

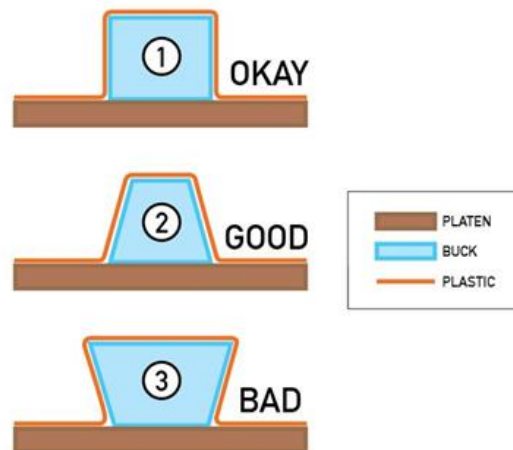
## Vacuum Forming Materials Prep List

Prior to vacuum forming, you will need to consider and prepare the following items in your designing phase.

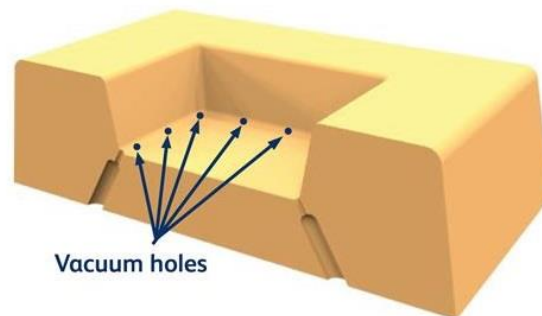
### Vacuum Forming Buck:

The “buck” is the object to form the thermoplastic sheet around, and its material properties and shape should be taken into consideration during the initial design process.

- The object should be solid enough to not buckle underneath the pressure and heat of the thermoplastic
  - Wood, plaster, 3D printed, and specialty foam forms work best
  - Raw pink foam bucks do not retain surface detail well during forming and will partially collapse
- Avoid undercuts in the design to allow for the buck to be easily removed after forming



- Bucks must be smaller than 18 x 18” in both directions
- Large bucks may benefit from paperclip-width holes in the crevices/valleys of the form to allow a channel for air to escape during the forming process



### **Thermoplastic Sheet:**

Not all plastic sheeting is adequate or safe for thermoforming. The Digital Fabrication Lab vacuum former is calibrated to work best with PETG plastic.

- Recommended PETG plastic thickness is 0.04 – 0.08” thick
- Sheets must be cut to exactly 24 x 24” to adequately fit within the frame
- For CoACM studio sections, PETG is a selectable option on the “Studio Materials Purchase Sheet” at the beginning of each semester
- Coordinators for other sections that wish to purchase PETG utilizing department funds must plan so with the office and with lab staff in advance
  - o For specialty CoACM projects that require additional and/or different plastic, please consult with staff for assistance prior to purchasing materials
- Plastic must be purchased by the student in advance, plastic is NOT available for free or for purchase for individual projects
- The protective coating must be removed from both sides of the sheet prior to forming

### **Mold Release:**

All objects/bucks benefit from the use of a mold release agent prior to forming to assist with the removal of the buck from the formed plastic.

- Spray-on mold release is purchased in advance for planned CoACM class/studio projects
- Students must purchase mold release for individual projects
- Most spray-on mold release agents are adequate for vacuum forming, however please consult staff if you have any questions regarding mold release and your object/buck’s material-type
- Brush-on or hand-application mold release agents, such as Vaseline or Crisco, are also adequate options, however their application is thicker and brushstrokes from their application will likely show in the formed plastic