solid wastes
  - Lastly, cover the toilet seat cover
5. Do NOT dispose of the following in the toilet
  - Cigarettes or other burning materials
  - Food wastes
  - Chemical products
  - Sanitary products and nappies
6. Do NOT switch off the ventilation fan as aeration is necessary for the composting process

Exception: If you find the fan disturbing your sleep at night, you may switch it off. Please do remember to switch it back on during the day



Image Source : <https://www.clivusmultrum.com.au/products/CM2-Complete-System-White-p55398375>