



# Welcome to **HOTBIN** composting

A **HOT** composting **BIN** that lets you put more food & garden waste **IN**

Please use this guide and the many resources available online to help you get hot composting between 40-60°C in your HOTBIN.

The **HOTBIN** was designed to provide a solution to composting household food waste more efficiently to allow it to be diverted from landfill. We want **HOTBIN** composting to be easy for everyone so there are few rules and little fuss. However if you are interested in the science and technology you will find lots of useful articles, hints and tips on our website.

Remember as well as food and garden waste you can add shredded office paper and chopped up cardboard. In fact we suggest you keep some handy to regularly add to your waste mix. Your **HOTBIN** is more likely to get too wet than dry as food waste alone has a 70% water content.

# HOW THE **HOTBIN** WORKS

The **HOTBIN** has been designed to make hot composting easy by maximising what nature does naturally. Composting is dominated by bacteria – ‘happy’ bacteria deliver faster more successful composting.

**Bacteria need the four elements below and are happiest when they are in the green zone.**

## Food

Bacteria need waste to eat – no waste = no bacterial activity = no heat produced. They digest different wastes at different speeds. Lots of easy to digest food results in fast quick heat release, slow to digest waste results in slow heat release. See the waste table.

Amount (Volume)	Small	Little	☺	Plenty	Lots
Ease Eating	Woody	Cellulose/Fats	☺	Sugars	
Size/Pieces	Chunks	Chopped	☺	Pieces	Powders
Carbon/Nitrogen	200:1		☺	30:1	10:1

## Water

Bacteria need water to both grow and to help with digestion. If there is too little water the bacteria are unable to grow; if there is too much water, the waste becomes soggy and it blocks the air flow restricting the oxygen the bacteria need. This will result in a ‘smelly’ **HOTBIN**.

WATER	Too wet		☺	Too dry	
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## Oxygen

Aerobic bacteria need oxygen. If there is not enough oxygen, their anaerobic cousins take over and create a stink and release methane (X25 Green House Gas potency!).

OXYGEN %	0%	6%	10%	☺	12%	21%	
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## Warmth

Bacteria digest waste 32 times faster at 60°C than at 10°C. As a rough rule of thumb, using 30 days in a month, is if it takes 18 months in a ‘cold’ heap at 10°C, it will take 18 days in the **HOTBIN** running at 60°C.

WARMTH (°C)	0	10	20	30	40	50	60	☺	70	80	90	100	110
SPEED (x times)	0	1	2	4	8	16	32	☺	64	0	0	0	0

Sad – stopped working
  OK – Working but not at full speed
  Happy – Working well and producing heat to hot compost

# WHAT GOES IN?

We suggest you keep your **HOTBIN** close to your kitchen door to help your new food waste recycling regime.



**Compost kitchen peelings** – Add IN your fruit and vegetable peelings. All food waste has a high % of water. Keep adding shredded office paper and corrugated cardboard.



**Compost all food waste** – Add IN left over meals, scrapings, meat, fish, small bones and things like mouldy bread and cakes. **ALWAYS** mix food waste together with bulking agent and thaw any frozen items.



**Compost garden waste** – Add IN grass cuttings, autumn leaves and garden pruning. It is advisable to read the online FAQ on how to get the best out of composting garden waste e.g it is best to use bulking agent and shredded office paper when composting grass.

## Remember to help keep the air flowing

All composting needs aeration and the **HOTBIN** uses the simple but effective air inlet Fig 9 and air outlet Fig 3 system to create a chimney effect. When you are composting food waste in the **HOTBIN** you must mix it with a 'bulking agent' (composted wood chip) to help maintain airflow which is essential to hot composting. Some **HOTBIN**'s come with a bag to get you started. You can make your own by 'chipping' garden branches, alternatively purchase from garden centres or [www.hotbincomposting.com](http://www.hotbincomposting.com). Some local recycling centres do have wood chips to give away.

## It's an easy recipe

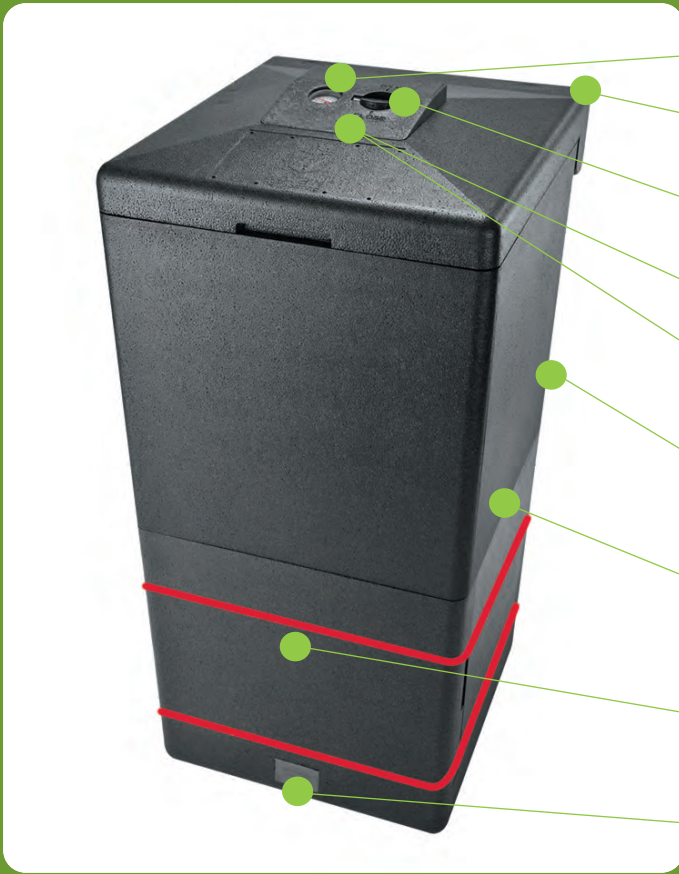
As the **HOTBIN** can handle virtually all UK domestic food and garden waste it allows us to simplify the traditional and complex green/brown mixes into a simple recipe. Add 1-part bulking agent to 10-parts food waste. This equates to 2 handfuls of bulking agent per 5-litre small caddy of food waste. For the best results, chop all waste into small pieces, preferably to less than < 4cm pieces.

# WHAT COMES OUT?

The **HOTBIN** is the smart way to compost more food and garden waste **as quite simply you can put more IN your HOTBIN**. For best results wait for 30 days for 'mulching' compost and 90 days for 'mature' compost.

# WHAT GOES WHERE?

The **HOTBIN** is a 200 Litre hot composting bin in which you can achieve temperatures of 60°C to make compost up to 32 times faster. The **HOTBIN** composts all food waste including meat and fish, not just fruit and vegetable peelings; there is less odour and fewer flies to worry about and the clever design makes it less attractive to rats too.



**Fig 1** Thermometer in the lid to help understand what is happening inside the **HOTBIN**

**Fig 2** Airtight lid to reduce smells and unwanted visitors

**Fig 3** Rotating aeration valve (air outlet) should be set to minimum as shown in Fig 4b

**Fig 4** Fixture plate

**Fig 5** Biofilter unit to stop any unfriendly smells

**Fig 6** Insulated walls to retain heat generated by the bacteria to aid rapid composting

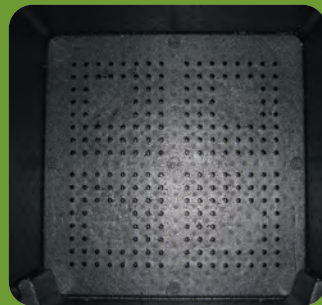
**Fig 7** Manufacture seal

**Fig 8** Removable hatch door panel to take out mature compost

**Fig 9** Aeration mesh plate (air inlet) & leachate outlet



**Fig 4b** Fixture plate close up



**Fig 10** Internal base plate with holes



**Fig 11** Cam straps ensure hatch panel stays in place

Bulking Agent is an essential component in hot composting as it helps to create the important aeration structure required. It must be added with ALL food waste but is great with grass and wetter items too.



**Fig 12** Waste Raking Stick



**Fig 13** Winter Kick Start Heater



**Fig 14** Long Stemmed Thermometer



**Fig 15** Bulking Agent to mix with food waste

All compost heaps have the potential to attract rats however 99.5% of **HOTBIN** users have not reported any issues with vermin. (Oct 2012)

**NB** All **HOTBIN**s come with cam straps but you may have bought a model **WITHOUT** extras.

# LOOKING AFTER YOUR HOTBIN

## Key things to watch out for

Hot composting in the **HOTBIN** requires active participation, you will need to;

### 1. FEED IT

#### The **HOTBIN** will not stay hot unless you feed it regularly

The **HOTBIN** is a hungry beast – it needs feeding to remain hot. Make sure you start your **HOTBIN** with plenty of easy to digest waste in the base layer. Then get yourself into a routine and empty 1 x caddy of food waste 2 x a week into your **HOTBIN** to help maintain a temperature of between 40-60°C. You will experience ups and downs in temperature as the bacteria use up the easy to digest waste. The trick to hot composting is to keep in the 40-60°C zone by ensuring you add a good mix of easy to digest waste in the **HOTBIN** regularly.

### 2. AID AERATION & ENSURE WASTE IS NOT 'TOO WET'

#### Or you could end up with a smelly, wet mess

Always keep the aeration valve set to minimum **see Fig 4b**. Do not layer waste, mix it up a bit so you do not restrict airflow. Add plenty of bulking agent, chopped up cardboard or shredded office paper along with other waste. The waste in the top of the **HOTBIN** will always look wet and steamy, but you should only be getting an espresso cup of leachate (dark liquid) coming out of the bottom aeration mesh plate. Too much leachate is a sure sign your waste is too wet. Wet waste blocks airflow and will restrict the temperature of your **HOTBIN**.

### 3. FOLLOW YOUR NOSE

#### Take action quickly

The waste in the top of the **HOTBIN** will give off a 'boiled cabbage' like odour when the lid is opened. If you start to smell a putrid odour act fast. One of the great features of the **HOTBIN** is how easy it is to fix a bin that is turning anaerobic - just add ½ bucket of chopped up cardboard and ½ bucket of bulking agent. Do not leave it to go fully anaerobic and water-logged as a two minute job will become a stinky 'dig out' and a restart!

### 4. WATCH THE TEMPERATURE

#### It's a dual dial

**Please note both thermometers have a Fahrenheit and Celsius gauge 40-60°C = 104-140°F**

The waste at the top of the **HOTBIN** will always be the hottest, the waste in the bottom of the **HOTBIN** will gradually lose heat as it matures and the bacteria use up all the high energy food. Use the long stemmed thermometer in the top 5cm of waste to get the most accurate reading. Once familiar with the **HOTBIN** the lid thermometer provides a temperature that can help you understand what is happening inside the **HOTBIN** and when the **HOTBIN** needs feeding. Your **HOTBIN** will need to be over half full and composting over 40°C inside to make the best use of the lid thermometer.

If you are not interested in recycling food waste you can compost just garden waste in a **HOTBIN**. You may not achieve the higher temperatures (except when composting grass) but overall your waste should compost quicker.

If your **HOTBIN** is not getting hot please check the online FAQ or email [help@hotbincomposting.com](mailto:help@hotbincomposting.com)

# HEALTH AND SAFETY

Composting is a natural biochemical process involving bacteria and fungi.

Humans have been composting safely for thousands of years, however we do suggest you always adhere to basic standards of hygiene.

## In summary:

- Always wear gloves, cover cuts and wash hands after composting.
- Do not leave your kitchen caddy, gloves or other compost equipment on or near food preparation surfaces.
- If you suffer from asthma or related respiratory conditions, take specific precautions to avoid inhalation of dusts e.g. wear a dusk mask.
- Your **HOTBIN** gets HOT! The maximum temperature the **HOTBIN** reaches is 75°C, and the normal operating temperature is 40-60°C. This is not a scalding risk to most people (60°C is the temperature of very hot tap water), but do wear gloves and do not immerse bare hands into the top layer of waste.

A full review of published H&S advice is available on our website within the online FAQ.

# HELP

Our online help in the form of frequently asked questions (FAQ) is extensive and will quickly help you troubleshoot queries. However, if you can't find what you need please drop us a line or contact our customer service team.

T: 0845 621 0095

E: [help@hotbincomposting.com](mailto:help@hotbincomposting.com)

W: [www.hotbincomposting.com](http://www.hotbincomposting.com)

You can keep in touch with us and other **HOTBIN** composters via



@HOTBINcompost



HOTBINcomposting



[hotbincompostingblog.com](http://hotbincompostingblog.com)



Made in **UK**  
100% recyclable  
Invented in **Morpeth**

Your **HOTBIN** should last a lifetime unless accidentally damaged. There is a 3-year warranty. **Your HOTBIN is made from a robust engineering material called expanded polypropylene bead that is also used on car bumpers.** Chosen for its hardy and insulating properties it is 100% recyclable and is collected at most recycling centres.



**HOTBIN** composting was designed by AC Innovations Ltd.

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Registered in | England & Wales | Registration number | 6918347

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you can put more **IN** your **HOTBIN**

[www.hotbincomposting.com](http://www.hotbincomposting.com)