



IFC EXPORT FOR THE MADASTER PLATFORM

IFC export from BIM software

Versie 3.0 - 25/02/21

Introduction

This manual is to support the import of your building to the Madaster platform. To make your file suitable for import, it must comply with the IFC protocol. Each software has its own steps for this. This manual supports Revit 2019 & Archicad 21. The focus is on the allocation of materials, NL/SfB and the IFC export.

For more extensive manuals related to ILS, please refer to the following manuals from the BIM desk.:

- [Handleiding Archicad](#) (v3.0 - mei 2020)
- [Handleiding Revit](#) (v1.01 - update mei 2020)
- [Handleiding Tekla](#) (v1.0 - november 2016)

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Revit

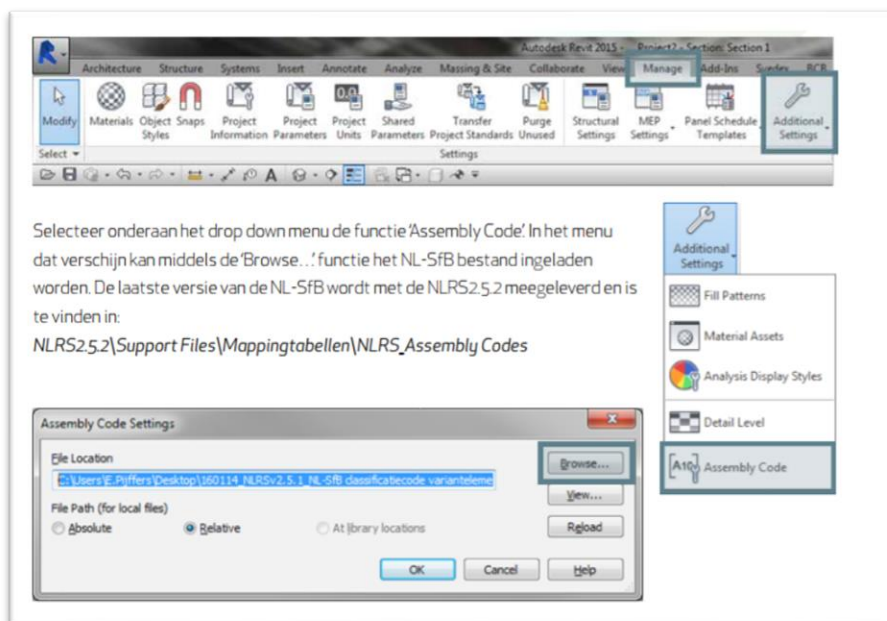
To make your file suitable for the Madaster import, we briefly explain below how NL/SfB coding and materials are added to elements. Also the correct settings for an IFC export are briefly explained. For more information about Revit, BIM standards and ILS we refer you to the available manuals on the internet. The Dutch Revit standard includes the possible export settings for an IFC, where the Revit Manual deals strongly with the information delivery specification.

Look especially at the parts NL/SfB, materials For the manual related to ILS: [Handleiding Revit](#) (v1.01 - update mei 2020)

Add "NL-SfB-Tabel1" in Revit

Go to "Manage > Additional Settings > Assembly Code" and navigate to the NL-SfB file using browse and confirm with OK to load it into Revit.

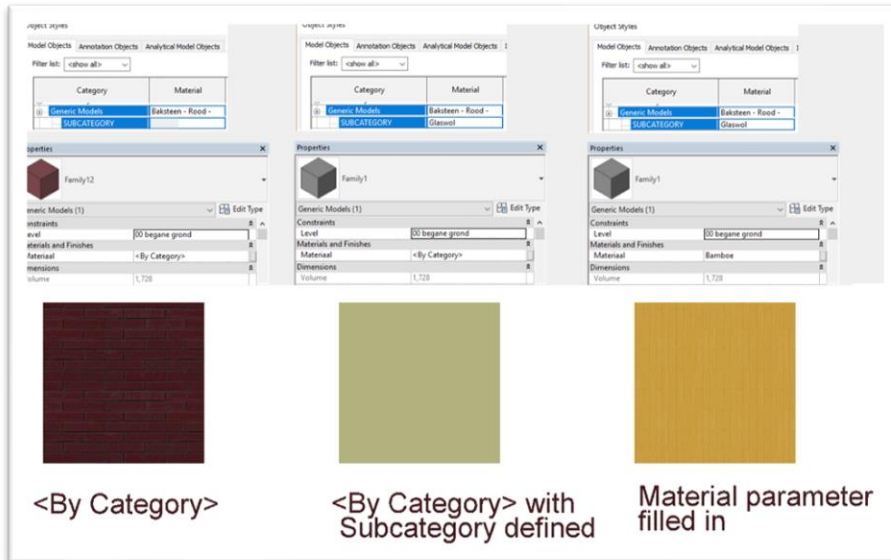
When you have selected an element go to "Edit Type" and click in the parameter "Assembly Code" and type the correct NL-SfB coding. It is also possible to select the Assembly code from a list, click on the block with ... and select the correct NL-SfB code.



Adding materials in Revit

To make a Material Passport from a 3D model it is important that all elements are drawn 3D and provided with a material. For this purpose, all elements must be provided with a material.

Manage tab > Settings panel > Materials.



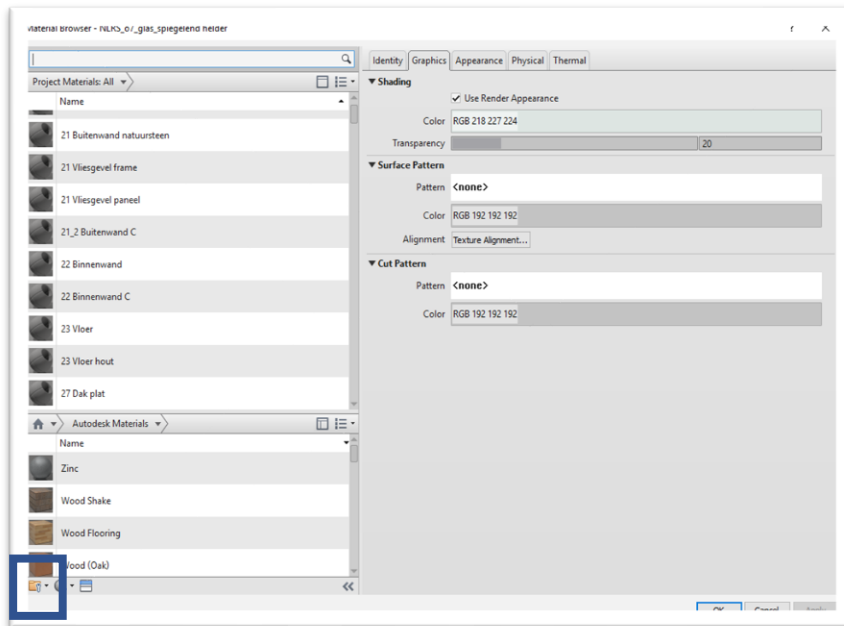
Revit has 3 ways to set the material. This can be done by setting the material to <By Category>, which will check in the Object Styles if there is a material set for the Category. If there is a material Subcategory linked to one of the geometries in the Revit family then the material defined in the Subcategory will be used. Or the user specifies the correct material directly in the element itself, this material will be used. Revit has its own Autodesk materials library. You can also use the NL/SfB materials library that you can import.

[Add material according to NL-SfB as material library.](#)

According to the Dutch Revit Standards the NLRS2.5.2 allows you to find a complete material library in the form of a .asd cliff. This is based on NL-SfB table 3 which allows you to directly export materials to IFC.

1. Click Manage tab> settings panel > Materials
2. Drop-down menu (bottom left) > Open Existing Library.

1. Select the .adsklib library and open the file.

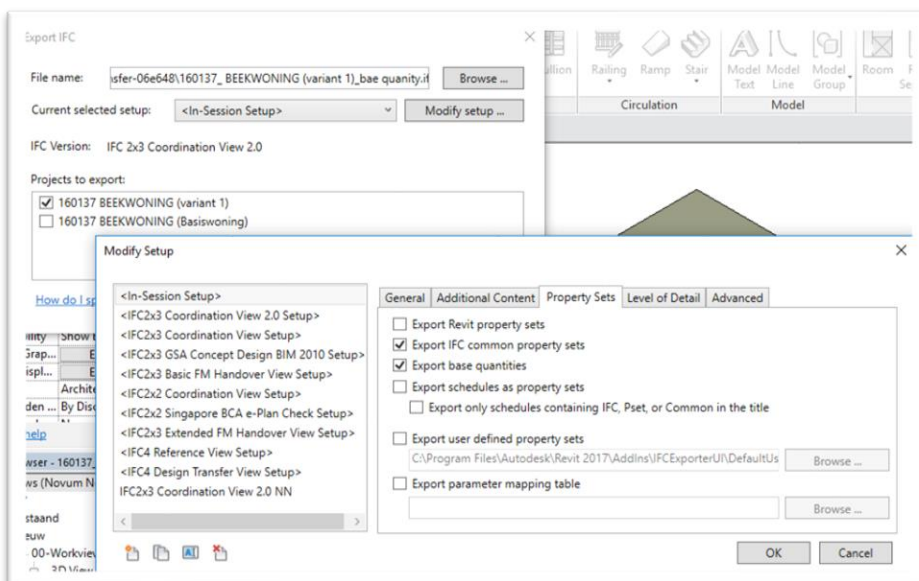


IFC export Revit

For general information about IFC and Revit see [link](#).

Manual setting 'IFC export'

With the IFC export, the IFC export settings can be adjusted manually under *Modify setup*. Here it is important that for the export the "IFC common property set" & "base quantities" are taken into account when writing the IFC. See also the figure below:



Archicad.

To make your file suitable for the Madaster import, we briefly explain below how NL/SfB coding and materials are added to elements. Also the correct settings for an IFC export are briefly explained.

Add NL/SfB in Archicad

The Madaster uses the NL/SfB* method to classify the elements. A 4 digit notation has to be chosen. This notation can be added in the Category and Properties in the selection settings of an object. In this window you need to open Manage IFC properties and activate the Apply predefined rule. In this last window you can activate the NL-BE Encoding and with the degree of detail (4 digit notation). The last step is now to indicate which NL/SfB Encoding the object has.

✓ hiermee kun je IFC, Stabu of unicode classificatie toevoegen:

1. selecteer coderingstype
2. selecteer de codering
3. selecteer de juiste code
4. selecteer apply

TIP:
maak schedules waarin de IFC parameters controleert worden.
vooral of loadbearing en external/internal overeen komt met de 4-cijferige codering.
omdat dit 3 losse parameters zijn, wordt soms de code aangepast, maar de loadbearing parameter vergeten.

Apply Predefined Rules

Select Rule:

NL-BE Coderingstabellen 1

3. NL/SfB (4 cijfers) 2

Description:

Kies hieronder een NL/SfB code. Deze code wordt als ifc-classificatie-parameter aan het geselecteerde element toegevoegd.

Select the required item:

- 17 PAALFUNDERINGEN
- 21 BUITENWANDEN
 - 21.0 ALGEMEEN
 - 21.1 NIET CONSTRUCTIEF
 - 21.10 ALGEMEEN
 - 21.11 MASSIEVE WANDEN
 - 21.12 SPUIJWANDEN 3
 - 21.13 SYSTEEMWANDEN
 - 21.14 VLIESWANDEN
 - 21.15 BORSTWERINGEN
 - 21.16 BOEIBOORDEN
 - 21.17 SCHOORSTENEN/KANALEN (BOUWKUNDIG)

Search:

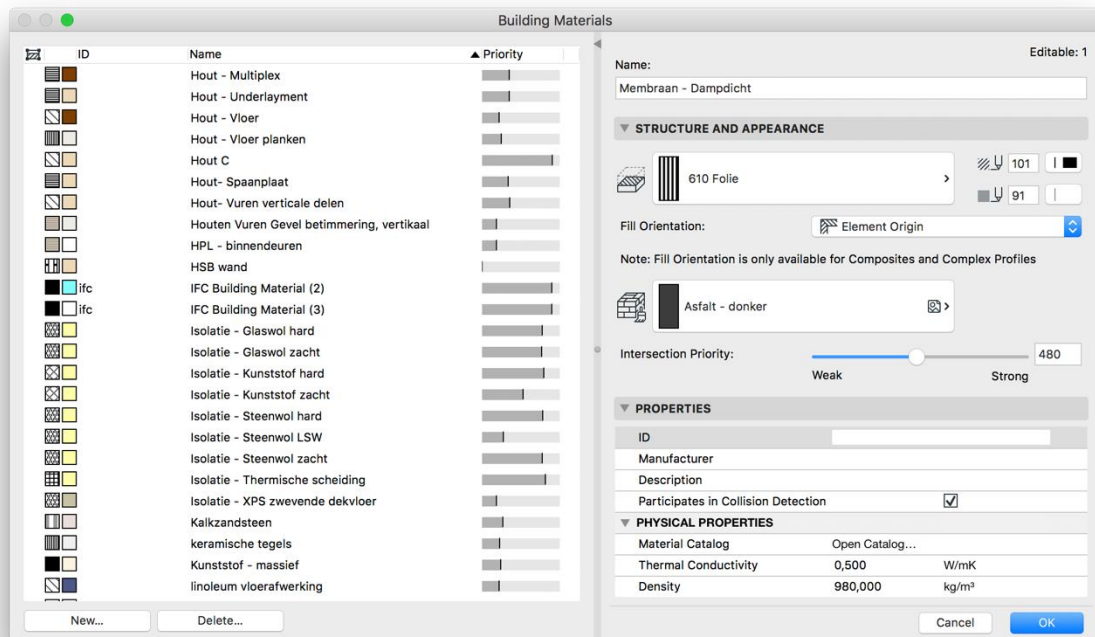
Search result:

NL SFB	Titel
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Cancel Apply 4

Adding materials in Archicad

To make a Material Passport from a 3D model it is important that all elements are drawn 3D and provided with a material. For this purpose all elements must be provided with a material which is defined in Archicad in the *Building Materials* (new materials are allowed). It is important that the materials that are used get a clear name in which the material definition is described (concrete, rock wool etc.). The materials can be hung directly on an object or element or can be used in a composite where a composition of materials is made..

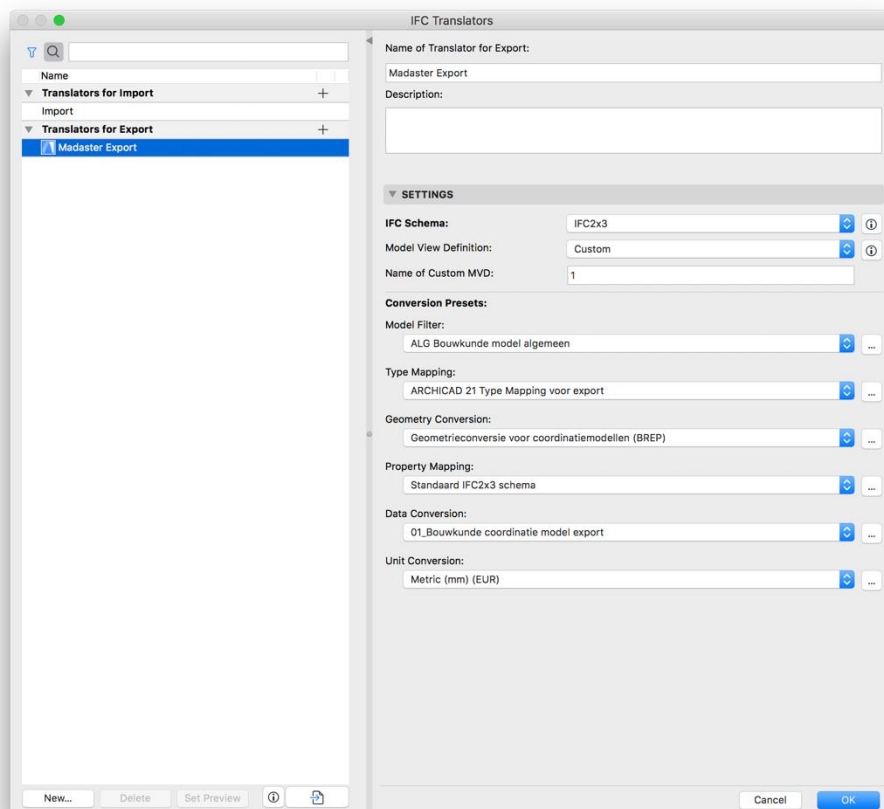


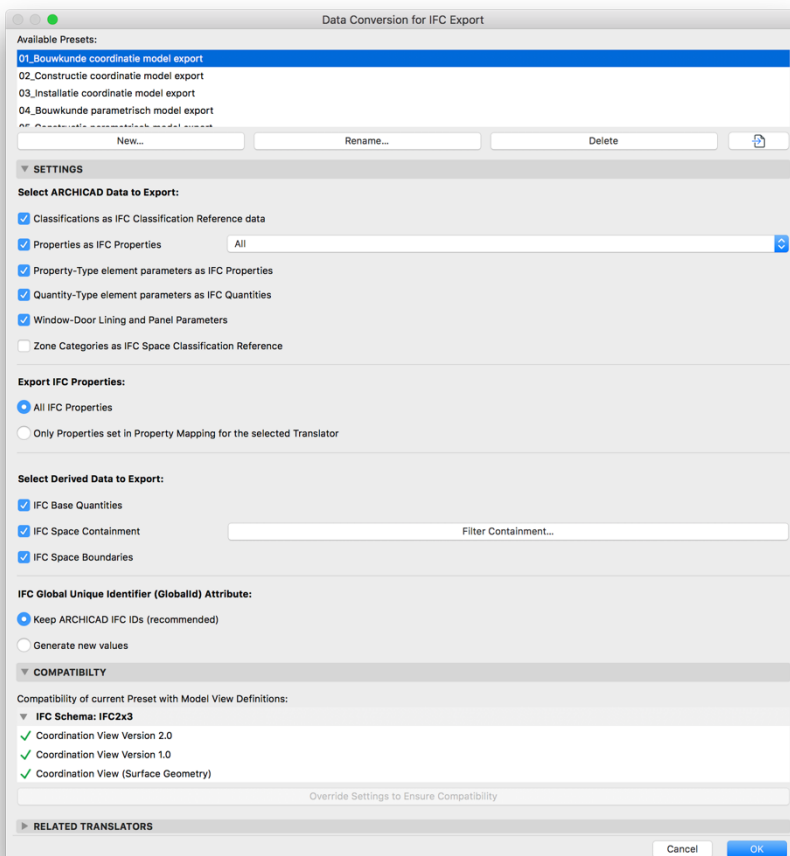
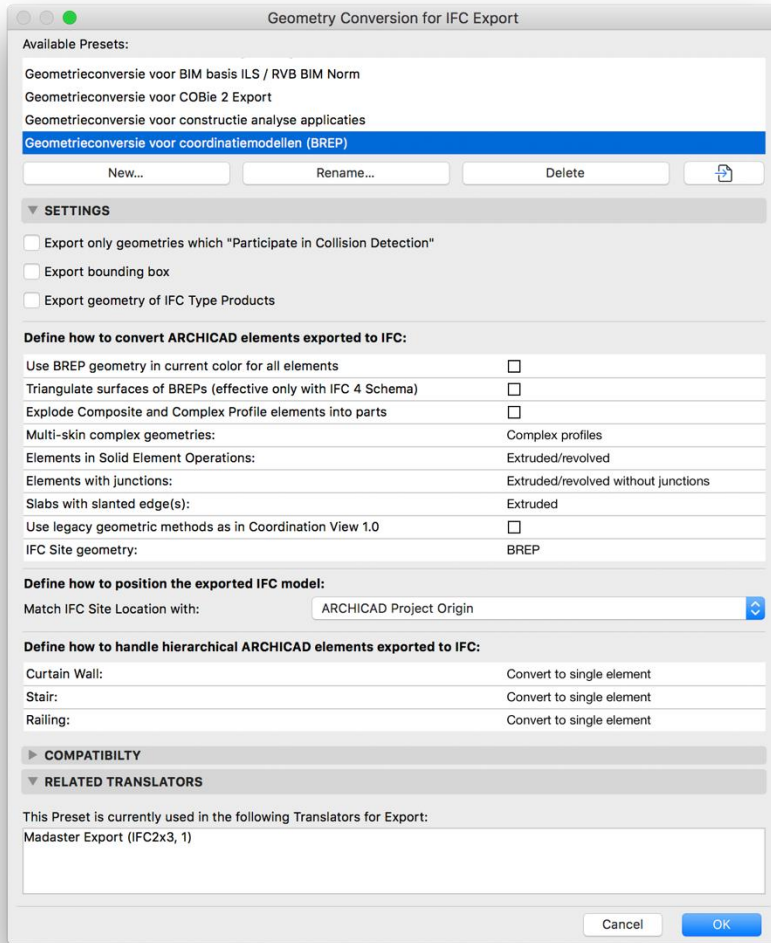
IFC export

Under “Save as” you can choose to save the file as IFC. This is done in the Format: IFC files. In addition, you will need to set the correct translator. These can be set in 2 ways: manually or directly downloadable.

Manually set up ‘IFC export’

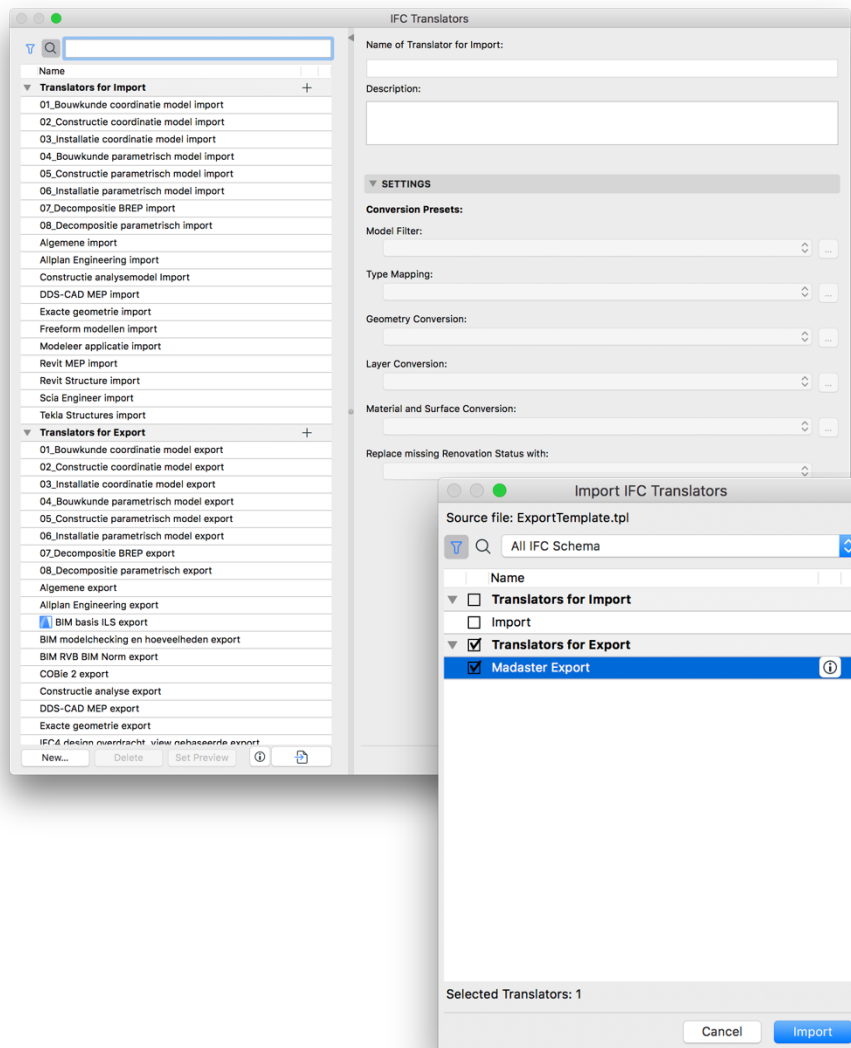
When setting up manually, start creating a new Translator by clicking Create new and save the settings somewhere on the server. In addition, all parameters (including tabs) need to be set correctly using the settings below (see figures below). It is important that the check mark IFC Base Quantities in the data settings is not forgotten. After you have set all parameters correctly you can press save settings & close button and create an IFC file with the correct settings.





Import instellingen 'IFC export

On the website of Madaster (https://docs.madaster.com/files/Archicad_ExportTemplate.tpl) you can download a preset IFC translator, which can be imported via the import button. For the Import it is important that the archicad project template can be selected. By checking the Madaster export, this export will now be loaded into the model. After this all parameters will be correct and you can use the save settings & close button to confirm the settings. After that you can write down the IFC with the correct settings.



Tekla

To make your file suitable for the Madaster import, we briefly explain below how NL/SfB coding and materials are added to elements. Also the correct settings for an IFC export are briefly explained. For more information about Tekla, BIM standards and ILS we refer you to the available manuals on the internet.

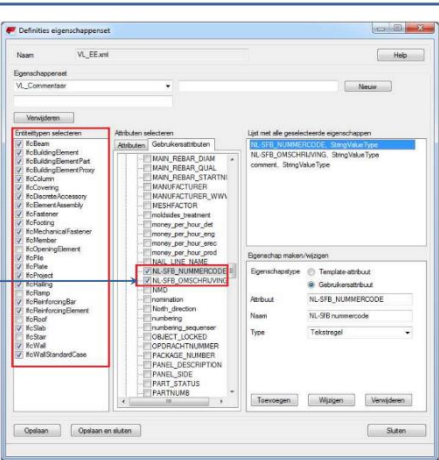
For the manual related to ILS: [Handleiding Tekla](#) (v1.0 - november 2016)

Below you will find a short description of the steps regarding NL/SfB and adding materials. It is important to check the base quantities for the IFC export.

NL/SfB

- ✓ Alle objecten (IfcOpenings behoren daar niet onder) dienen voorzien te zijn van minimaal een viercijferige NL-SfB classificatie in het IFC-extract (bijv. 21.11).
- ✓ Er dienen twee parameters toegevoegd te worden in het object.inp bestand. Tevens dienen de parameters toegevoegd te worden aan de extra eigenschappenset.
- ✓ In de eigenschappenset dient een tabblad aangemaakt te worden (in het voorbeeld 'VL-commentaar' genoemd). Vervolgens wordt onder 'Entiteitstypen selecteren' aangegeven voor welke ifc entiteiten het tabblad aanwezig dient te zijn. Als laatste dient er onder 'Attributen selecteren' de parameters worden toegevoegd.

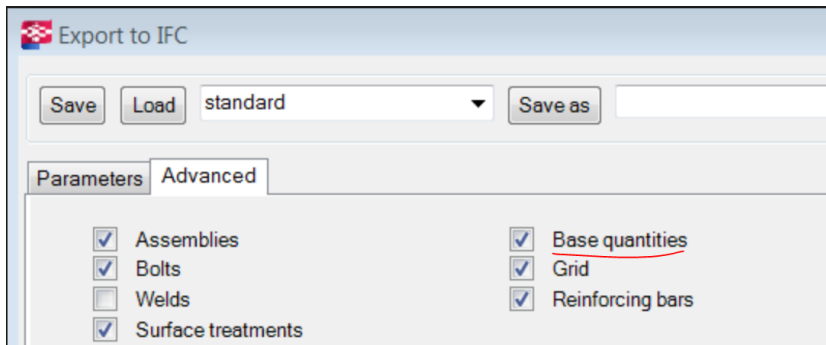
TIP: De correcte lijst met NL-SfB coderingen is oa te vinden op het [BimLoket.nl](#).



Materials



Export



IFC model check

Before uploading your IFC model to the Madaster platform, it is recommended to do a completeness check (NL/SfB encoding, Base Quantities, Material etc.) For this check, use the "free" BIMcollab ZOOM Public Viewer in combination with the Madaster smart views.

BIMcollab Zoom & Madaster Views

BIMcollab ZOOM Public Viewer and the Madaster smart view can be downloaded for free via this [link](#). After installing the BIMCollab Zoom, you can load the programmed Madaster smart views into the program via the Import button. By now opening your own (IFC) model, the model, the smart views, can be checked for completeness.

