

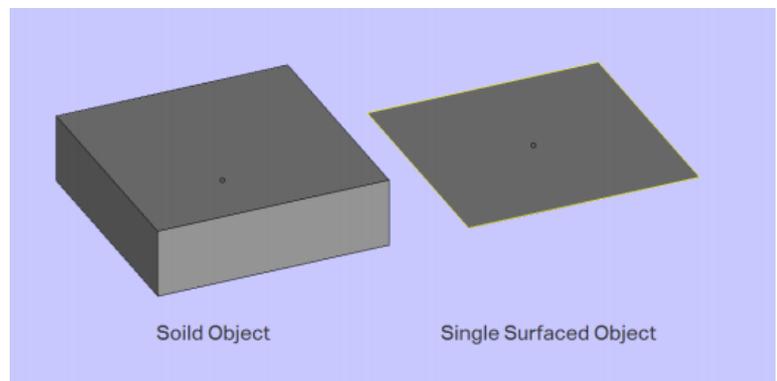
Basic requirements for 3D printing



This short guideline explains the basic requirements a 3D model must fulfill to be 3D printable. It is applicable for all 3D printing technologies.

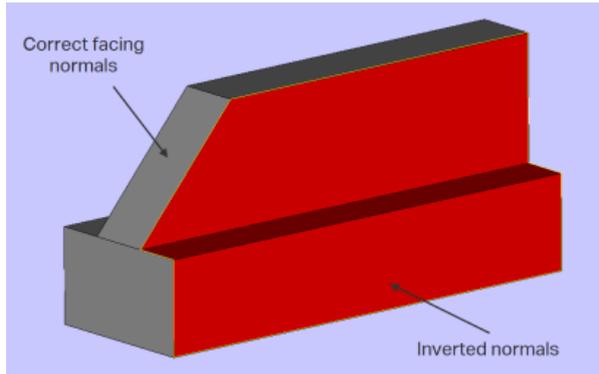
Solid objects

A part modeled in 3D CAD software must be made into a solid 'watertight' object in order to be printable. Solid objects drawn in CAD software contain a volume and it is important for a 3D printer to recognize an object's volume in order to apply material in the correct places. Single-surfaced objects contain no volume and cannot be printed. Ensure that all single-surfaced objects are given a specified thickness.



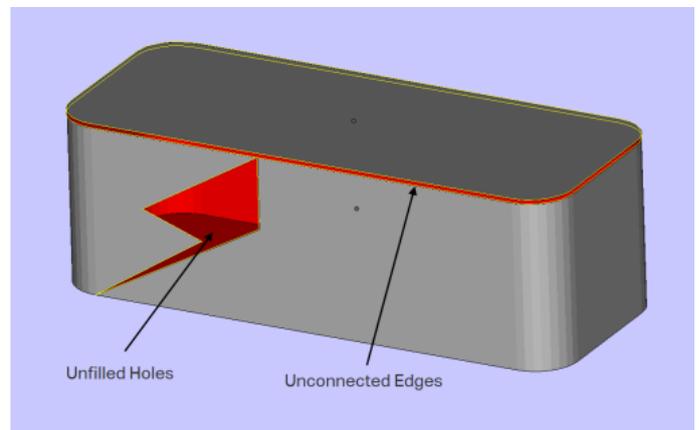
Surface normals

Check all surface normals face the correct direction on your model. Usually every 3D CAD software works in such a way that the surfaces have an inside and outside face. If the 3D CAD software doesn't warn you about inverted faces, when the model is converted to STL format it will yield an error and you will be able to see the incorrect faces, colored in red. Such errors may also result as an error during converting the files. We will try to fix them for free for you before printing.



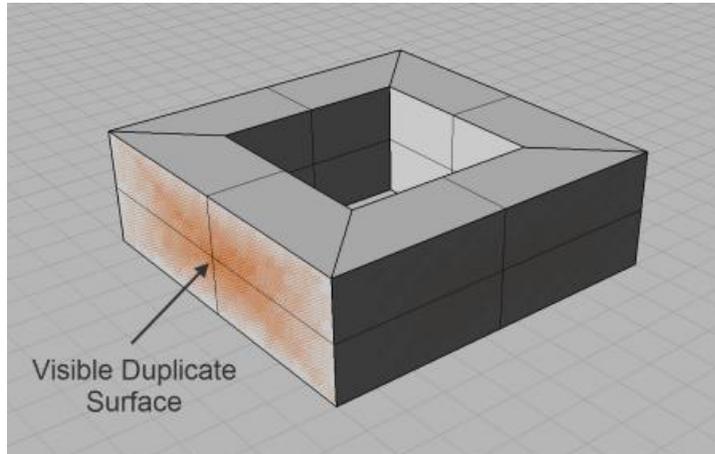
Open edges and holes

Any holes or edges which are not connected may result in unexpected results during printing. Such errors break the solidness of the model and also may result during conversion to STL format. We will try to fix them for free for you before printing.



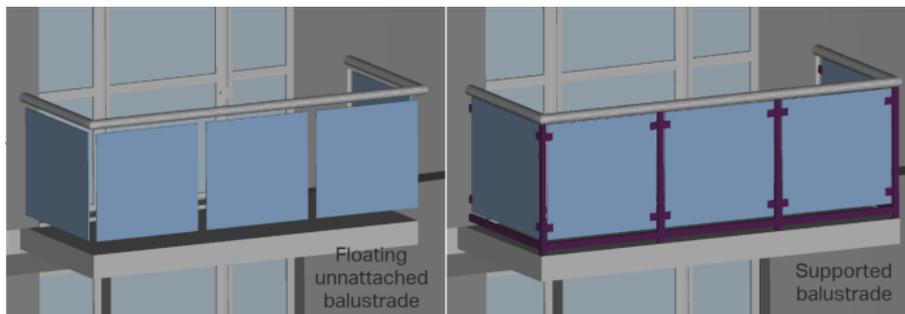
Duplicate surfaces

Any duplicate surface must be removed before printing for better results. Identical surfaces may exist on top of each other and it is advised that you remove them. Usually they are visible on any 3D CAD software.



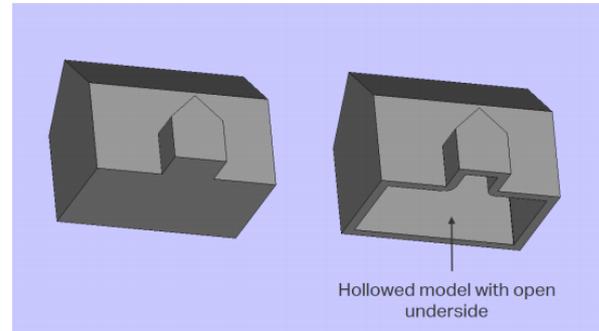
Floating objects

Make sure that all parts of your model are supported, connected to each other and not floating in the air. Every object that is not joined correctly will be printed separately and possibly will ruin the whole print.

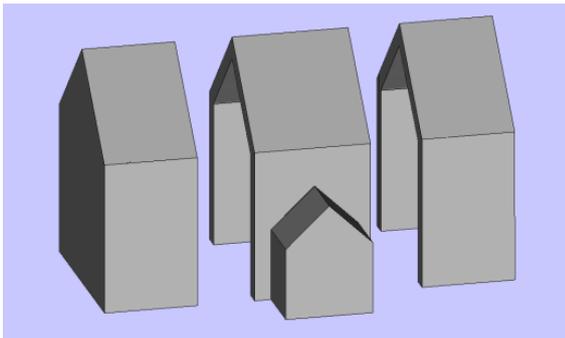


Hollowed parts

It is not mandatory to make your models hollowed, but you can save material, cost and time by doing so. Nevertheless if your model is not hollowed we will try to print it with smaller density, while keeping it strong enough to be used.



Large models



Extremely large models may not fit the build envelope of our machines, so we may have to cut, print them in parts and assemble them later. You can also do it by yourself if you prefer.