



## AIR FILTRATION WITH A FILTER BOX

The filtration package includes two materials: zeolite and activated carbon.

They are packaged in separate bags ready to insert in the filter/fan box if required.

### **Zeolite**

This material is a naturally occurring mineral which has an affinity for ammonia. The material will absorb ammonia until it becomes saturated. At this point it can be “recharged” and made ready for re-use by soaking it in salt water solution for a day, rinsing it and then drying it in the sun.

Zeolite is not effective in absorbing most other substances, so although the removal of ammonia is important, and may prove adequate if used just by itself; complete air filtration requires that it be used in conjunction with activated carbon.

The zeolite used in this package is in larger pieces so that it does not unduly obstruct air flow.

### **Activated Carbon**

This material is ineffective in removing ammonia, but is effective against many other substances which may be present in vented air. It is in the form of extruded pellets which do not obstruct air flow as much as other forms of activated carbon appear to.

Activated carbon cannot be regenerated (except through incineration), and so if it proves to be necessary to use this material in addition to zeolite, additional bags should be purchased.

### **Placement in Filter Box**

When placing the bags in the filter/fan box, the following procedure is suggested:

1. Remove enough zeolite and activated carbon from each bag and set aside. There should only be enough in the bag to provide a thin layer (1/2”) of each material in the filter box.
2. Make sure the plastic screen is below the filter material bags so that the filter material does not ‘sag’ into the vent and block air-flow.
3. Fold the zeolite bag in half, and tuck the empty top half under the bottom half.
4. Insert the bag in the box making sure that the depth of material is reasonably even, and that air will be forced through the material rather than being able to bypass it.
5. If activated carbon is also being used, fold and place the carbon bag on top of the zeolite bag, immediately under the fan.

In this way the zeolite material is placed on the bottom so that vented air comes in contact with it first, and ammonia is removed before the air contacts the activated carbon.

### **Recycling the Zeolite**

It is best to recycle the zeolite on a regular basis, and in any event before it becomes saturated.

Regular addition of a few ounces of lime to the composting drum will reduce the amounts of ammonia and hence increase zeolite cycle times.