Can Lid (Customizable)

HJ

VIEW IN BROWSER

updated 16. 5. 2022 | published 16. 5. 2022

Summary

Customizable lid for cans (or anything circular needing a lid). Great for securing cling film / saran wrap.

0.18 hrs	1 pcs	0.25 mm	0.40 mm	PLA	3 g	Prusa MINI / MINI+

Household > Kitchen

Tags: parametric can dog small customizable quickprint utility prusaslicer functionalprint

Motivation

Getting cling film to stick down to open cans of dog food with a tight seal can be frustrating.

I designed this simple customizable lid that works for any perfectly circular container within size limits.

If printed without top and bottom solid infill layers (see below), they print very quickly. For example the included model is a fairly standard can size and takes 10-15 mins, using only 1 m (3 g) of PLA.

Disclaimer

Without further treatment, prints are not food safe. Ensure that your use case is appropriate if at all related to food and apply food safe treatments to any printed objects as required.

Models

The model shown was specifically measured for my particular use case, which is a reasonably standard can size.

It's easy to tweak for any purpose however by downloading the OpenSCAD file and customizing.

Customizing

Edit the variables at the top of the .scad file to create a customized STL that fits your container. See the OpenSCAD documentation for more information on how to use OpenSCAD.

can_diameter should be the actual diameter of the top of the can (or other container) that the lid is for, plus 0.5-1 mm. You may need to experiment to get the right tolerance for your object and printer.

Print Settings

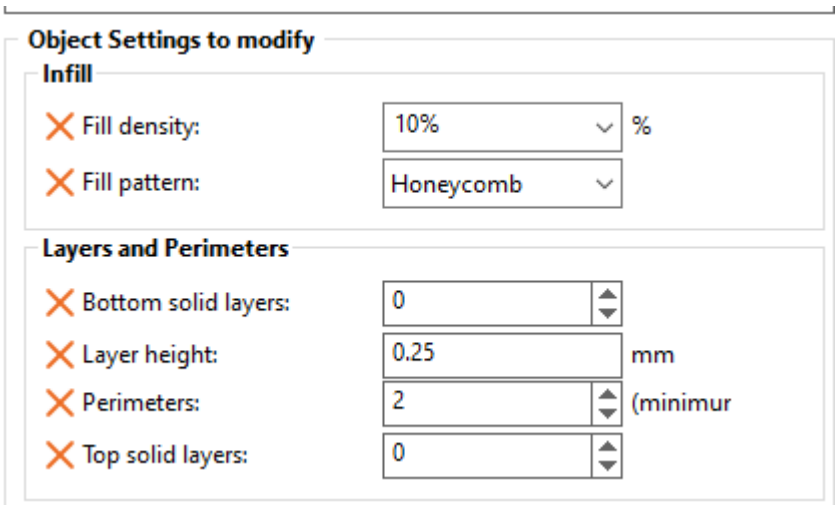
- 0.25mm layer height (draft quality in PrusaSlicer)
- 10% infill, honeycomb (see below)
- No supports, rafts, or brim needed
- I have only tried printing these in PLA. The example in the pictures is eSun matte grey PLA.

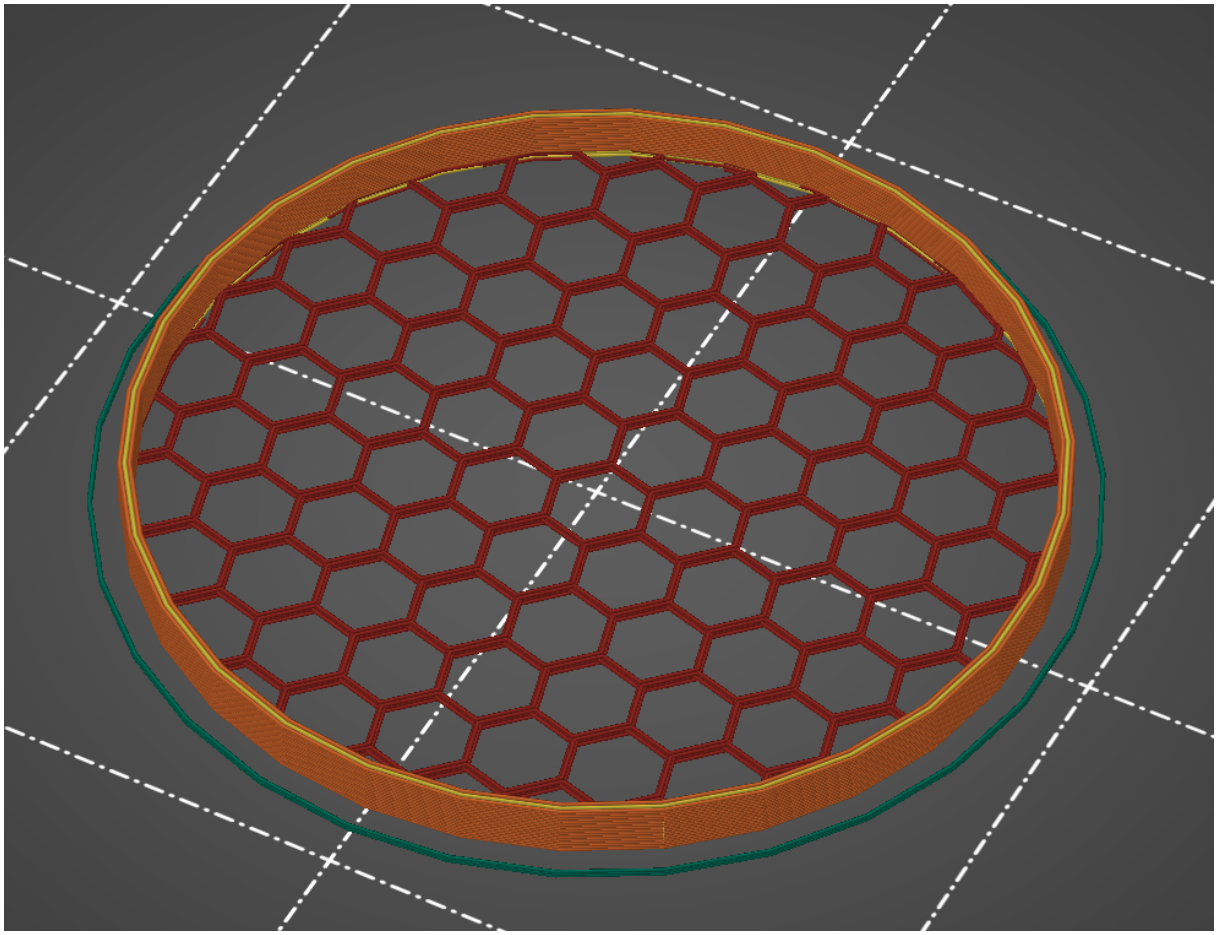
Hexagon effect

The top of the lid is solid in the model, but can be manipulated in PrusaSlicer to print with an infill pattern (e.g. honeycomb) instead of top and bottom solid layers, to greatly reduce print time if a solid lid is not needed (e.g. for securing cling film).

- Set PrusaSlicer to advanced mode
- Right click on the object in the right-hand pane
- Select “Infill” and right click on the object again to also add “Layers and Perimeters”

- Set custom settings to change the fill density, fill pattern, bottom solid layers, and top solid layers as below:





This idea is from this model, which uses the tips in this article.

The provided 3MF file may serve as a starting point, but make sure that all settings are set to work with your printer / filament.

Feedback

If you try making these, please comment to let me know if you have any questions or feedback. Constructive feedback is always appreciated.

Model files

can_lid.scad

can_lid_755.3mf

can_lid_755.stl

Print files

can_lid_755_025mm_pla_mini_11m.gcode

PLA | 0.40 mm | 0.25 mm | 0.18 hrs | 3 g | Prusa MINI / MINI+

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