

How do I import a geometry in PLAXIS 3D?

Importing geometry in PLAXIS 3D 2013 / 3D AE / 3D Classic

Latest version of this document available online: <http://kb.plaxis.com/tips-and-tricks/how-do-i-import-geometry-plaxis-3d>

PLAXIS 3D allows to import volumes and surfaces. On top of that, you can also import the top and bottom soil surfaces in the Modify Soil Layers configuration window in the Surfaces tab.

When importing a geometry file, a list of possible file extensions are shown. Most common import file types are:

- STEP/STP: "Standard for the Exchange of Product model data" files
- brep: Open CASCADE BRep file format
- DWG/DXF^{*)}: For DWG and DXF files we only support 3DFACE entities (i.e. triangulated surfaces/volume boundaries, not quads. *Update: since PLAXIS 3D2011, 3DFACE quads are also supported*), other entity types are ignored. Hint: you can also try to export to 3ds and import that into PLAXIS 3D which succeeds more often.
- 3DS^{*)}: valid surfaces or volumes need to be defined

^{*)}: with the internal changes for the geometric datamodel for the next version (3D 2016), Plaxis will no longer support the import of triangulated geometry. This includes *.3ds, *.dwg and triangulated *.dxf files.

Importing 3DS files from Google's Sketchup Pro

Not supported starting PLAXIS 3D 2016

Google's SketchUp is a tool for creating, editing and sharing 3D models. SketchUp Pro exports your data as 1:1. When importing objects in PLAXIS 3D, these are taken as the project units. When importing a Sketchup model with the project units set to inch, into a PLAXIS 3D model with meters as project length units, you will need to scale the model in order to get the same model size.

Google SketchUp Pro can export models as 3DS-files, that can be imported into PLAXIS 3D. In order to get the best options for 3ds-files from Sketchup, use these settings (based on Google Sketchup Pro 6):

1. select the desired geometry
2. intersect the desired geometry with itself (via Edit menu)
3. then export the selection as a 3DS-file
4. and make sure you apply these settings (under Options): export as single object, export entire model, or only the selection, do NOT export two-sides faces, do NOT export stand alone edges, since PLAXIS 3D does not support materials and cameras, do NOT export these, and choose your scale
5. save the file
6. now import the file into PLAXIS 3D as a surface or as a solid