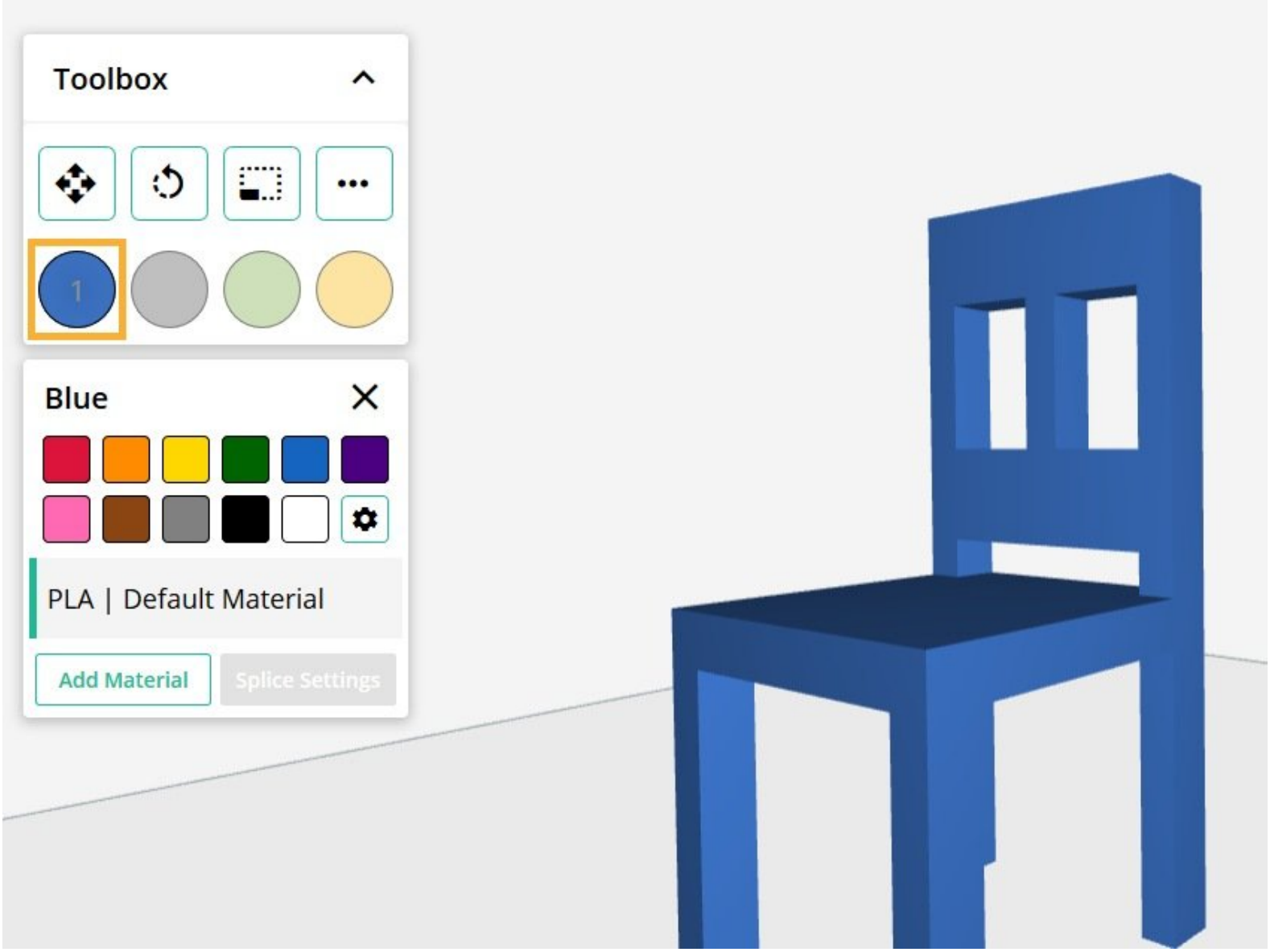
Supports in CANVAS

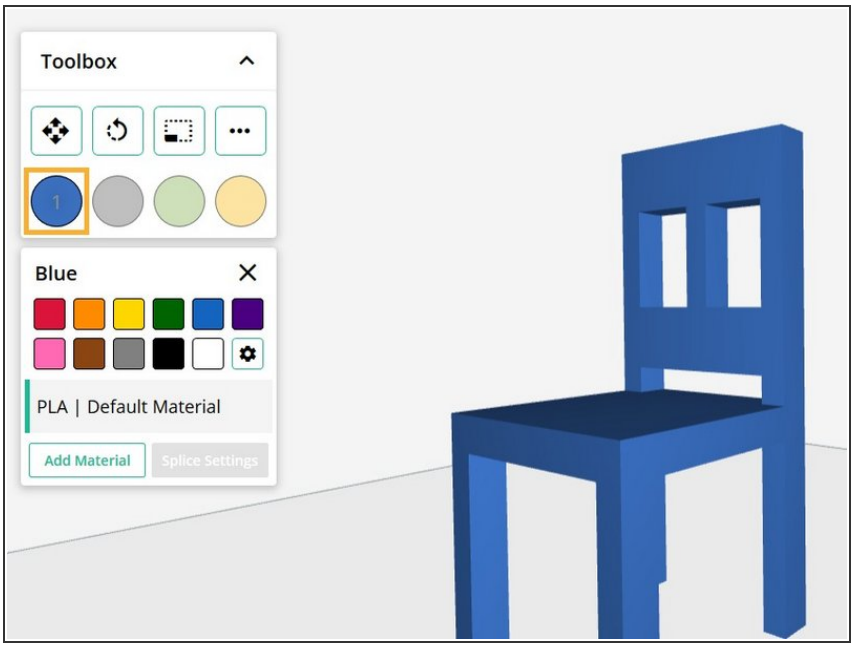
Written By: Mosaic Support



INTRODUCTION

This article will provide instruction on how to use supports in your print when working within a project, and assumes you are already familiar with how to slice with CANVAS.

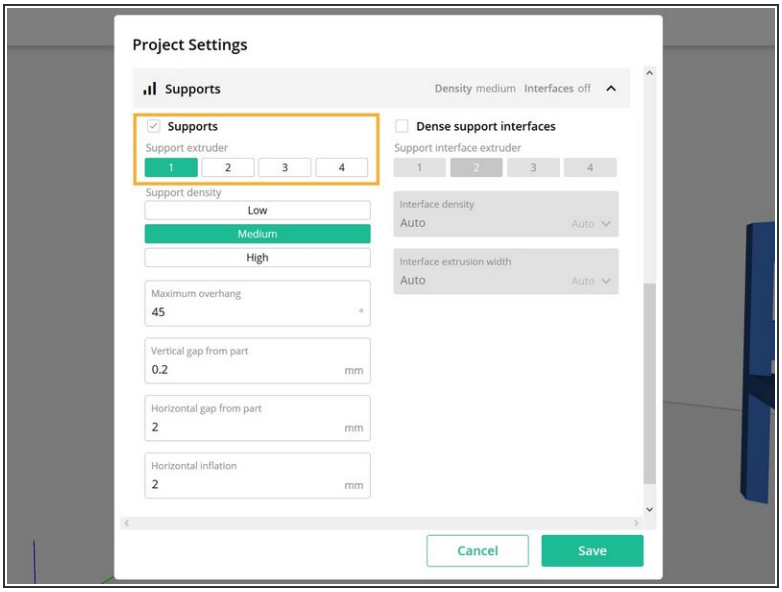
Step 1 — Selecting a Support Extruder

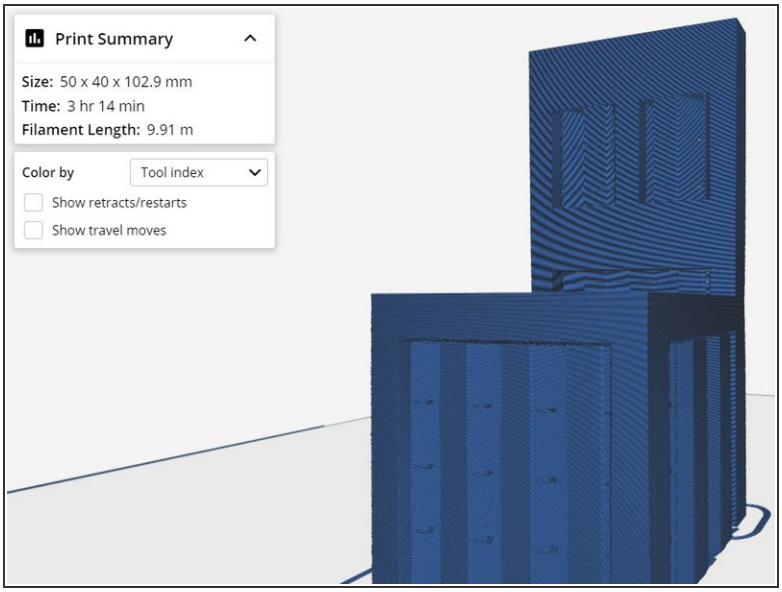


These support structures are non-soluble. If you are going to use the same material from the model as supports, please follow these instructions. Non-soluble supports are fun to remove when you're having a bad day and want to go to town with some shears (just remember to wear safety goggles!)

- Upload and place model(s).
- Select the input drive you would like to use for the supports on the Support Extruder setting. For single-color prints, if you'd like the same filament to be used for both your model and support, make sure that the same input drive is selected.

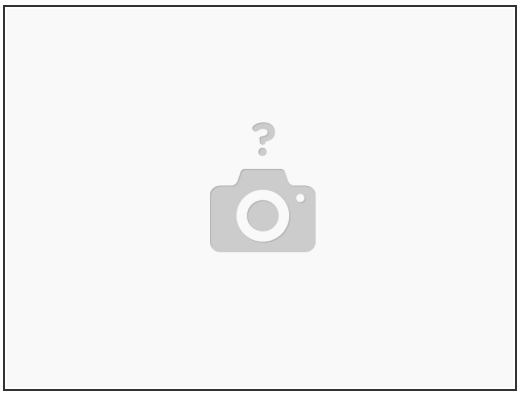
Step 2





- Go to the **Settings** screen and expand the **Supports** tab. Since we are only using Drive 1 for this print and want to use the same filament for supports, we are also selecting Drive 1 as a support extruder.
- For non-soluble supports it's suggested to use a coarse support density so that they can be removed easier.
- For multi-color prints, we suggest selecting an input drive for the supports that would help reduce the number of transitions in a single layer to reduce filament waste.
- Go to the Preview screen and click the "Slice" button to preview. Here you can see that the same filament will be used throughout the print.

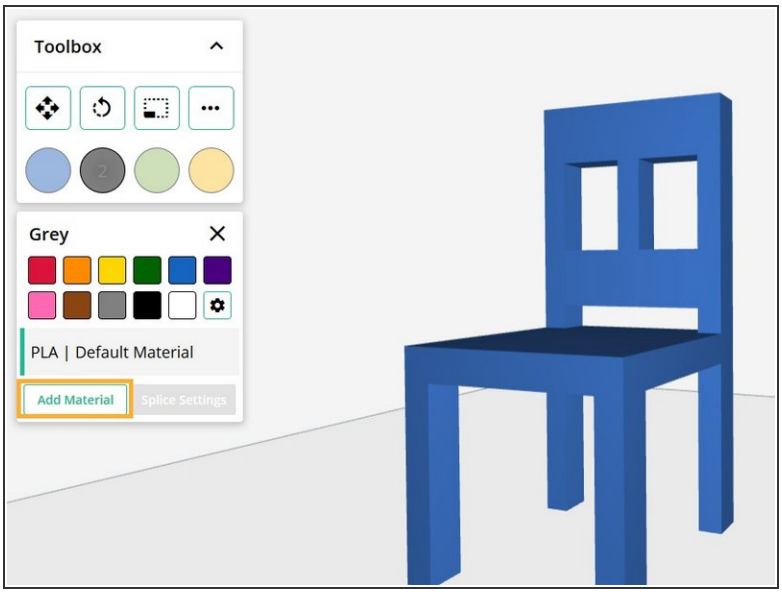
Step 3 — Using Soluble Supports

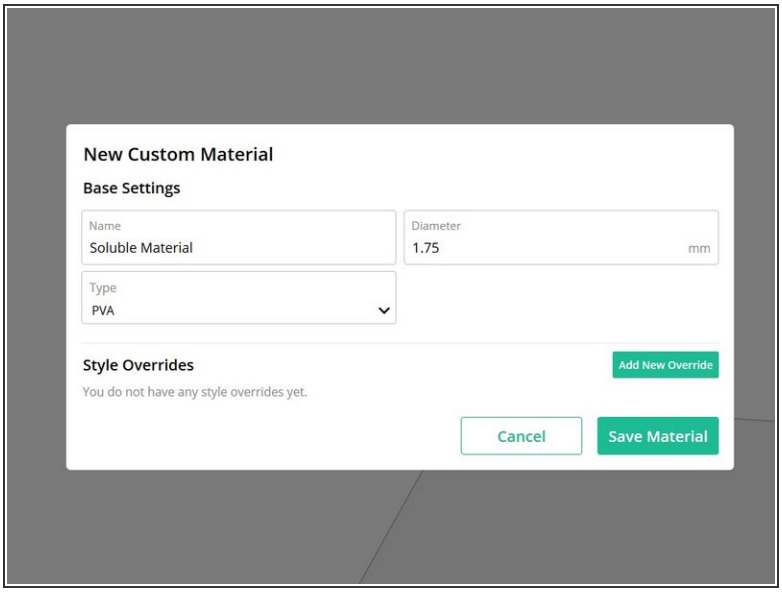


Before printing with soluble supports, please perform splice tuning for the materials used in the print. Please create a material profile for this soluble material based on splice tuning results before using it in the project.

These support structures are entirely soluble. This helps with finely detailed models where you want to preserve the surface quality of the print. 3D models need some self-care too. After you finish printing, soak the print in some water and watch the soluble material dissolve away. You'll have a squeaky clean print!

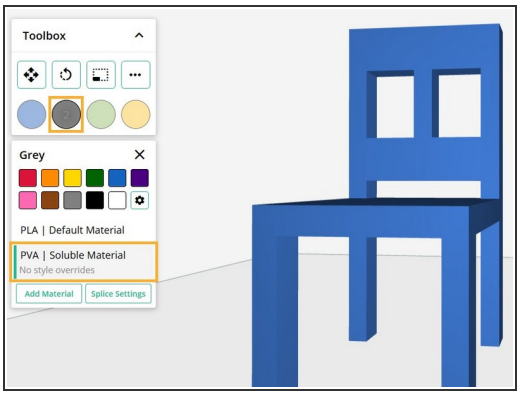
Step 4 — How to Add Soluble Supports

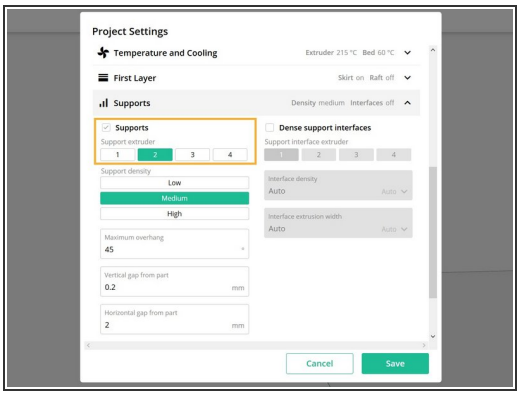


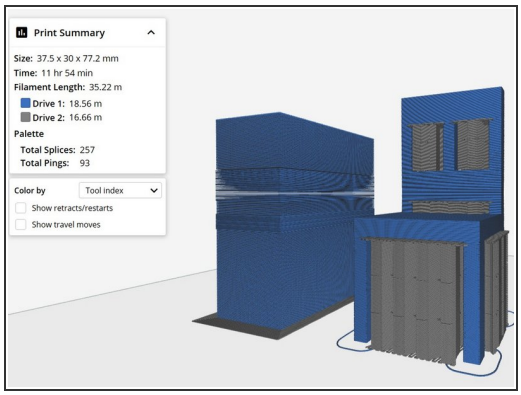


- Upload and place model(s).
- Click on the input drive that you would like to load the soluble filament into. Click **Add New Material**. If you have already created a Soluble material profile, simply click on it to select it for this drive, and skip to step 5.
- If you are adding a new material, give this material a name for easy reference, make sure the filament diameter is 1.75 mm, and select the soluble material you are using (PVA, HIPS, etc) and click the **Save Material** button.

Step 5

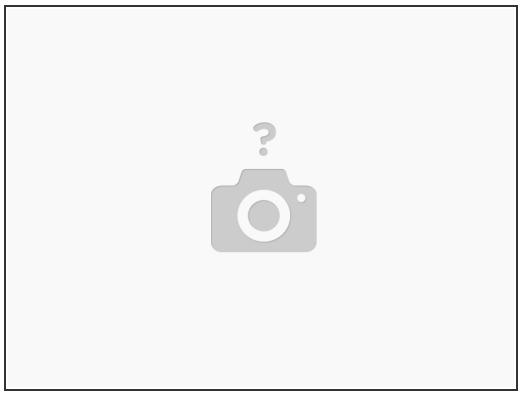






- When you view the color swatch for this input drive, make sure that the Material Profile you created is selected.
- Go to the **Settings** screen and expand the Supports tab. You will find the **Supports** setting. Select the input drive for the soluble filament used in step 3.
- Go to the Preview screen and click the "Slice" button to preview the different tool indexes. Here you can see the two different input drives used, where PLA will be loaded into Drive 1 and Soluble material will be loaded into Drive 2.

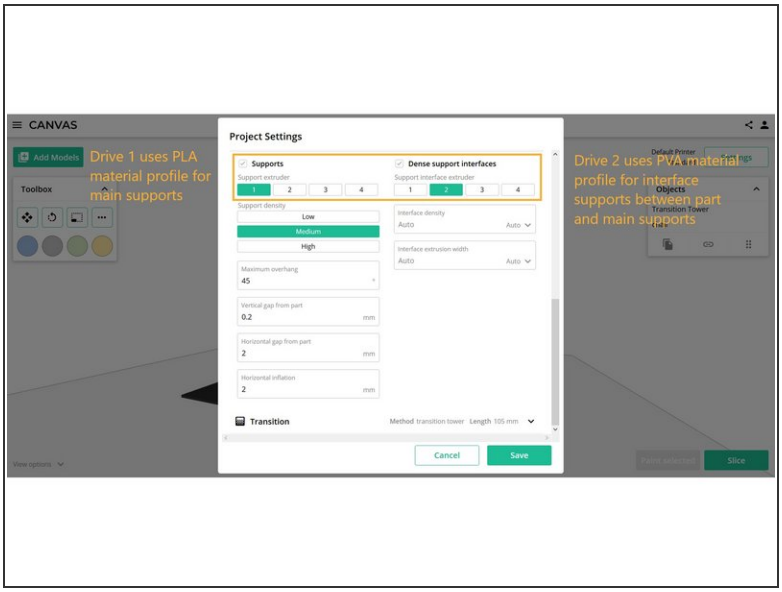
Step 6 — How to Add Soluble Support Interface Layers

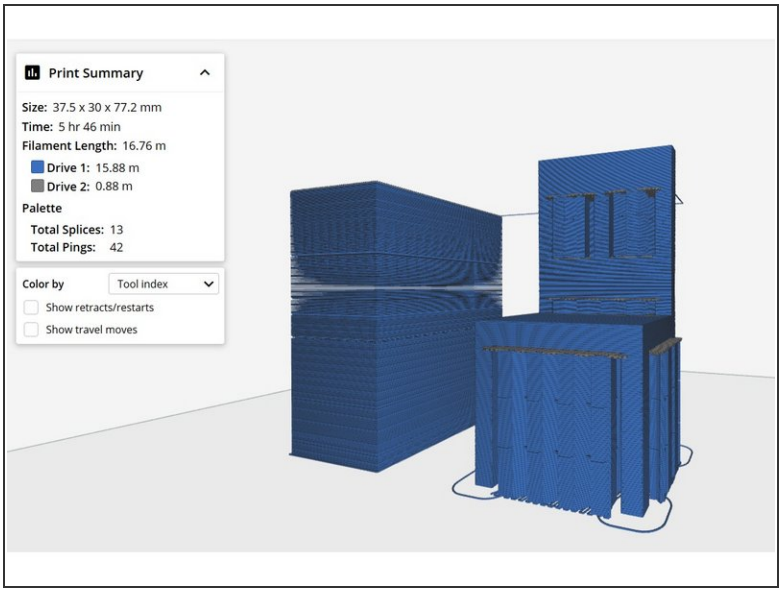


These support structures are composed of non-soluble filament with a layer of soluble material to help separate support from model. This helps reduce waste of soluble filament.

- Upload and place model(s).
- Click on the input drive that you would like to load the soluble filament into. Click "Add New Material." *If you have already created a Soluble material profile, simply click on it to select it for this drive, and skip to step 5.*
- If you are adding a new material, give this material a name for easy reference, make sure the filament diameter is 1.75 mm, and select the soluble material you are using (PVA, HIPS, etc) and click the **Save Material** button.

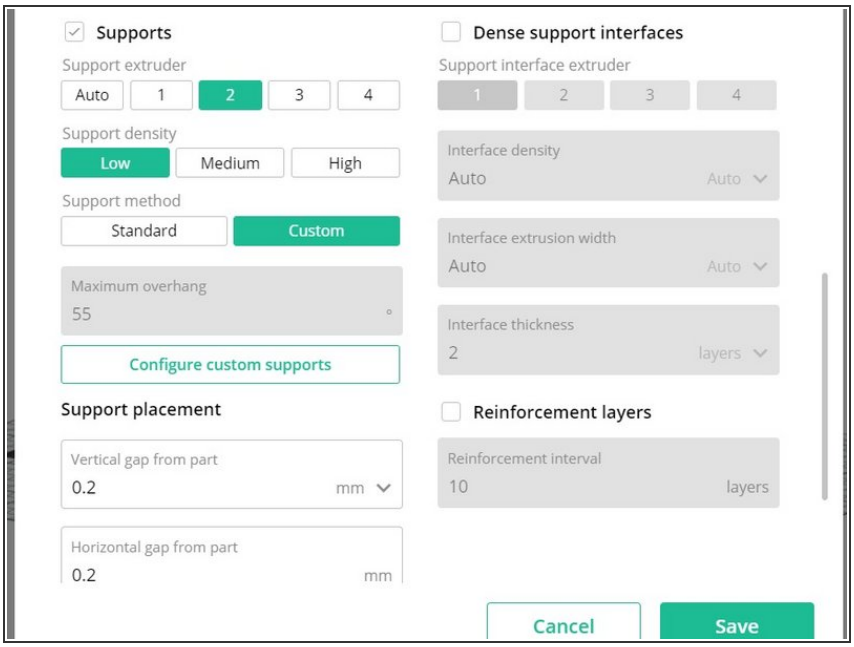
Step 7





- When you view the color swatch for this input drive, make sure that the Material Profile you created is selected.
- Go to the **Settings** screen and expand the **Supports** tab.
- On the "Dense support interfaces" setting, select the same input drive you are using for the soluble filament created in step 3. Under the "Supports" setting, select the drive you are using for PLA.
- Go to the Preview screen and click the "Slice" button to preview the different tool indexes. Here you can see where the soluble interfaces are placed between the main supports and the part.

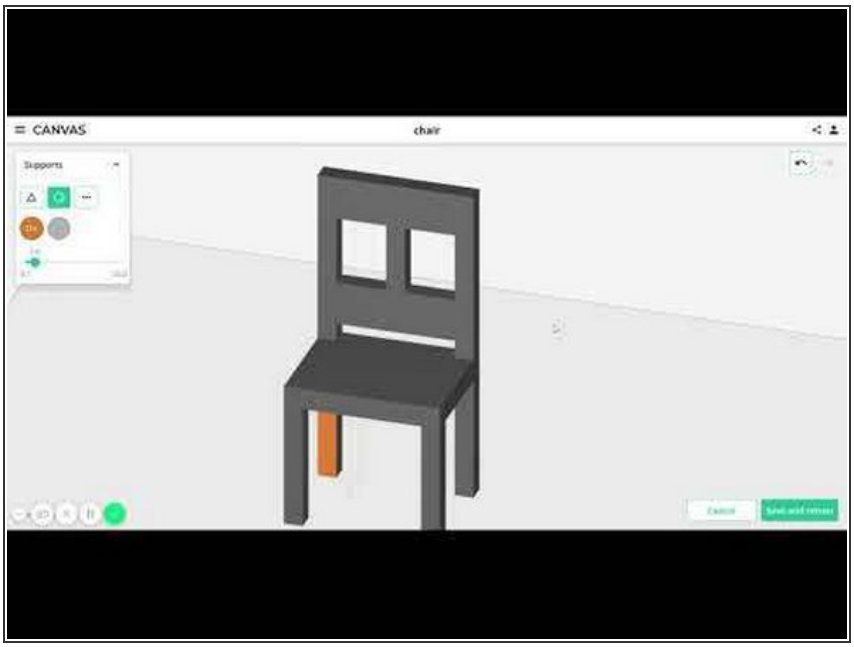
Step 8 — How to Use Custom Supports



Areas where supports are required can be painted directly onto the model. Custom supports can also be auto-generated throughout the model or from the build plate only.

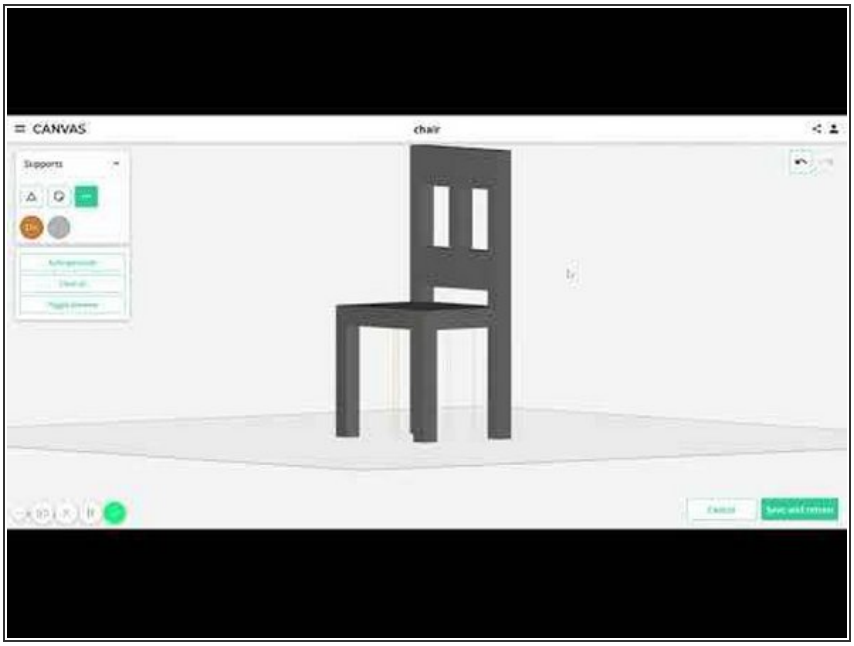
- Upload and place model(s).
- Click on the *Settings button > Enable Supports > Support Method: Custom > Configure Custom Supports*. Remember to select the input drive that you would like to use for support material.
- You will now be taken to the Custom Supports View. From here, you have more options for the model as to where you would like supports to be generated. You may use one of the following methods to create custom supports.

Step 9 — Painting Method



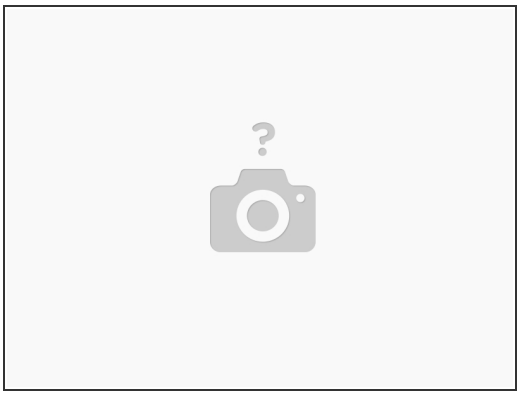
- With the support tool on and using the facet or sphere tool, paint the model where you would like supports to be generated. Each painted region will generate supports vertically. With the tool off you may erase painted regions.

Step 10 — Auto-generate with Overhang Angles or From Build Plate



- Click on the **'More'** options (three ellipses) to auto-generate the supports. Please note that if you painted supports previously, they will be cleared if you auto-generate. Enter a maximum overhang angle that supports will be auto-generated for. 45° should work fine for most printers.
- When you auto-generate any part of the model matching this angle will have a support created underneath it. If you select from build plate only, only faces of the model directly above the bed will have supports generated.

Step 11 — Toggle Preview



- From the **'More'** options, you can turn the preview on or off. When painting supports or generating them, you can preview where the supports will be.
- Click **Save and Return** to go back to the project view.

If you have any questions, please send a message to us at support@mosaicmfg.com.

