# How do you block supports in a specific area?

Asked 3D Content Team
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**Abstract.** Put a support blocker on the overhang: Cura's Support Blocker tool (E), or right-click, Add support blocker in PrusaSlicer, Bambu Studio and OrcaSlicer, or paint it (L).

**Keywords:** supports, slicer-settings

**Table 1.** The number

| Slicer | Block supports in one area | Force supports in one area | Paint tool and key | Supports only where you enforce them |
|---|---|---|---|---|
| UltiMaker Cura 5.14.0 | Support Blocker tool (E): click the overhang to drop a 10 mm cube. Or the Paint tool's Support mode, Mark as "Avoid" | Paint tool's Support mode, Mark as "Preferred". Or a mesh set to "Print as support" in Per Model Settings | Paint (P) | Leave "Generate Support" unticked and paint Preferred areas |
| PrusaSlicer 2.9.7 | Right-click the object, "Add support blocker". Or paint with the right mouse button | Right-click, "Add support enforcer". Or paint with the left mouse button | Paint-on supports (L) | Sidebar "Supports": "For support enforcers only" |
| Bambu Studio 2.9.1 | Right-click the object, "Add support blocker". Or paint with the right mouse button | Right-click, "Add support enforcer". Or paint with the left mouse button | Supports Painting (L) | "Enable support" on, "Type" normal(manual) or tree(manual) |
| OrcaSlicer 2.5.0 | Right-click the object, "Add Support Blocker". Or paint with the right mouse button | Right-click, "Add Support Enforcer". Or paint with the left mouse button | Support Painting (L) | "Enable support" on, "Type" Normal (manual) or Tree (manual) |

## 1 How do you block supports in a specific area?

Put a support blocker over the overhang you want left bare. In UltiMaker Cura, select the model, press E for the Support Blocker tool and click that overhang to drop a cube. In PrusaSlicer, Bambu Studio and OrcaSlicer, right-click the model and choose Add support blocker. Or press L and paint the area with the right mouse button.

### 1.1 The number

Every label and key is read from each slicer's source at its latest release tag: UltiMaker Cura 5.14.0 with CuraEngine 5.14.0, PrusaSlicer version_2.9.7, Bambu Studio v02.09.01.70 (2.9.1) and OrcaSlicer v2.5.0.

### 1.2 Why does a blocker have to cover the overhang itself?

Because the slicer decides where support goes at the overhang, layer by layer. On each layer it finds the area hanging past the layer below, and that area becomes the top of a support column built down to the bed or the part. PrusaSlicer, Bambu Studio and OrcaSlicer subtract the "support blockers" from that area on every layer they overlap. CuraEngine does the same with its Anti Overhang Mesh, which Cura defines as a mesh where "no part of the model should be detected as overhang."

So the blocker has to enclose the overhanging surface itself. A cube floating in the empty space below touches no detected overhang and changes nothing.

An enforcer works the other way: PrusaSlicer, Bambu Studio and OrcaSlicer support every overhang inside it "as if with 90 degrees of slope", whatever the threshold angle says. Cura turns painted Preferred areas into a forced-overhang mesh that does the same. What that threshold measures is in what overhang angle needs support.

### 1.3 How do you block supports in a specific area in Cura?

UltiMaker Cura 5.14.0 gives three ways:

1. **Support Blocker.** Select the model, pick Support Blocker in the left toolbar or press E, and click the overhang. Cura places a 10 mm cube there. Resize and position it with the Scale and Move tools until it encloses the overhang. Clicking a blocker again with the tool deletes it.
2. **Paint.** Press P, choose Support, set "Mark as" to Avoid and paint the overhang ("Erase" removes paint). Brush shapes are Circle, Square and Face; Face selects neighboring faces within the "Angle Threshold". Painting works on one ungrouped model at a time and arrived in Cura 5.14.

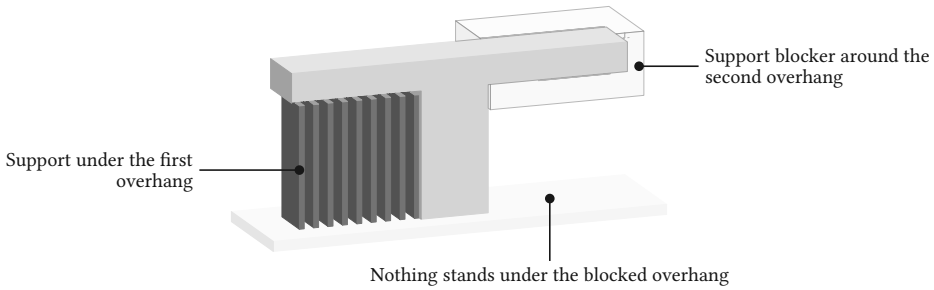



**Figure 1.** Support stands under the first overhang, while the blocker wrapped around the second removes it from the slicer's overhang detection, so nothing is built under it.

3. **Any shape as a blocker.** Load a second mesh, open Per Model Settings and pick "Don't support overlaps". It blocks like the cube.

### 1.4 How do you use paint on supports in Bambu Studio?

1. **Open the tool.** Select one object and press L, or click Supports Painting in the top toolbar.
2. **Pick a tool type.** Circle paints visible facets; Sphere paints every facet inside it; Fill floods connected facets up to the "Smart fill angle"; Gap Fill fills small gaps between painted areas with the neighboring type.
3. **Paint.** The left mouse button enforces and the right blocks. Shift plus left erases, and Ctrl plus the mouse wheel changes pen size. "Highlight overhang areas" with "On overhangs only" keeps strokes on overhangs.
4. **Slice.** With an auto Type, Bambu Studio builds its automatic support plus the painted areas, minus the blocked ones. With a manual Type, only painted enforcers get support.

"Enable support" must be ticked: with it off, Bambu Studio builds no support at all, even for painted areas.

OrcaSlicer works the same way under the name Support Painting, also on L. Inside it, C, S, F and G switch between Circle, Sphere, Fill and Gap Fill.

### 1.5 How do you add support blockers and enforcers in PrusaSlicer?

- **As a shape.** Right-click the object and choose "Add support blocker" or "Add support enforcer". Then pick Box, Cylinder, Sphere or Slab; Advanced and Expert modes add Gallery and Load. Simple mode adds a box straight away. Move and scale it until it encloses the overhang.
- **By painting.** Press L for Paint-on supports, shown only in Advanced and Expert modes. The left mouse button paints "Enforce supports" and the right "Block supports". Shift plus left is "Remove selection", and Alt plus the mouse wheel changes brush size. Tool type is Brush or Smart fill.
- **By angle.** Drag "Highlight overhang by angle" and click Enforce to paint enforcers on every highlighted facet.
- **Automatically.** "Automatic painting" paints enforcers where PrusaSlicer's own check finds spots that need support. It first erases any paint already on the model.

### 1.6 What are support enforcers?

A support enforcer is the opposite of a blocker: a shape or painted area where the slicer must build support. It catches overhangs automatic detection skips, such as a shallow overhang under the threshold angle. Bambu Studio has allowed painting on vertical faces since version 1.10.0, and Bambu Lab's wiki says supports painted there on tall, thin parts make them less likely to collapse.

Cura's shape-based equivalent is a mesh set to "Print as support" in Per Model Settings. Cura prints its volume as support. "Drop Down Support Mesh" is on by default and adds support everywhere below the mesh.

### 1.7 How do you print support enforcers only?

Keep support generation on but switch automatic placement off, then add enforcers:

- **PrusaSlicer:** set the sidebar's "Supports" to "For support enforcers only". That ticks "Generate support material" and unticks "Auto generated supports", so PrusaSlicer builds support only inside "Support Enforcer" volumes. Prusa's knowledge base says painted enforcers count in this mode as well.
- **Bambu Studio and OrcaSlicer:** tick "Enable support" and set "Type" to a manual type. The setting's own description says only support enforcers are generated.
- **UltiMaker Cura 5.14.0:** leave "Generate Support" unticked and paint Preferred areas. CuraEngine still supports them, and a "Print as support" mesh prints regardless.

Prusa's own print profiles for the MK4S and CORE One ship in this mode: "Generate support material" ticked, "Auto generated supports" unticked, so the sidebar reads "For support enforcers only". Only their SOLUBLE profiles turn automatic support on. That is why a model with overhangs slices with no support on those printers until you add enforcers or switch "Supports" to "Everywhere".

### 1.8 How to check it on your own print

1. **Turn automatic supports on.** A blocker only removes support the slicer would otherwise build. Tick “Generate Support” in Cura, or “Enable support” with an auto Type in Bambu Studio and OrcaSlicer. Prusa’s knowledge base says blockers need PrusaSlicer’s “Supports” set to “Everywhere” or “Support on build plate only” (what build plate only does).
2. **Check the blocker’s position.** In the 3D view it should overlap the underside of the overhang, not only the empty space beneath.
3. **Slice and open the preview.** The blocked overhang should have nothing under it, and the other overhangs keep their support.
4. **If support still appears there,** grow the blocker to the overhang’s edges. Support built down from a higher overhang still passes a blocked one, so the higher overhang needs its own blocker.
5. **If painted enforcers produce nothing,** tick “Enable support” in Bambu Studio or OrcaSlicer. In Bambu Studio, a warning that the object has floating regions, a floating cantilever or large overhangs means support is off.
6. **If a Prusa MK4S or CORE One slices with no support,** the sidebar probably reads “For support enforcers only”. Add enforcers or switch to “Everywhere”.
7. **Save the project file.** Prusa’s knowledge base notes that the 3MF project keeps the paint data, so you can edit it later.

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