

# BRUSH VACUUMING TECHNIQUES

The best method for removing dust, dirt, and particulate matter is brush vacuuming. Dust should be removed as it is abrasive and can scratch objects. Dust also attracts moisture to surfaces, which can accelerate the corrosion of metal, become a source of food for insect pests, and lead to mould growth. Brush vacuuming is also a technique used to remove dormant mould, insect casings and eggs.

Whether brush vacuuming dust, insects, or mould, a HEPA (High Efficiency Particulate Air) filter vacuum should be used to prevent the recirculation of the vacuumed substance through the exhaust. Most modern vacuum cleaning units have these filters attached.

Do not vacuum objects with loose pieces, powdery surfaces or delicate components. Great care must be taken when vacuuming finer materials such as paper and textiles. If in doubt, a conservation specialist should be consulted.



*A conservation professional vacuuming the reverse of an artwork using a micro-vacuum attachment*

## Materials and equipment

- *HEPA filter vacuum cleaner with variable control suction.*  
Note that even on the lowest setting, household vacuum cleaners will still have a strong suction. This can be an issue when dealing with fragile materials such as garments and paper documents.
- *Micro-vacuuming attachments.* These are available at vacuum supply stores and are relatively inexpensive. They are fitted to the hose of the vacuum and can be used directly over the item, with or without a safety screen in place. Holes can be pierced in the hoses of micro-vacuum attachments to lower the overall suction strength.
- *Selection of soft, natural and synthetic art brushes of various sizes.*
  - Have different brushes allocated for different material types and conditions. For instance, brushes used for cleaning mould should be kept isolated to prevent cross-contamination. Brushes used for cleaning iron objects should not be used on other materials, as you risk transferring iron particles to other materials, potentially leading to corrosion and staining.
    - Standard vacuum cleaner brushes may be suitable for use in some instances, however they must be clean prior to use on artefacts.
  - *Masking tape to cover metal ferrule of brushes (metal band securing the bristles).*
  - *Polyester netting.* This is readily available from fabric supply shops.
  - *Elastic/rubber bands.*
  - *Zip-lock bags and a box.* For storing any pieces of objects that become detached with labeling equipment (tags, pencils).

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## Preparation of equipment & work environment

- Set the vacuum suction to low.
- Cover the nozzle of the vacuum cleaner hose with a piece of netting and secure this with masking tape or an elastic/rubber band. This prevents loose pieces of the object becoming dislodged during vacuuming and from being sucked inside the cleaner. You may also wish to place the fabric netting directly over top of the item.
- Choose a brush to use for vacuuming that is suitable for the material that you are working with. For instance, a size 20 art brush and a shaving brush are appropriate sizes for many material types. When choosing a brush, also keep the hardness of the bristles in mind, as you do not want to risk scratching your items.
- Cover the ferrule of all brushes used with masking tape, to prevent the ferrule from scratching the object.
- If dealing with mould, choose an area to work that has good ventilation. Fans are not recommended as spores can be easily spread. Also, ensure that you have adequate personal protection when dealing with these materials. Please refer to our 'Mould' fact sheet for further information.

## Brush vacuuming method

- 1 Position the nozzle of the vacuum approximately 5-10 cm diagonally away from the object and set the suction to low.
- 2 Select a brush that is narrower than the nozzle.
- 3 Holding the brush with the other hand, gently brush the surface of the object towards the vacuum nozzle. Avoid dragging the brush across the surface as this may result in scratching.
- 4 Alternatively, micro attachments can be used in place of a brush.
- 5 When brushes become grubby, wash them and rinse them thoroughly to remove any detergent residues. The brush should be dry prior to reuse.
- 6 If a small piece of the object becomes detached during cleaning, place it in a zip lock bag, label the bag and keep it with the item.



*Vacuuming an object using a standard vacuum brush*