MATERIAL INVENTOR AND REVIT 2017

26.05.2016 Bernhard Fetzer

0 MY QUESTIONS

a. **HOW SHOULD THE MATERIAL BEHAVIOUR FROM THE PERSPECTIVE OF AUTODESK BE?**
    a. As in Revit?
    b. As in Inventor?

b. **WHY THE MATERIAL INFORMATION (MATERIAL NAME AND MATERIAL APPEARANCE) ARE USED DIFFERENTLY IN THE TWO PROGRAMS?**

c. **WHY ARE THE DEMANDS ON THE MATERIAL LIBRARIES IN BOTH PROGRAMS DIFFERENTLY (PHYSICAL MATERIAL IN INVENTOR)?**

d. **WHY ARE THE ORIGINS OF THE MATERIAL MAPS IN BOTH PROGRAMS DIFFERENT?**

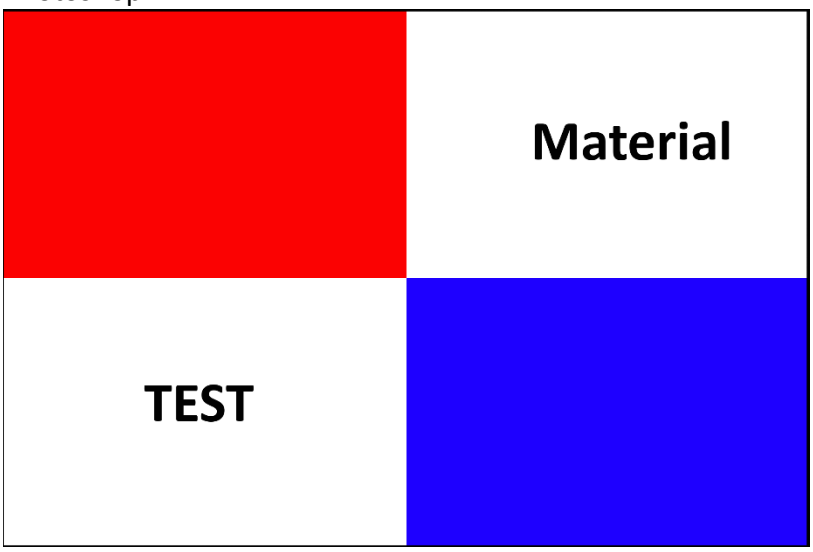
e. **WHY MATERIAL OUT OF INVENTOR WILL BE SHOWN WITHOUT A PREVIEW IN THE MATERIAL LIBRARY INSTEAD LIKE REVIT MATERIAL (WITH PREVIEW) ?**

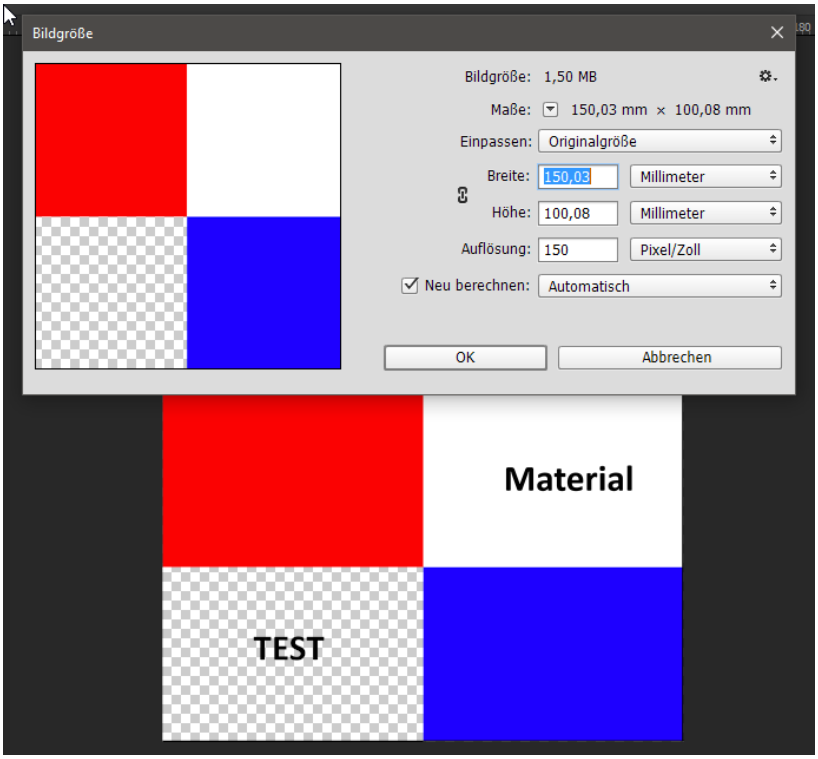
f. **WHY THE SCALE (SIZE) OF THE MAPS IS DIFFERENT IN BOTH PROGRAMS ?**
(MM IN REVIT, CM IN INVENTOR)

I would like to explain my Problems respectively the Behavior of the Materials in both programs Step by Step:

1 CREATING A MATERAIL MAP

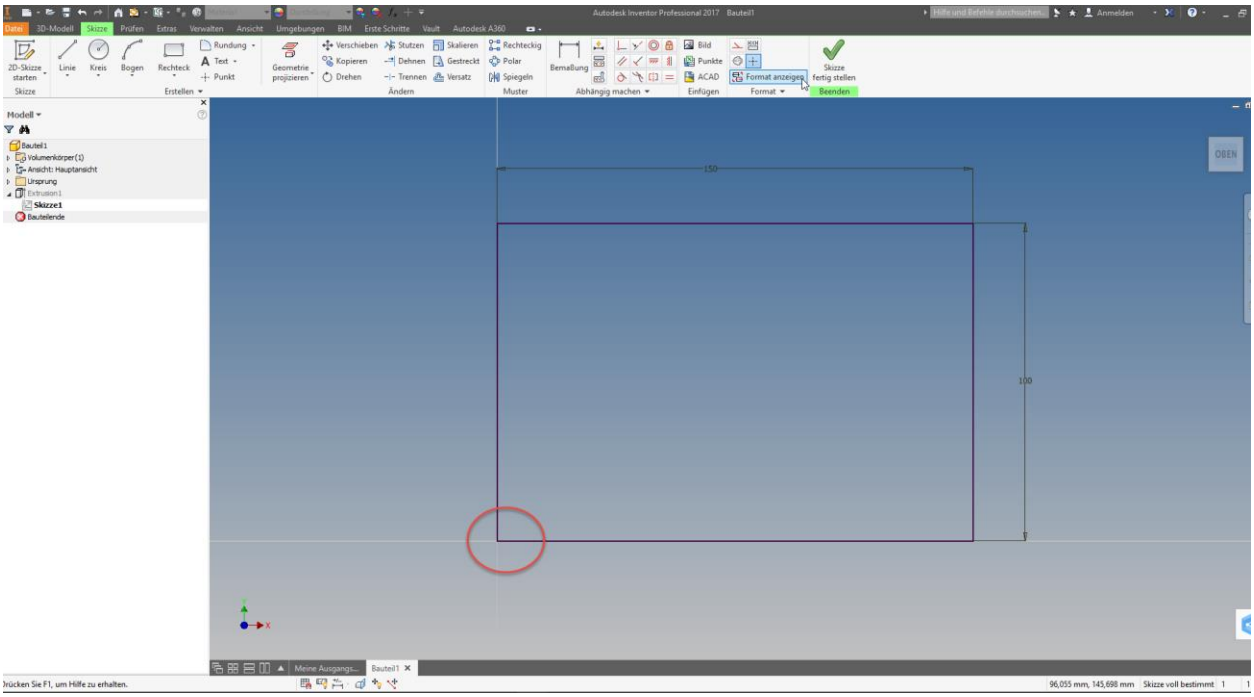
PNG 150x100mm, 150DPI
Photoshop



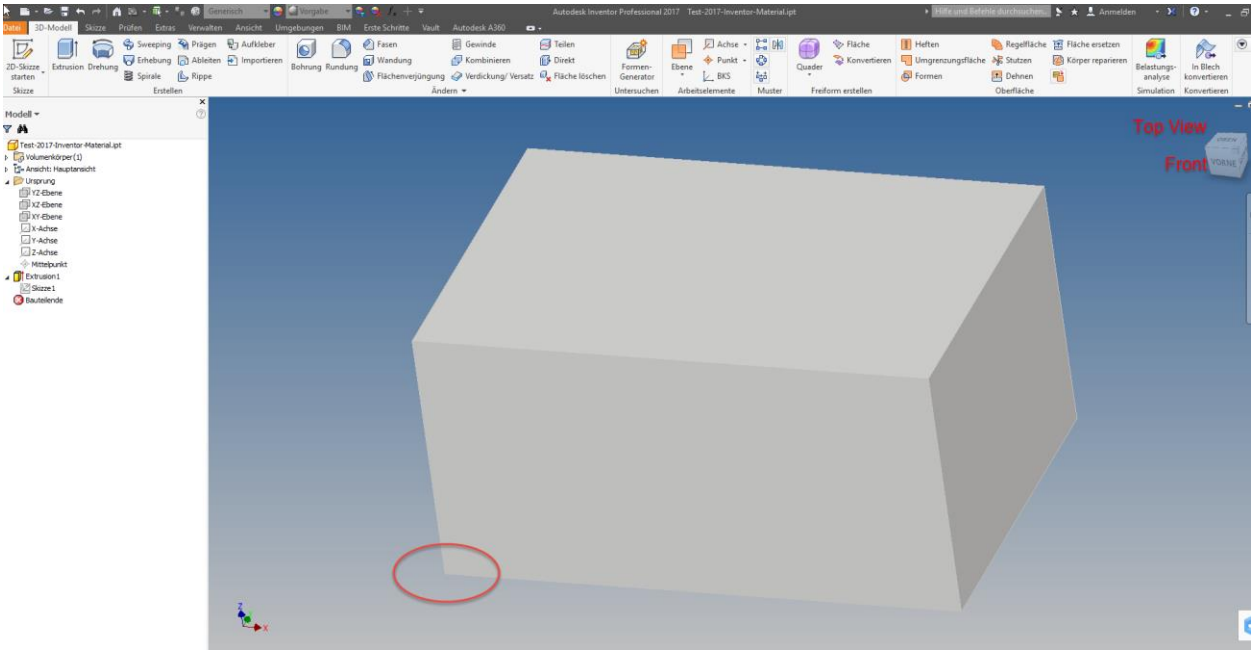


2 BUILD A NEW PART IN INVENTOR

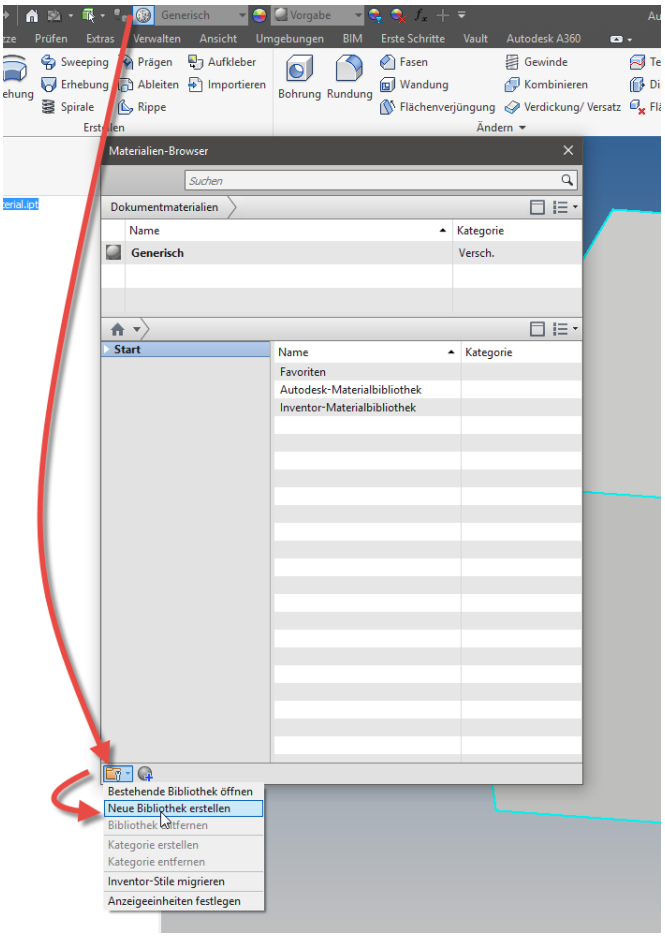
Inventor 2017
Cube 150x100x75mm

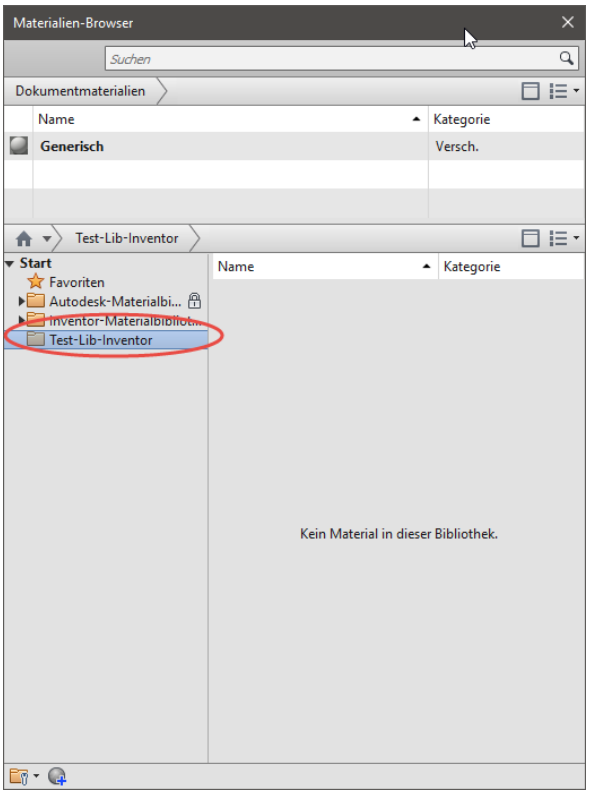


Sketch on xy-Plane (Top View), starting on 0,0, Extrusion 75mm

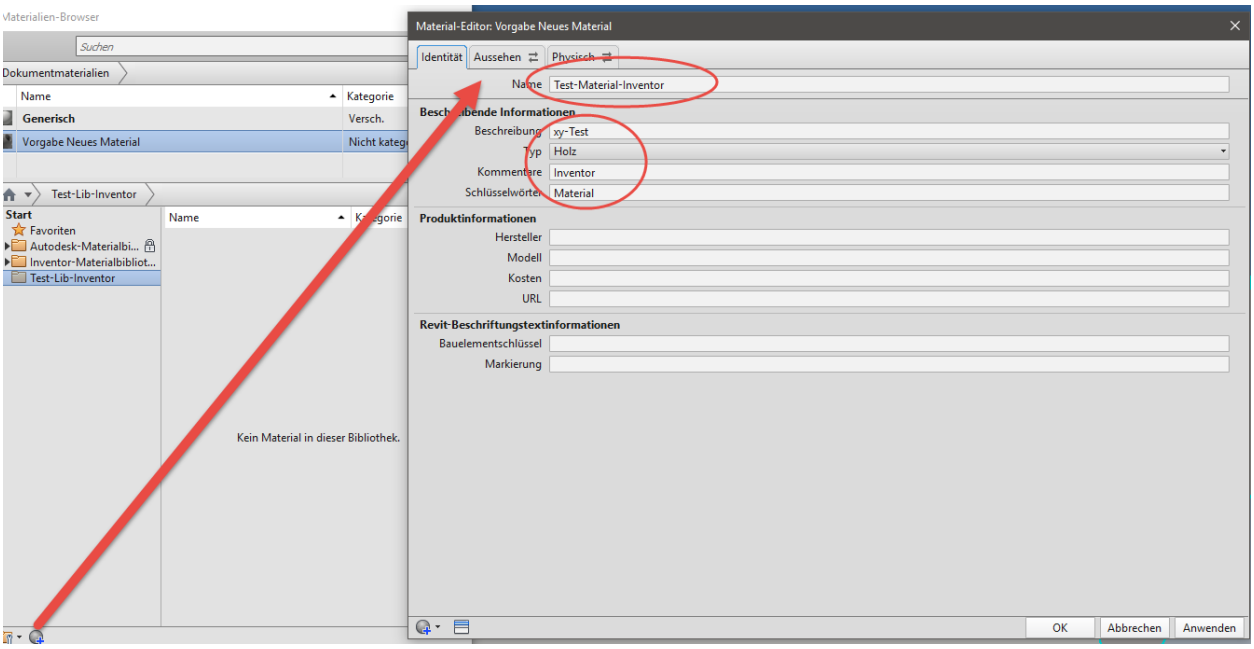


3 NEW MATERIAL LIBRARY

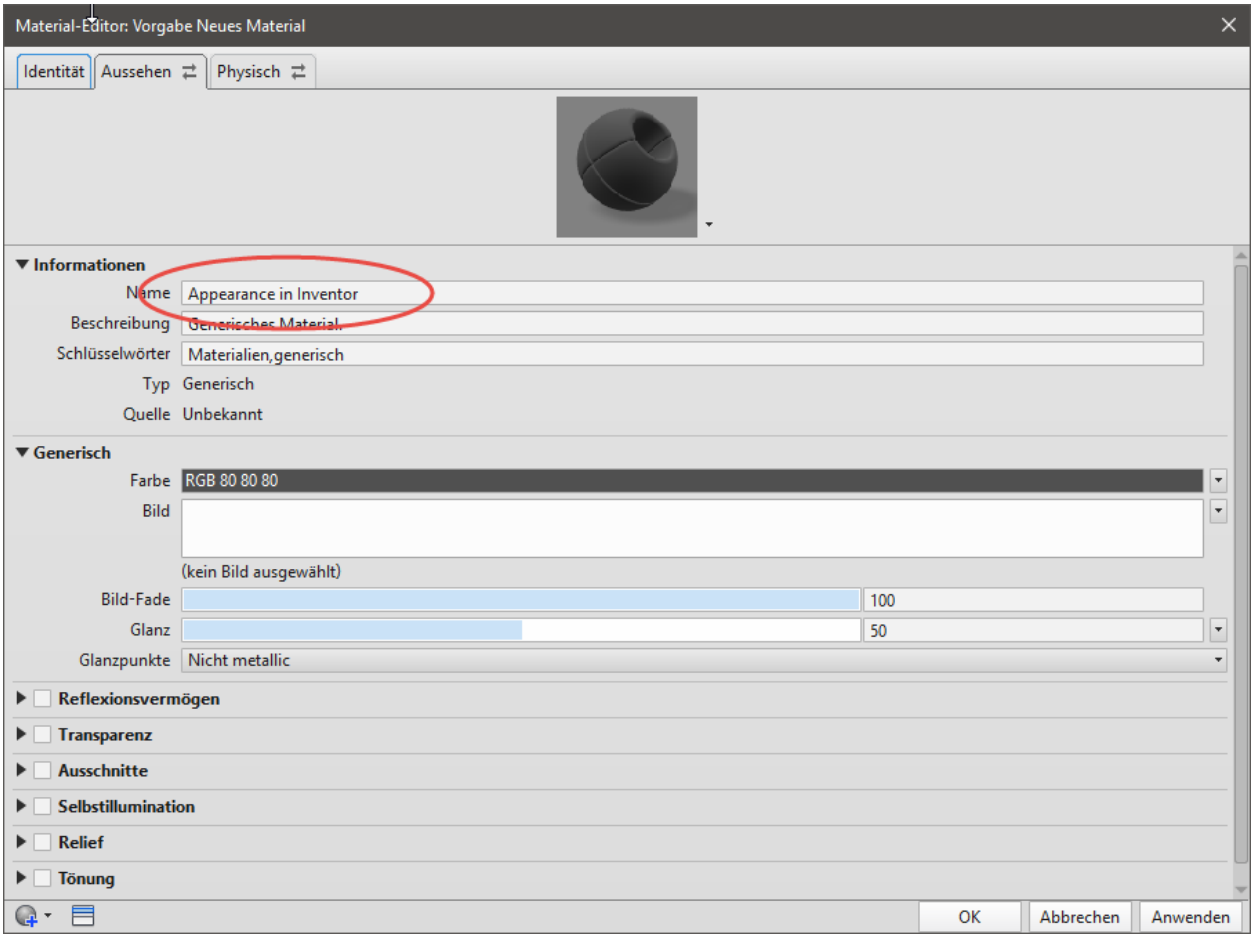




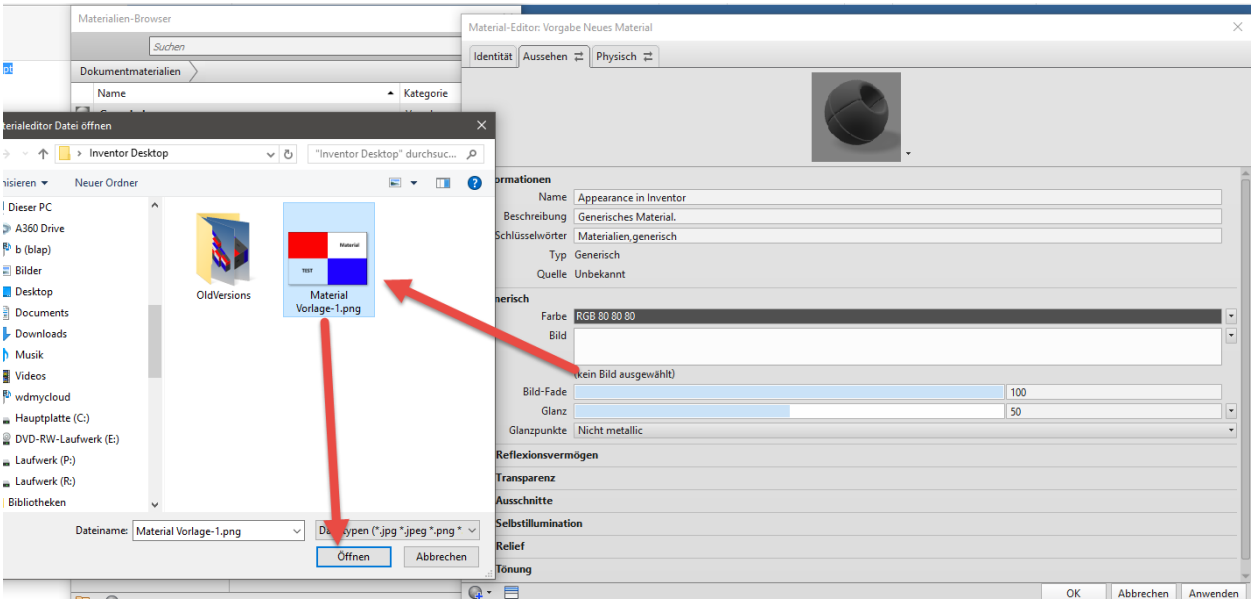
4 NEW MATERIAL



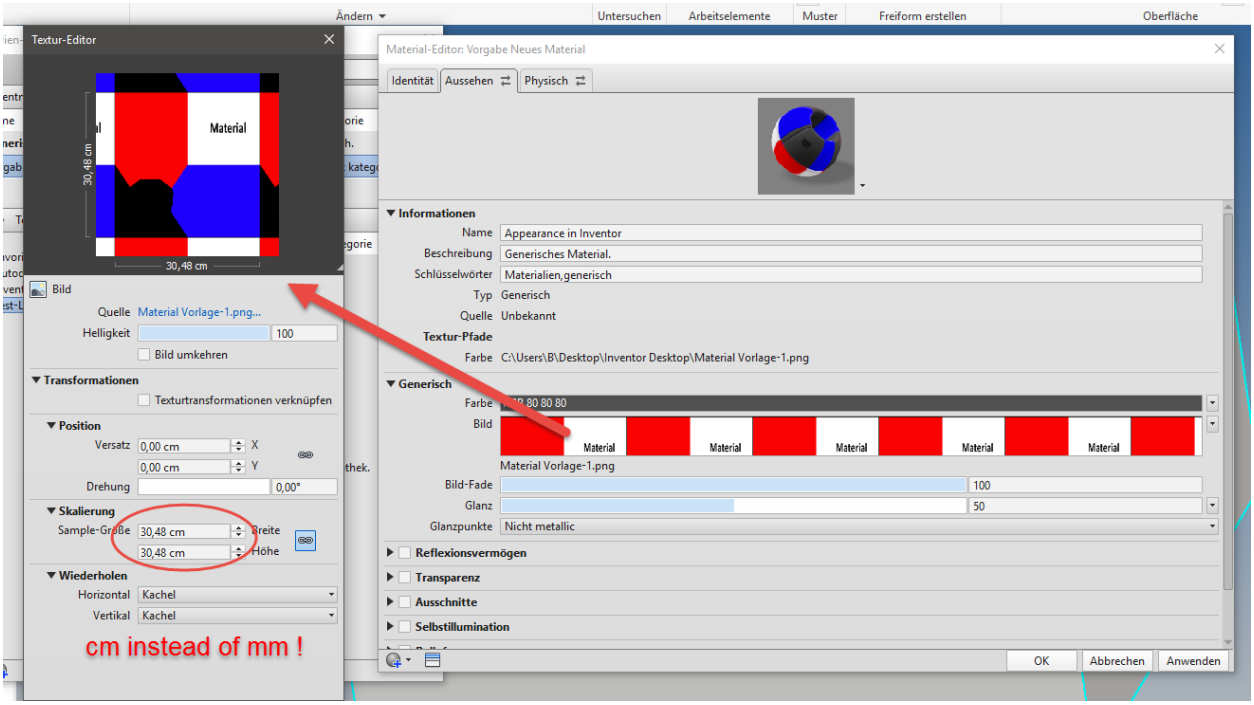
New Name, new Description etc. on Identity-Tab



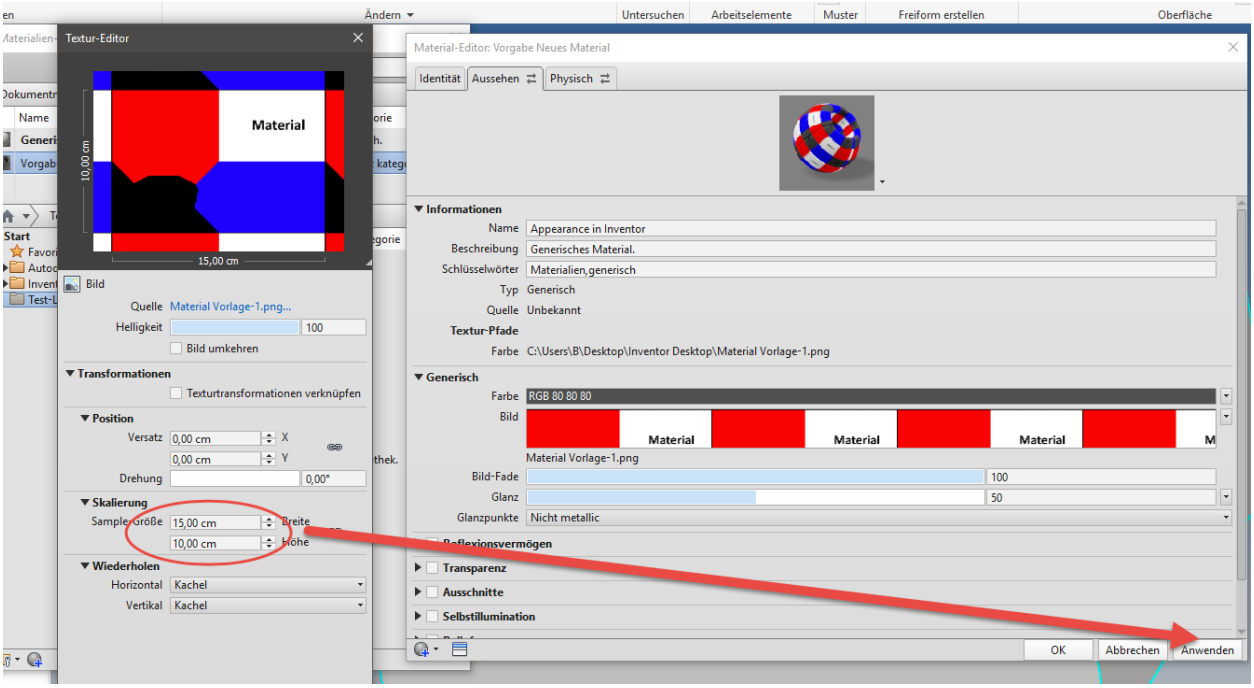
New Name on Appearance-Tab



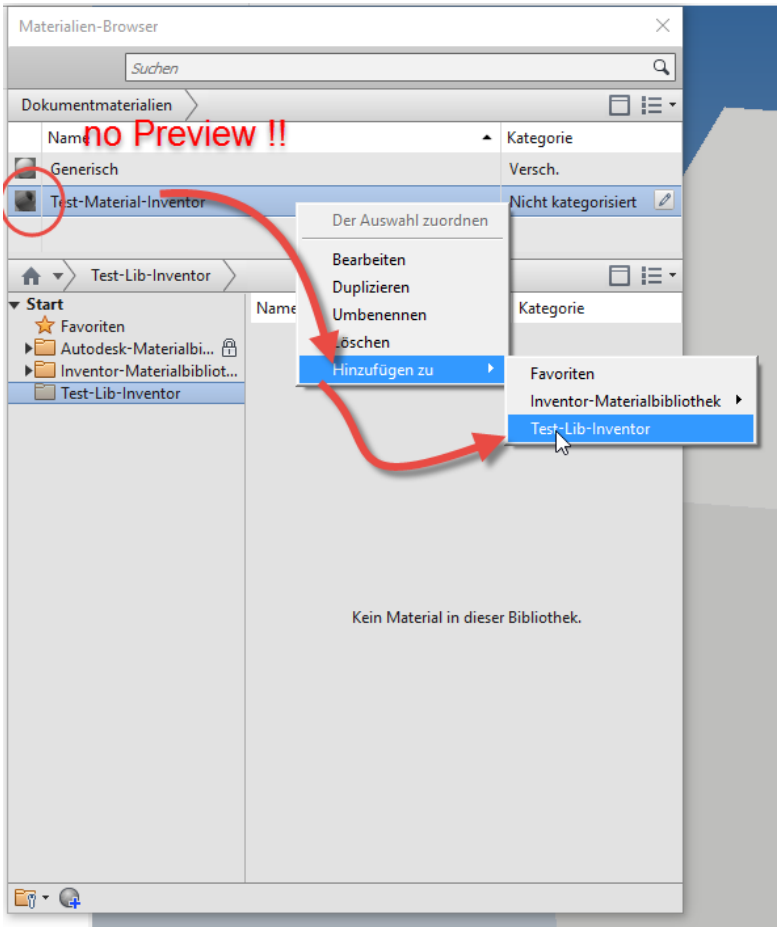
New Bitmap



Size of Bitmap shown in cm instead of mm (Part Template is mm !!)

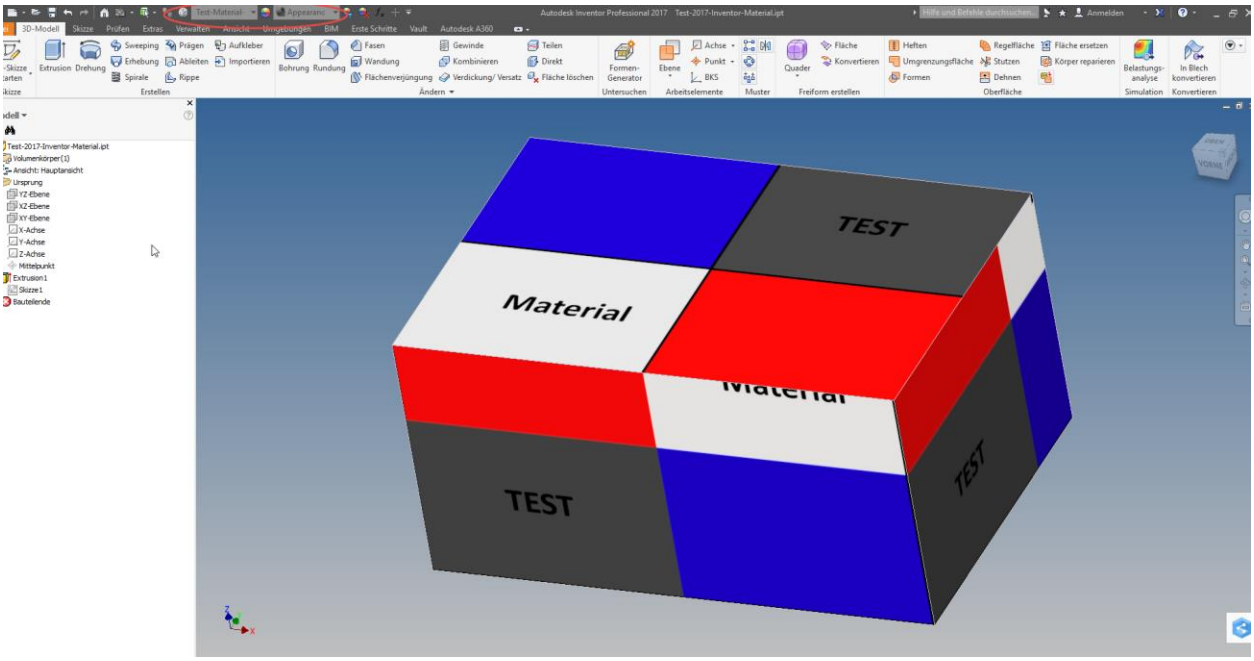


Size changed in 15x10cm



Export the Material into the new Library

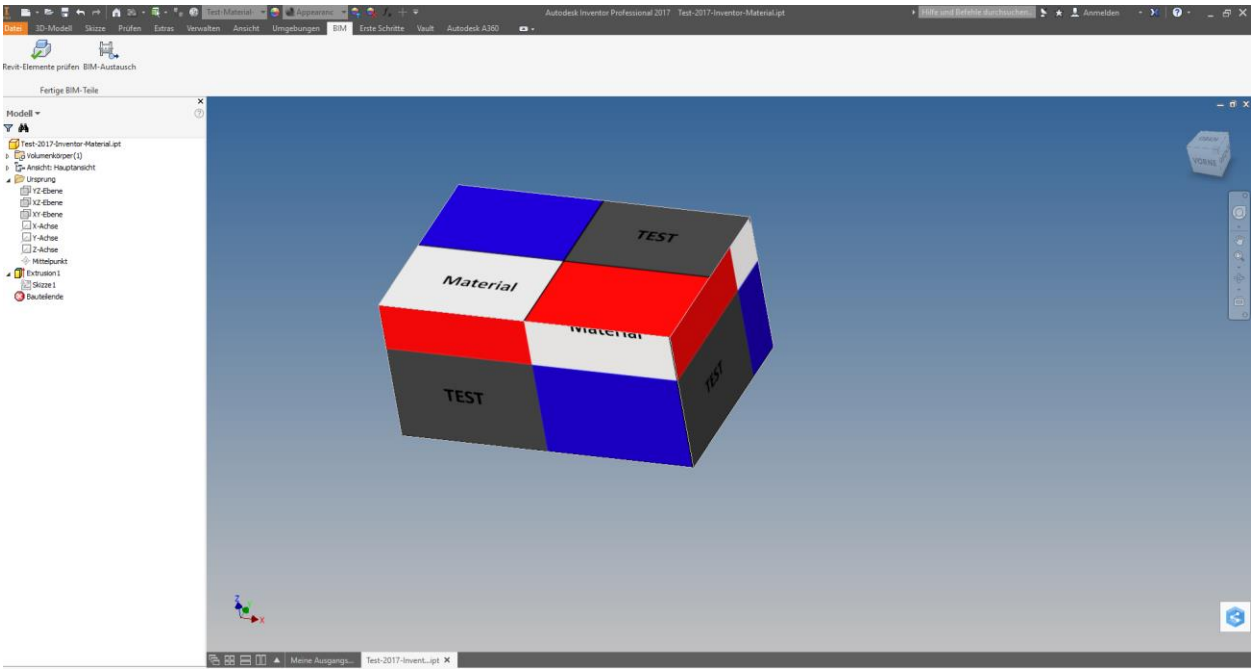
(btw.: No Preview is shown)

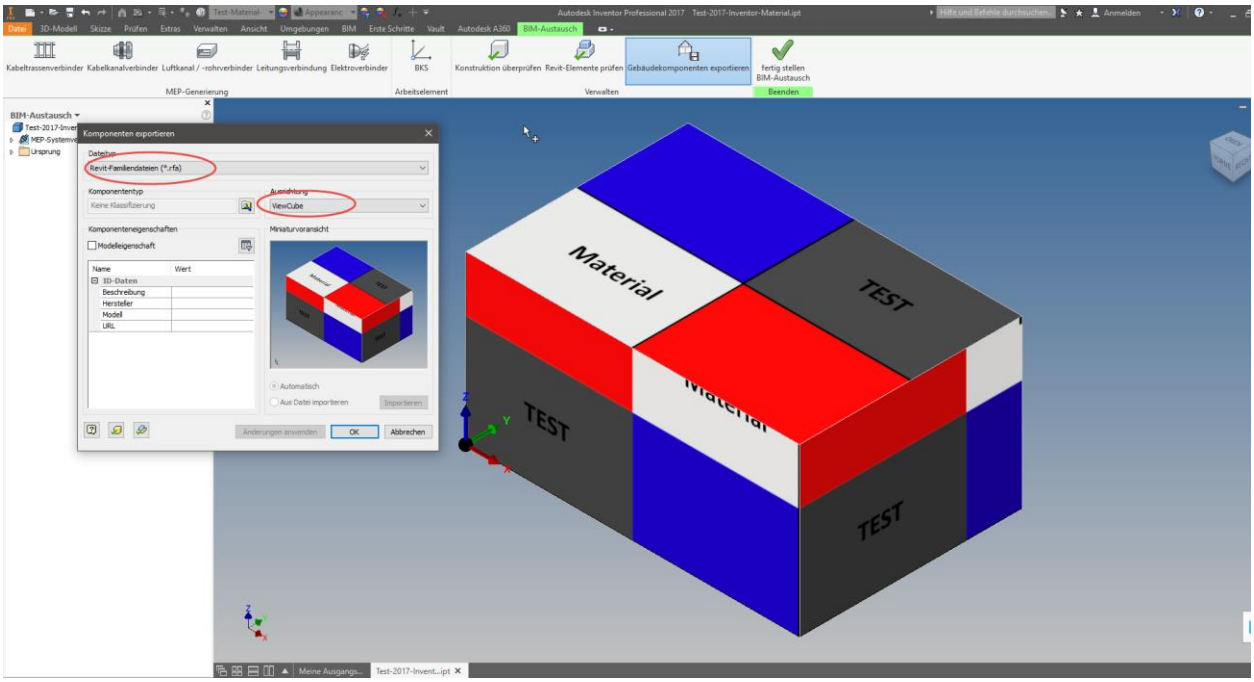


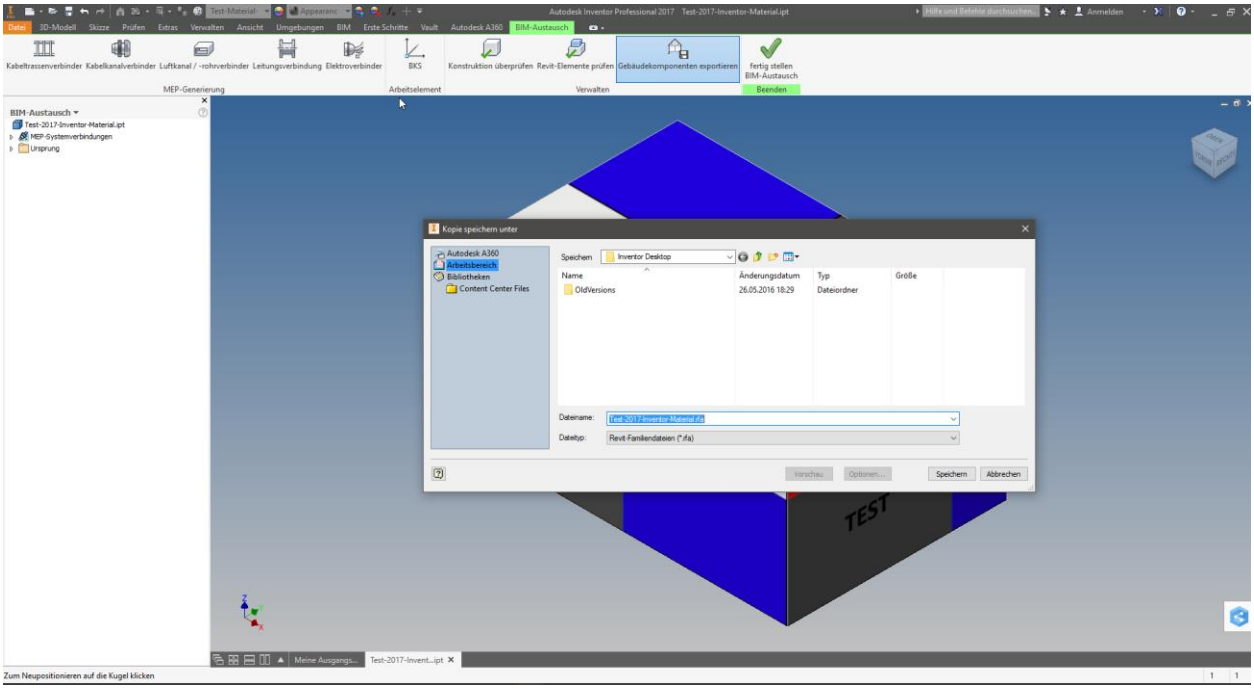
Add Material to the Part

I wonder: Why the Material Origin is not similar to the Origin of the Sketch (or of the Part)?

5 BIM EXPORT AS *.RFA

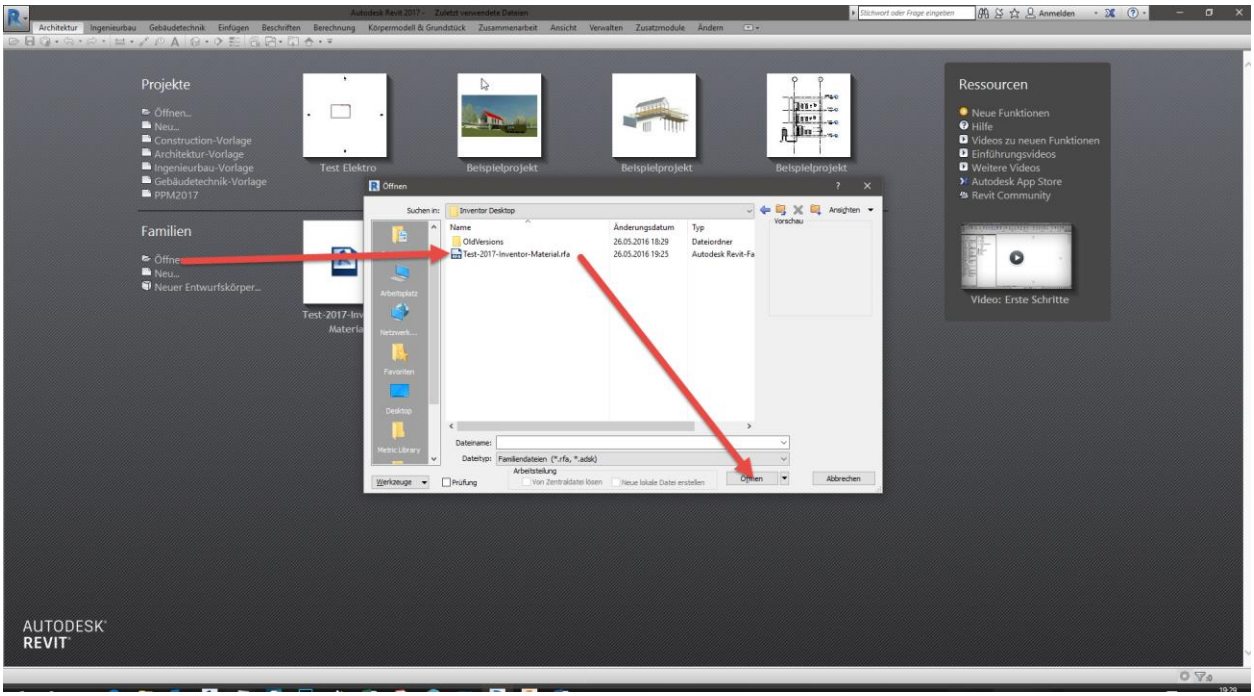


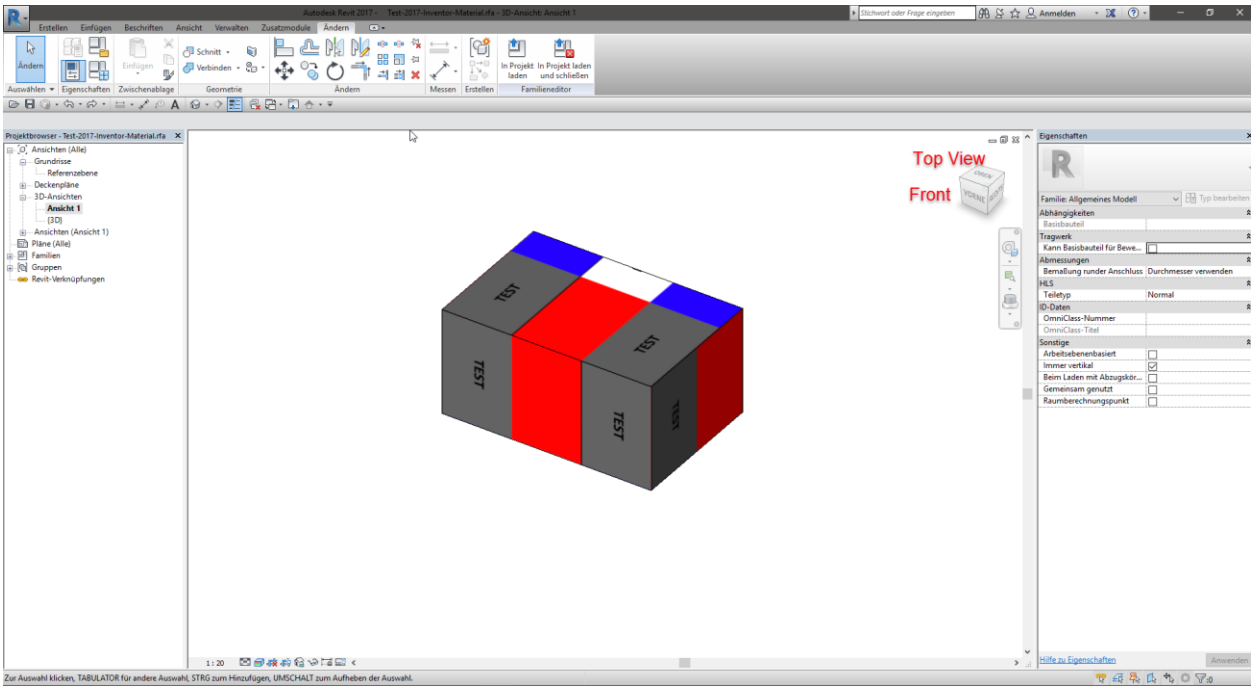




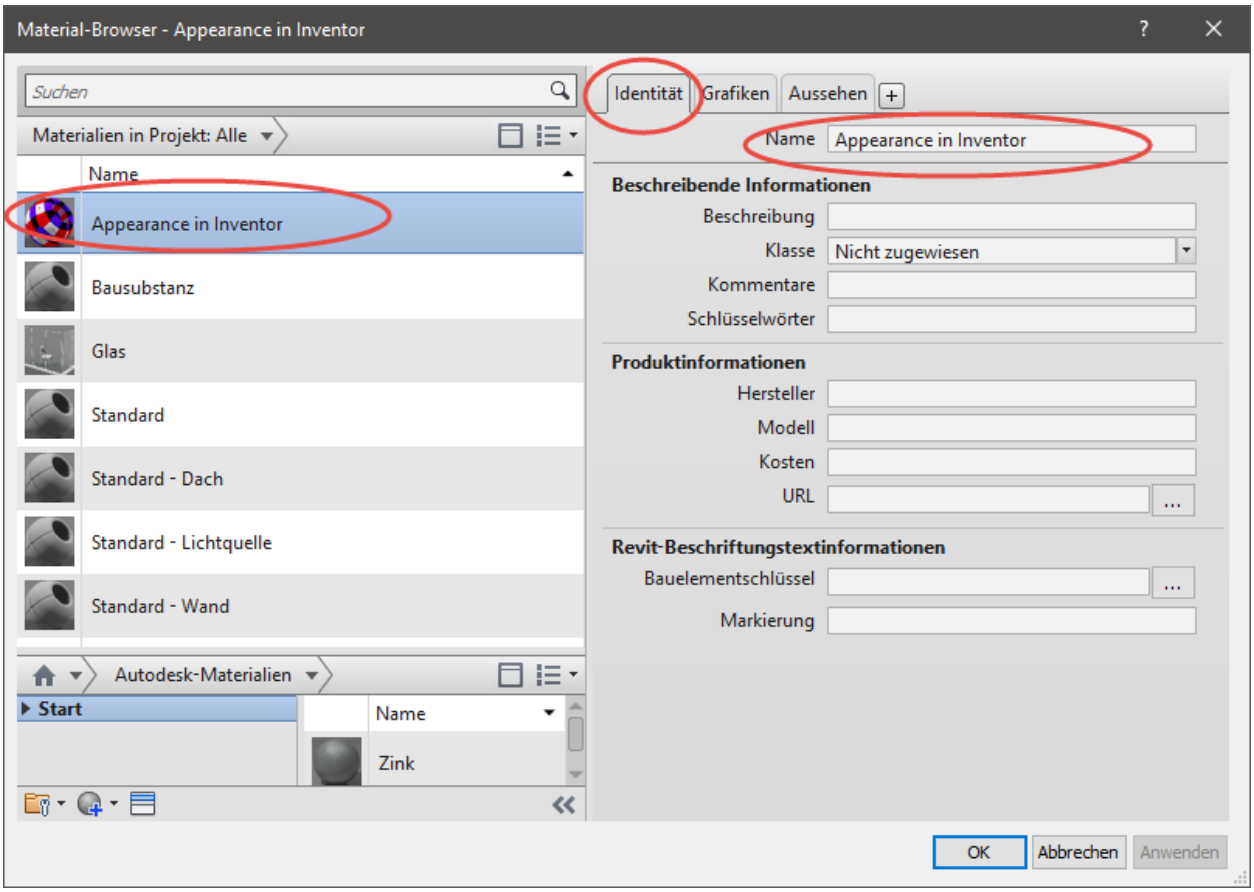
Part saved as ***Test-2017-Inventor-Material.rfa.***

6 OPEN THE RFA-FILE WITH REVIT 2017



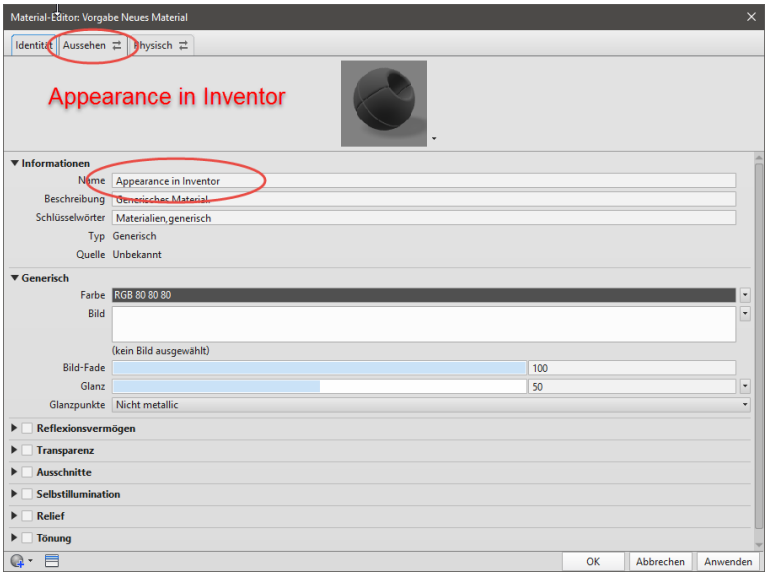


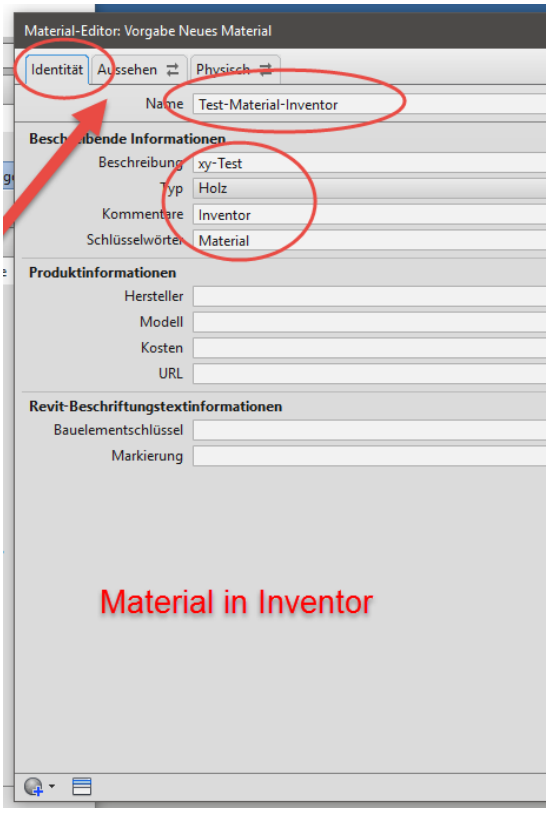
Material-Map is rotated by 90°

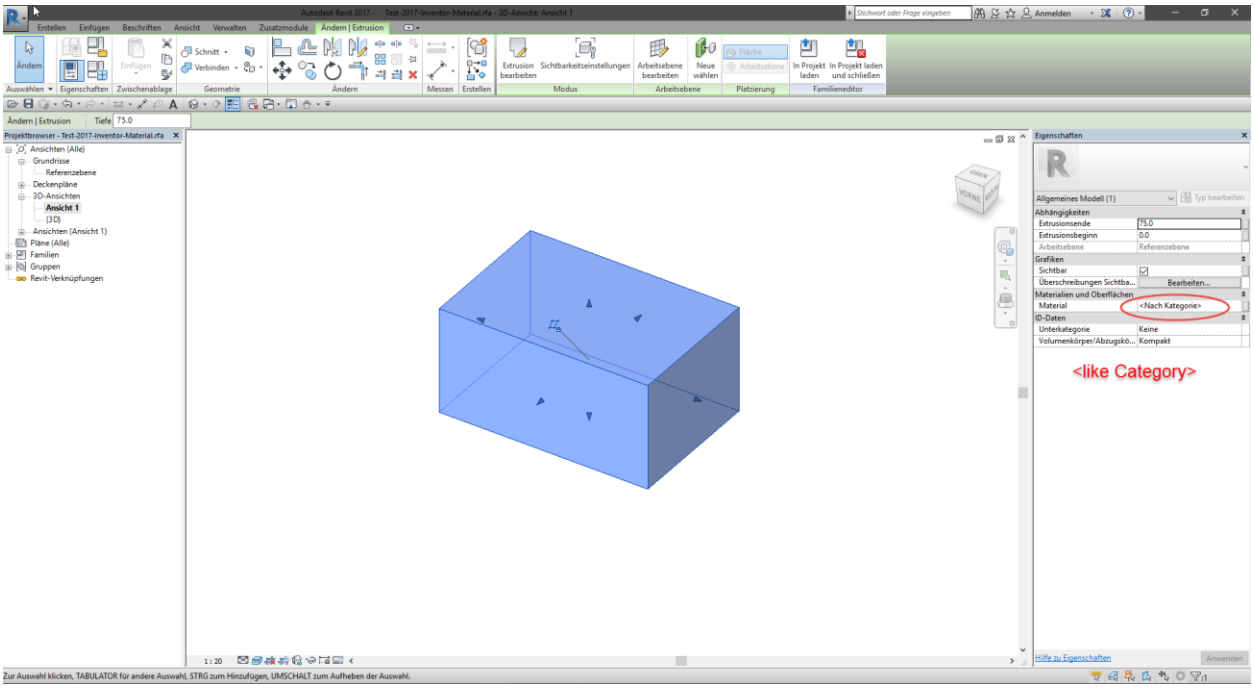


Wrong Material Name

(Remember: ***This is the Name of the Appearance and not the Material Name given in Inventor!!!)***

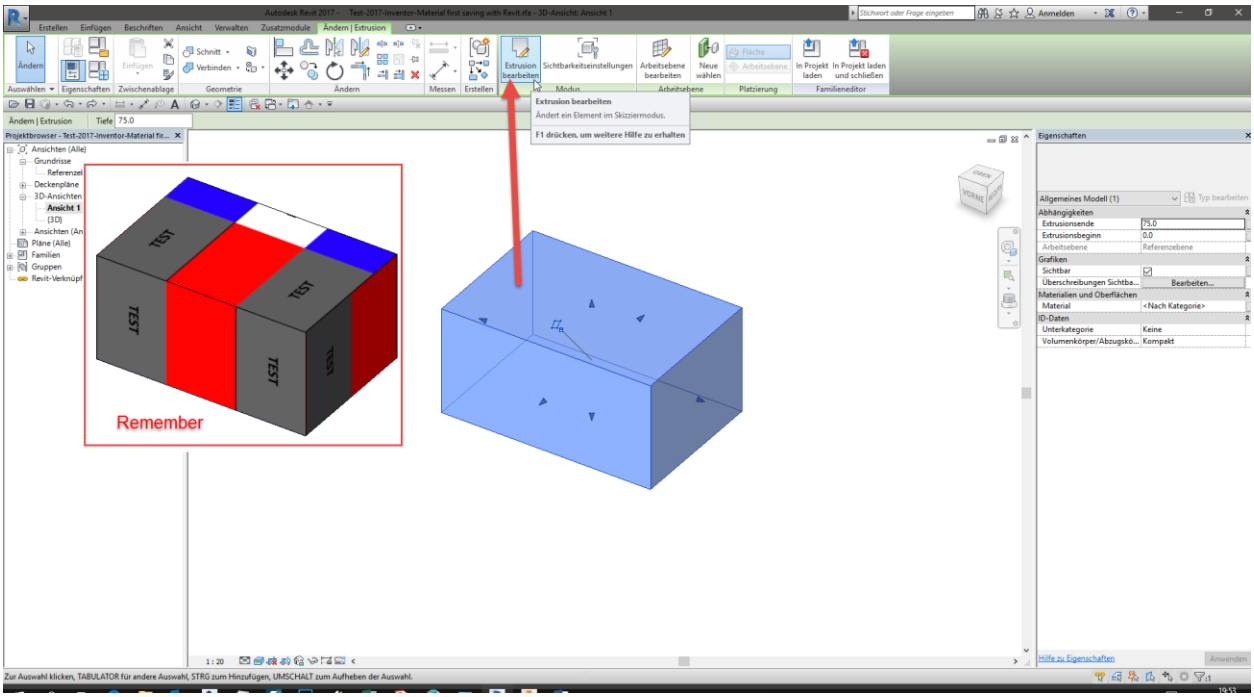




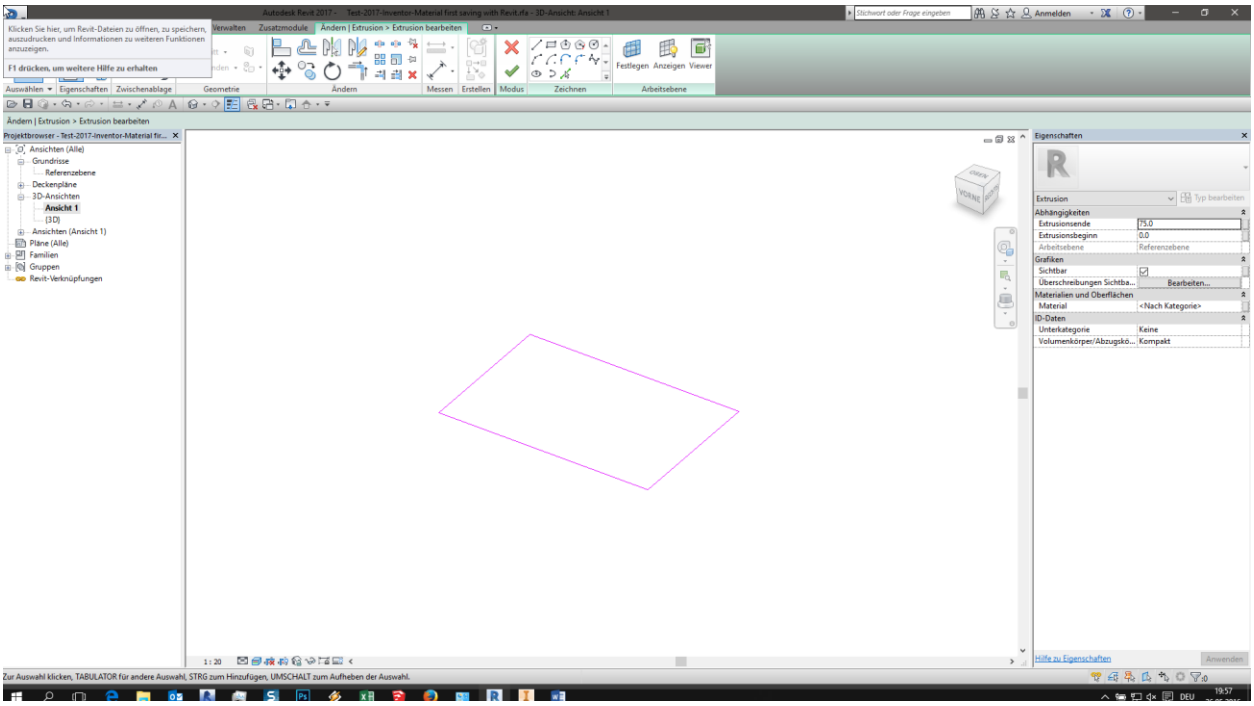


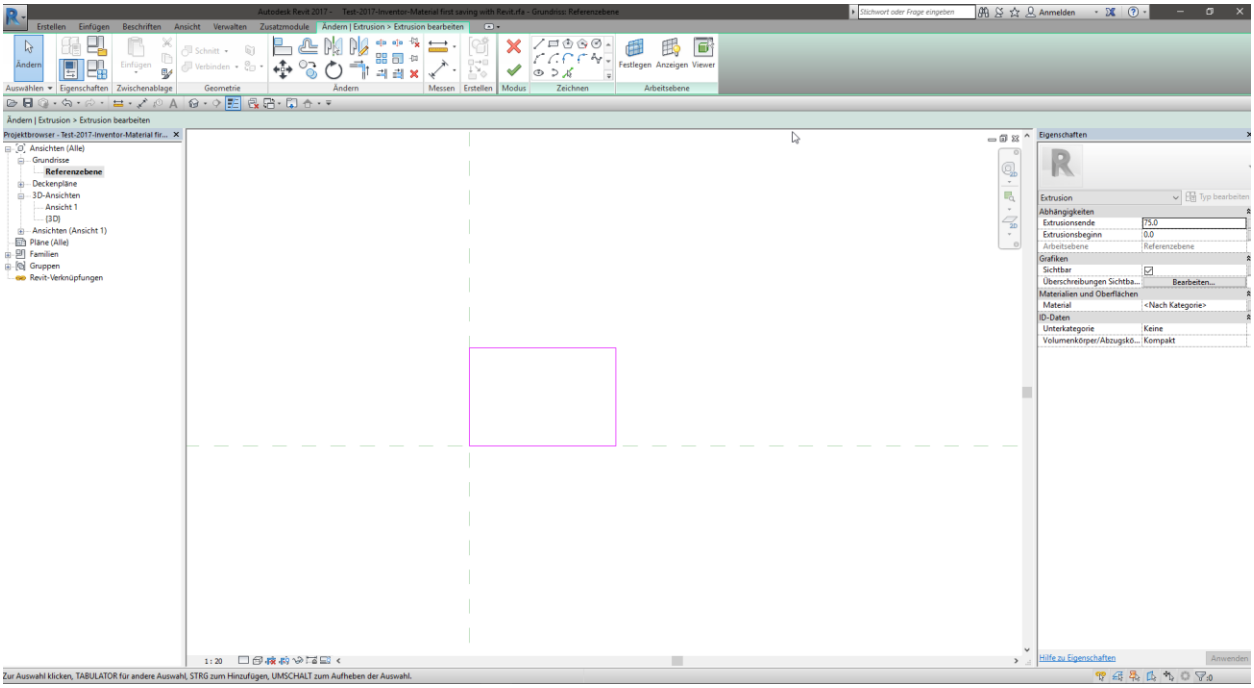
I wonder again: A Material is shown but no Material is link to the Extrusion or Body

Now I've saved this File as ***Test-2017-Inventor-Material first saving with Revit.rfa***

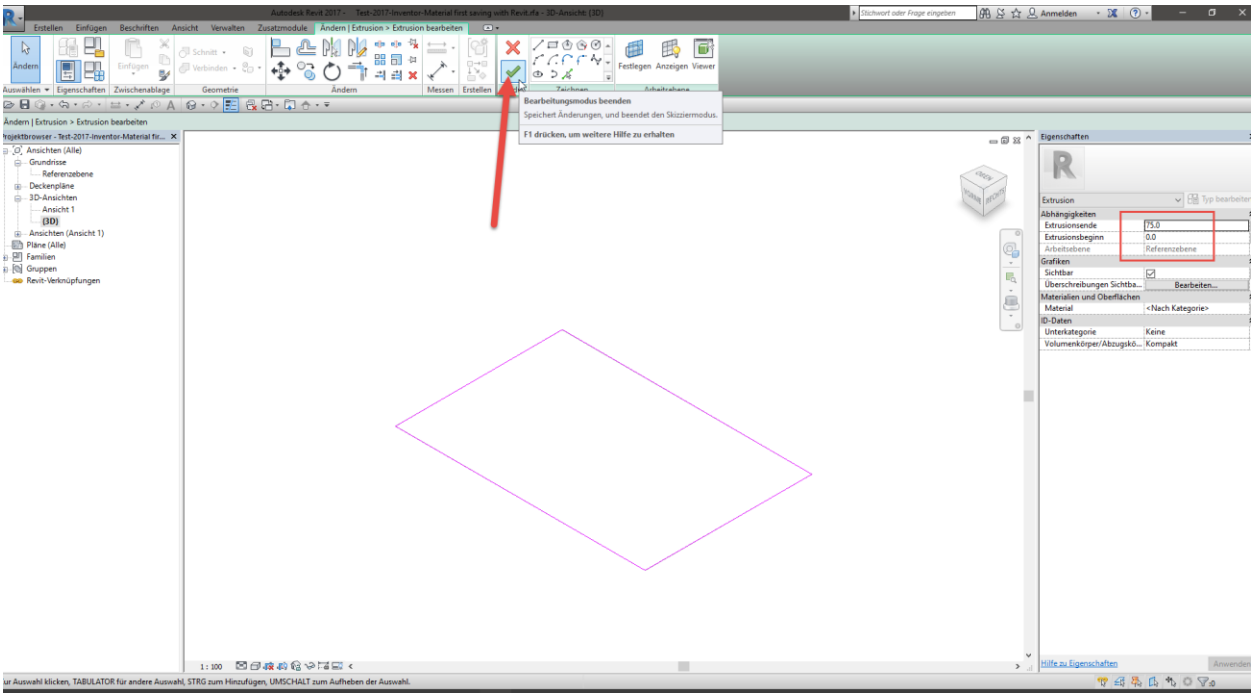


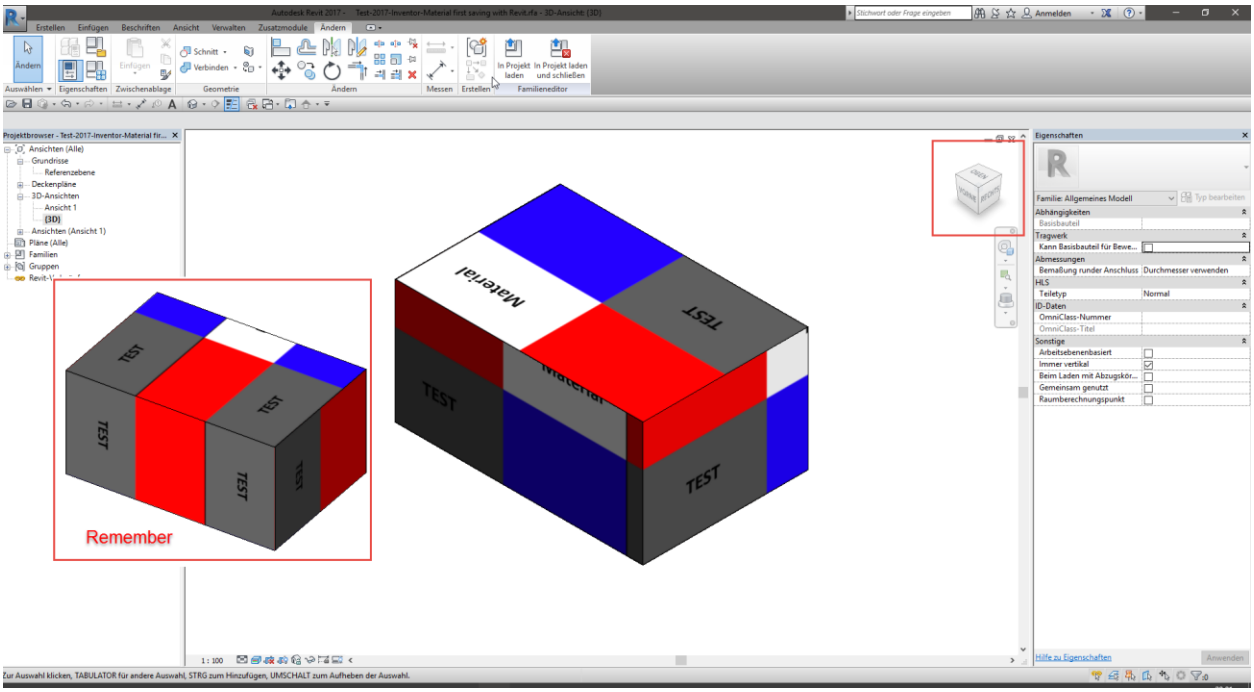
I open the Extrusion





Sketch is on 0,0. That’s fine ;)

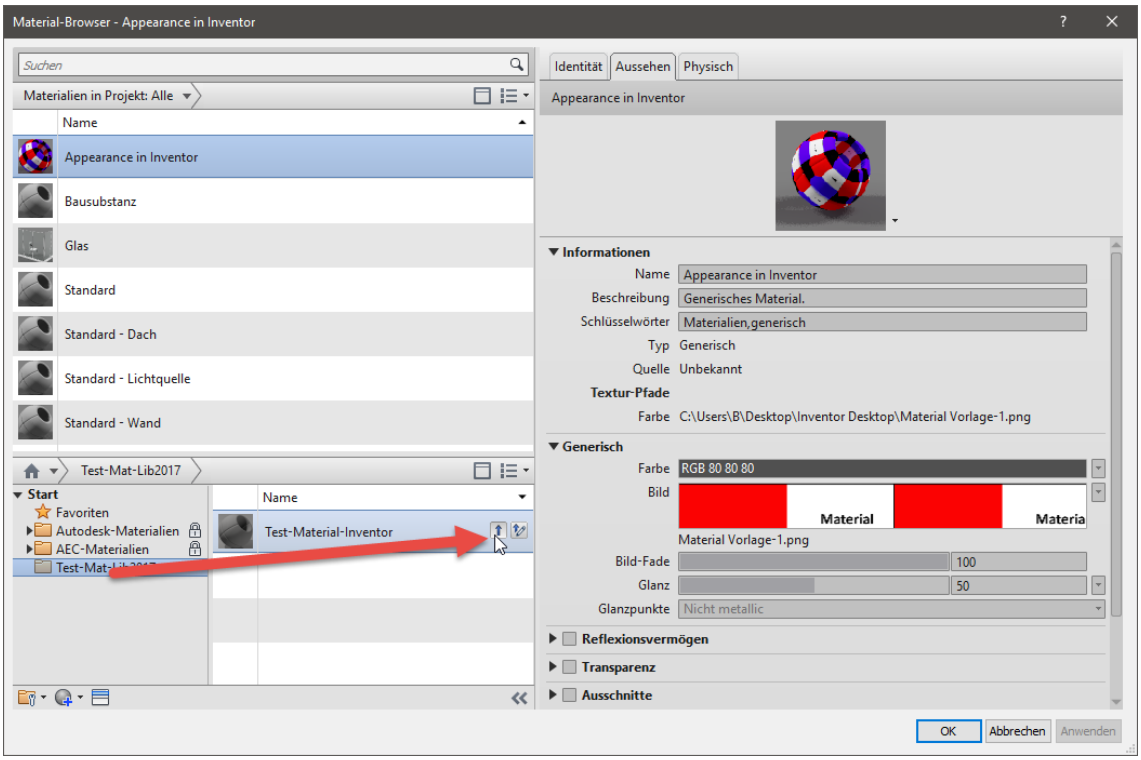


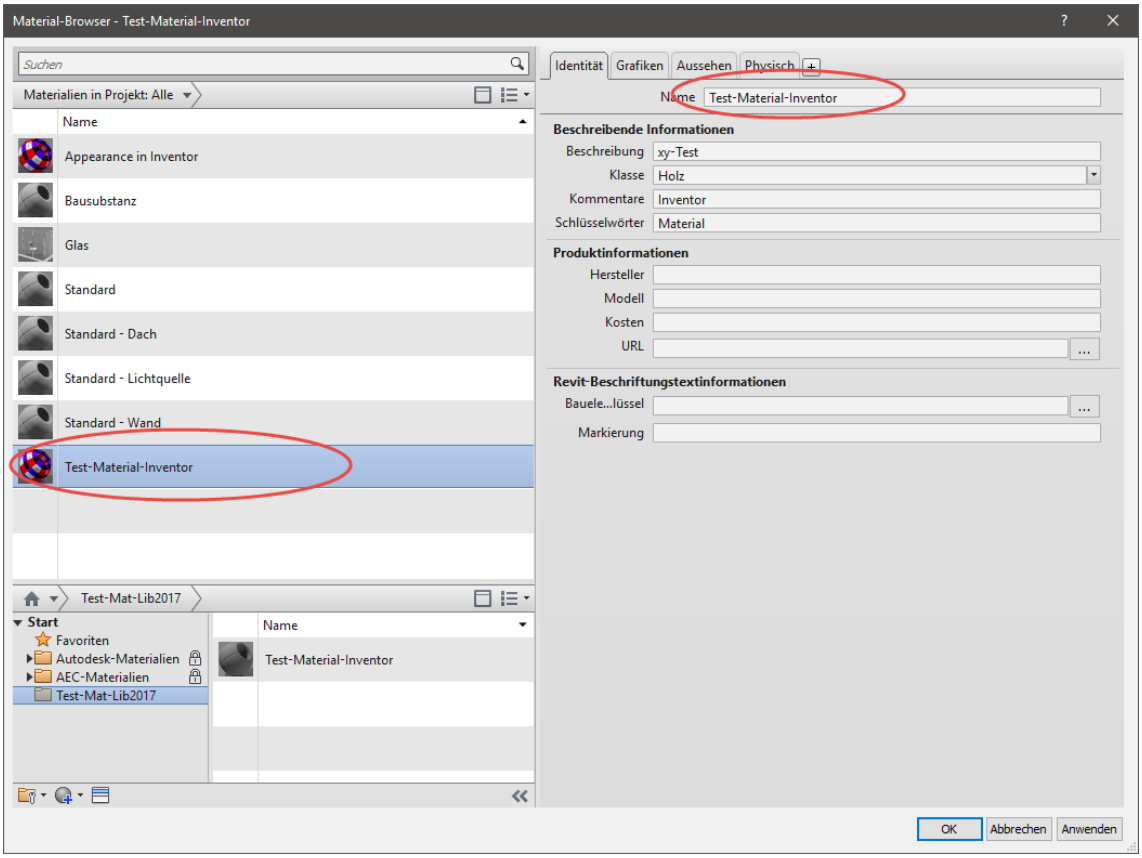


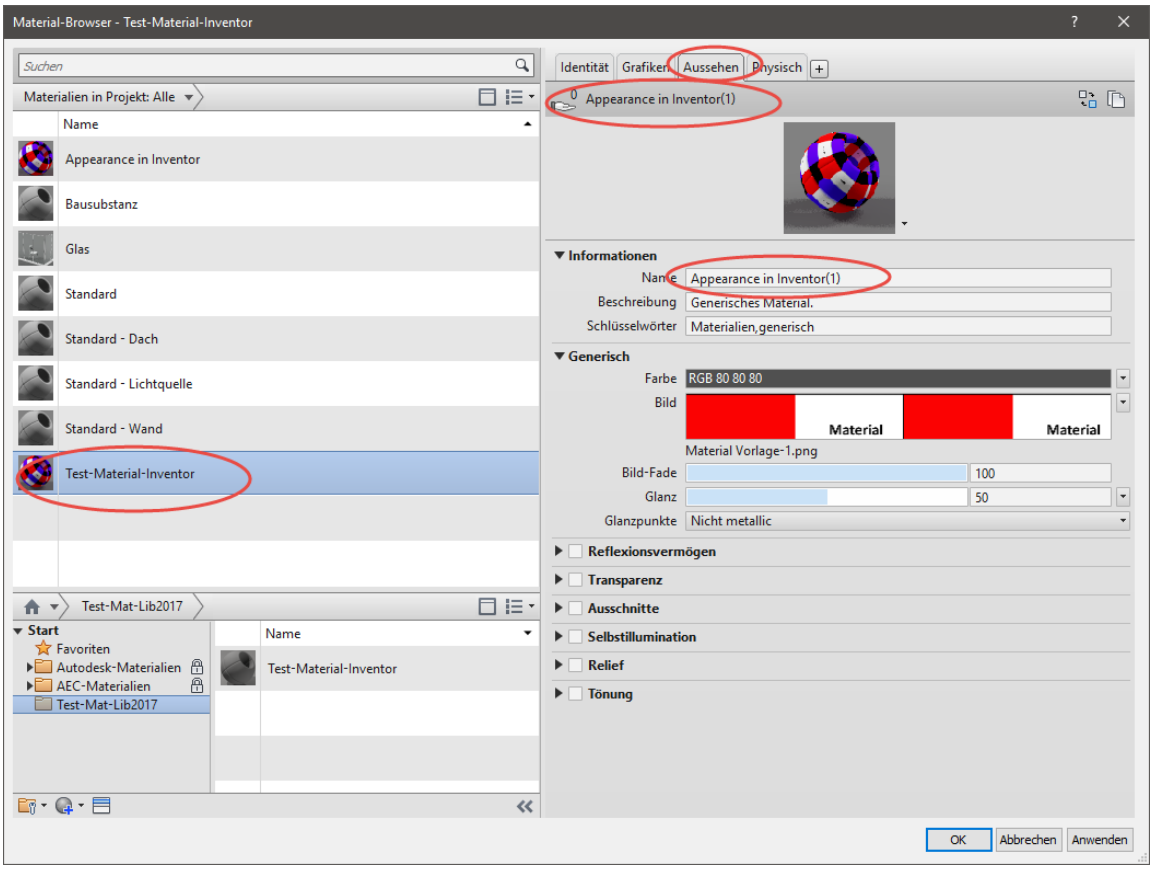
What's that ? The Map is rotated again. But in the wrong direction by 180°

Now saved as ***Test-2017-Inventor-Material second saving with Revit.rfa***

7 IMPORT MATERIAL FROM LIBRARY

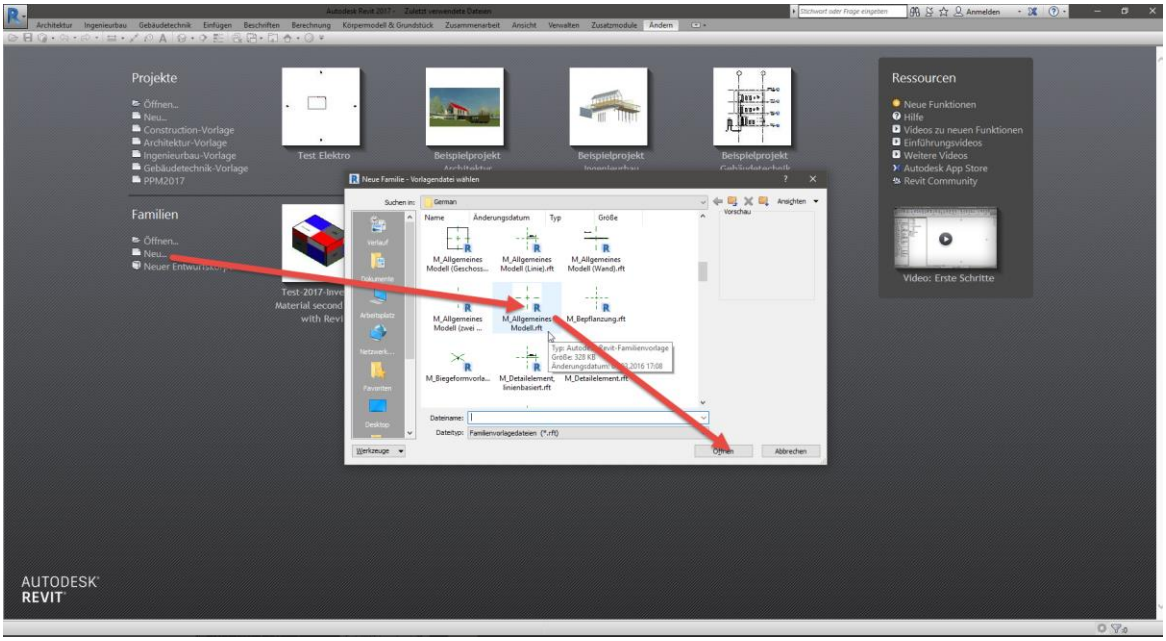


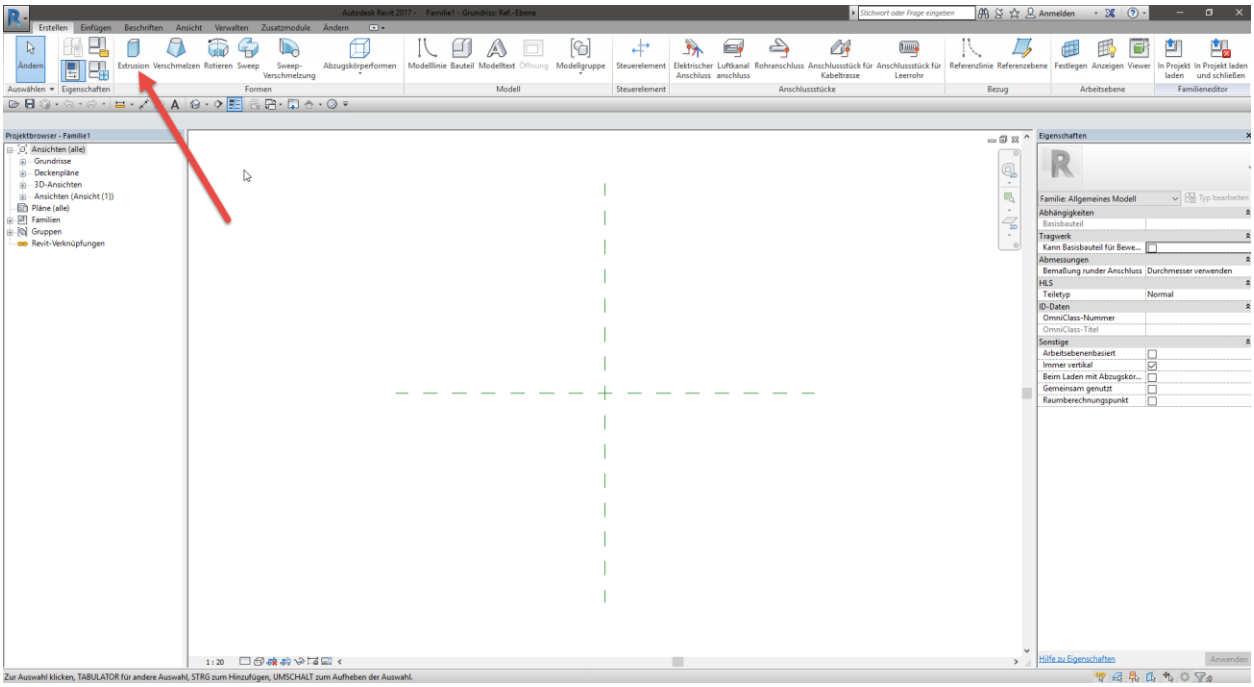


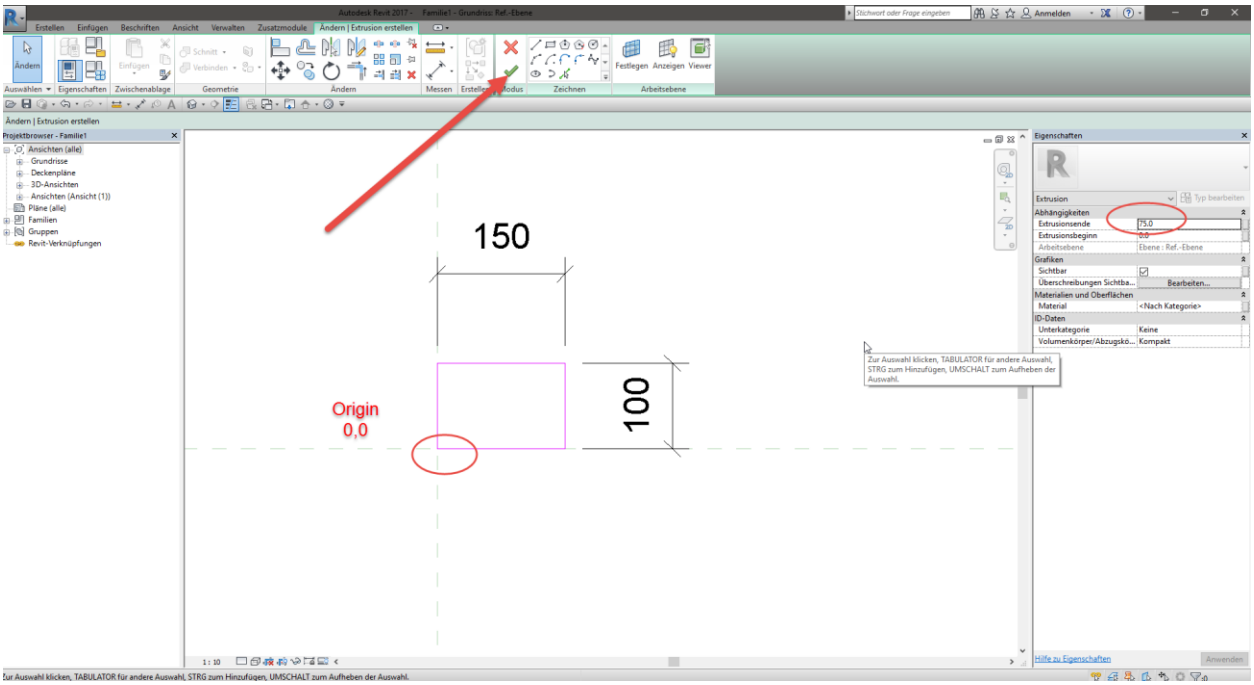


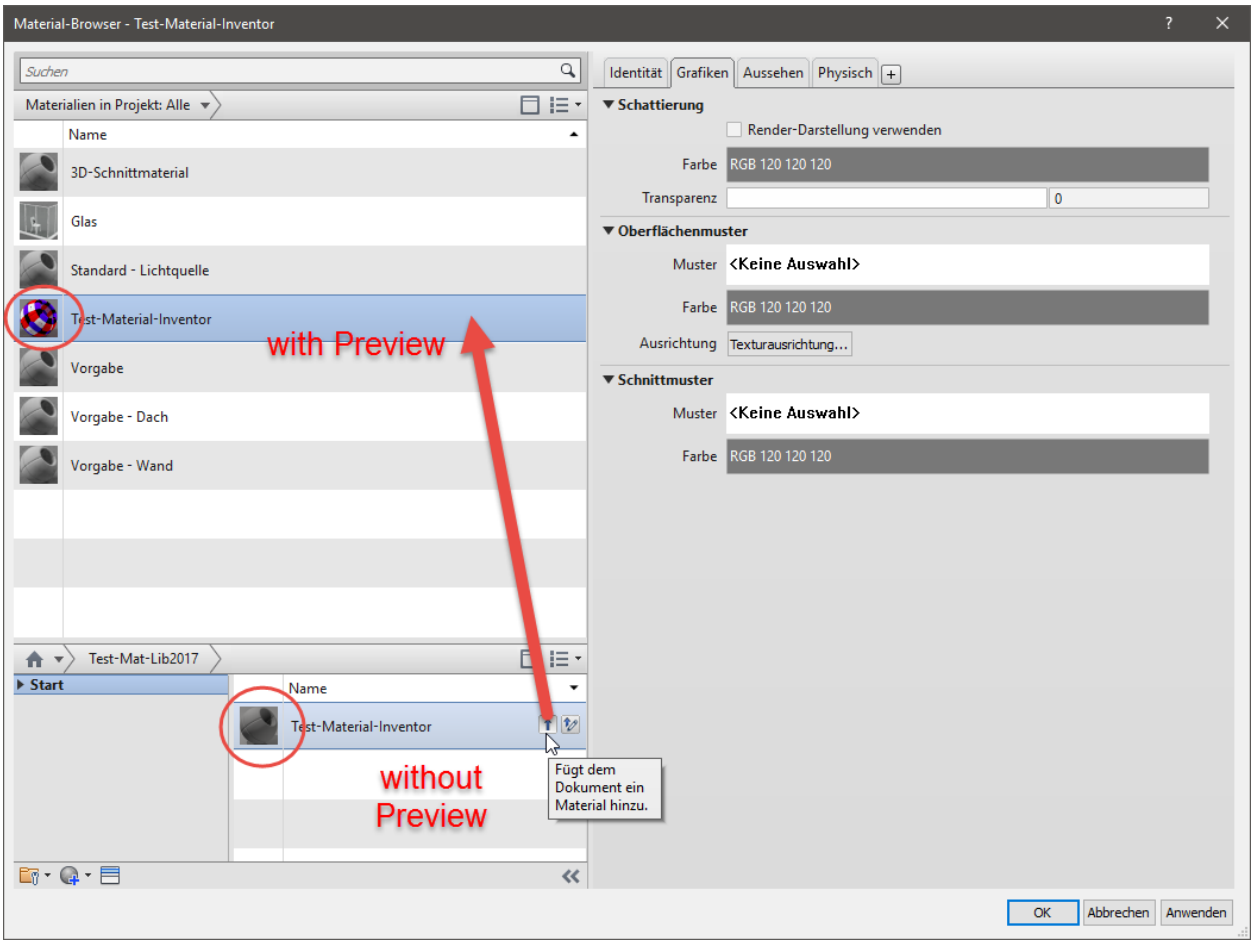
Now both Materials are placed in the browser. But the Appearance of the Inventor Material is duplicated !

8 New Revit Family with Inventor Material



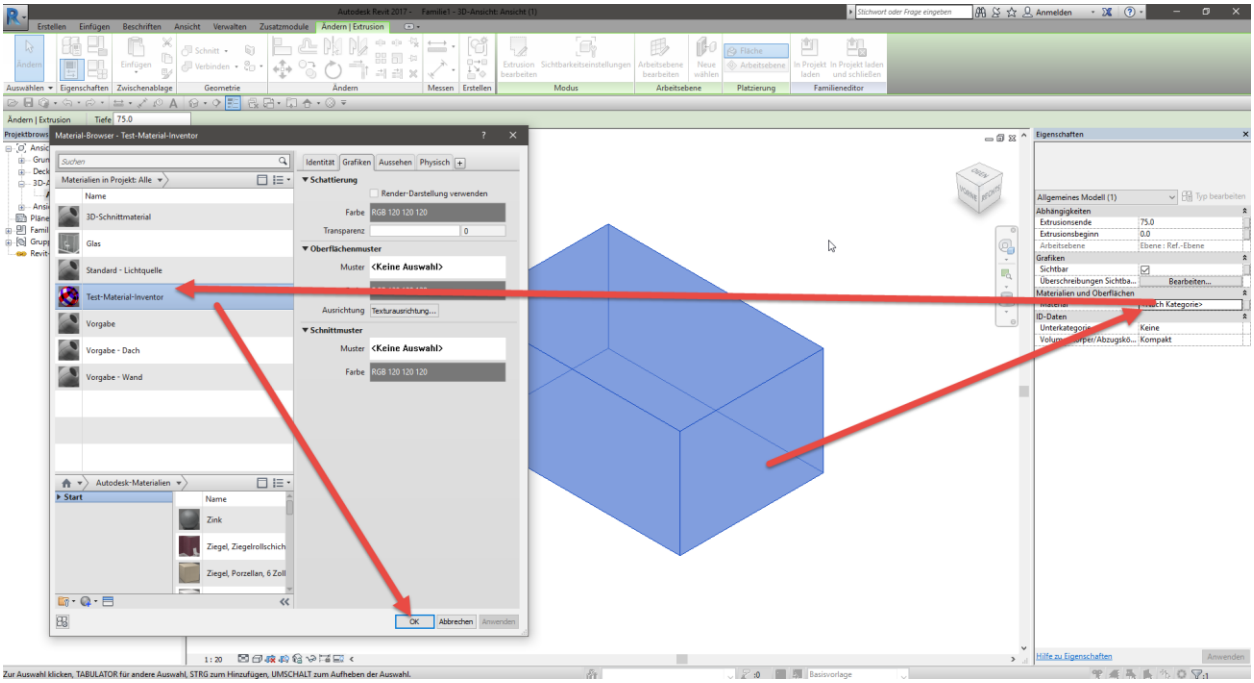

Erstellen
Einfügen
Beschriften
Ansicht
Verwalten
Zusatzmodule
Ändern
Extrusion
Verschmelzen
Rotieren
Sweep
Modellinie
Bauteil
Modelltext
Modellgruppe
Steuerelement
Projektbrowser - Familie1
Ansichten (alle)
Grundrisse
Deckenpläne
3D-Ansichten
Pläne (alle)
Familien
Gruppen
Revit-Verknüpfungen
Eigenschaften
Familie: Allgemeines Modell
Zur Auswahl klicken, TABULATOR für andere Auswahl, STRG zum Hinzufügen, UMSCHALT zum Aufheben der Auswahl.


Ändern | Extrusion erstellen
150
100
Origin
0,0
Extrusion
Extrusionsende
75.0
Extrusionsbeginn
0.0
Zur Auswahl klicken, TABULATOR für andere Auswahl, STRG zum Hinzufügen, UMSCHALT zum Aufheben der Auswahl.

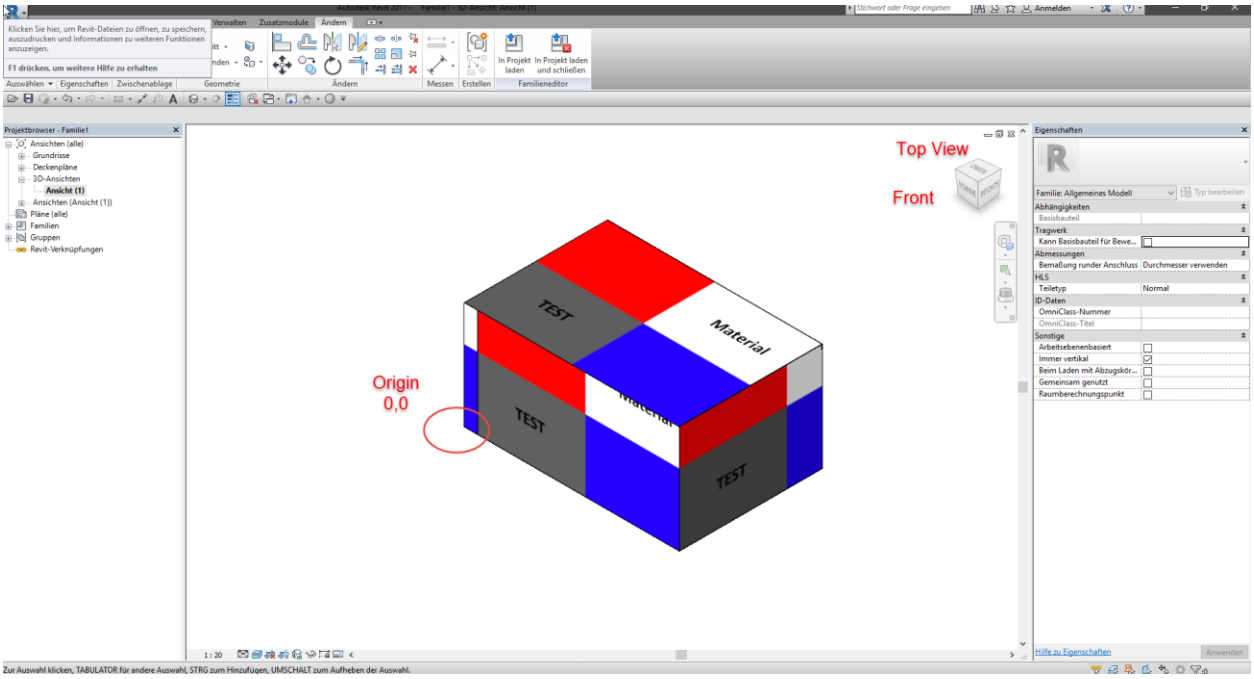


Import Material from Library.

Note: In Library no Preview, in Project File Preview

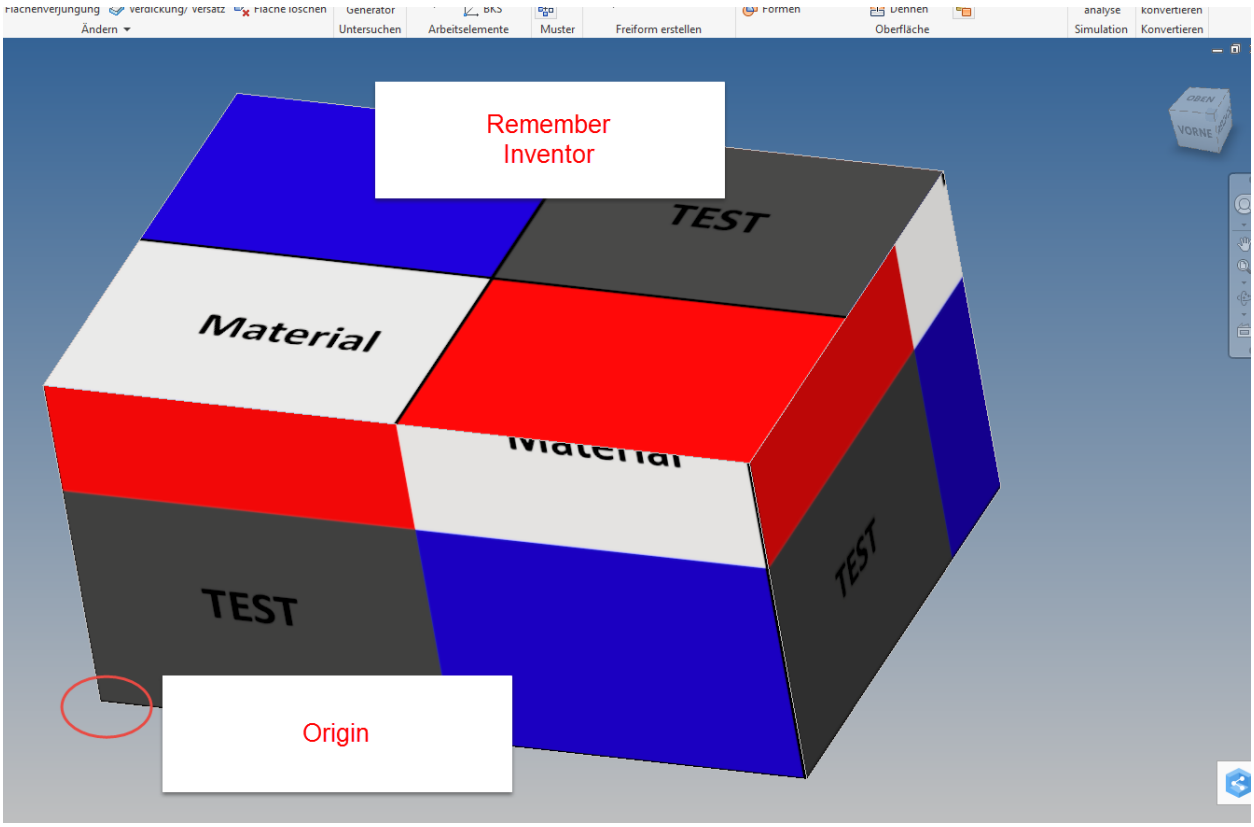


Add Material to Extrusion



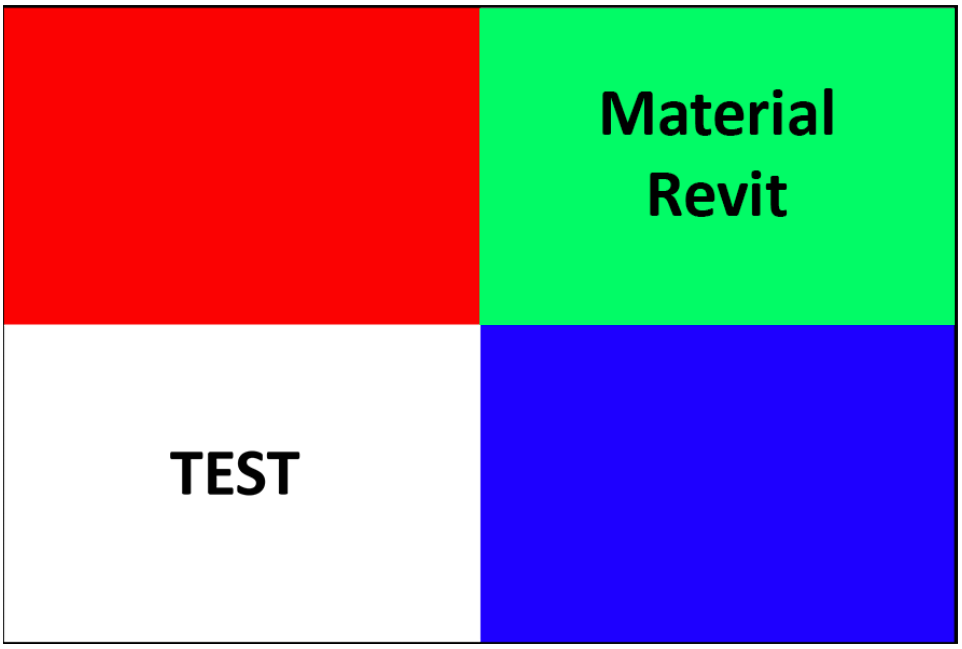
Now in Top View the Material starts from the Origin of the Sketch.
(Saved as Test-2017-Inventor-Material new Family.rfa)

Remember how its look like in Inventor:

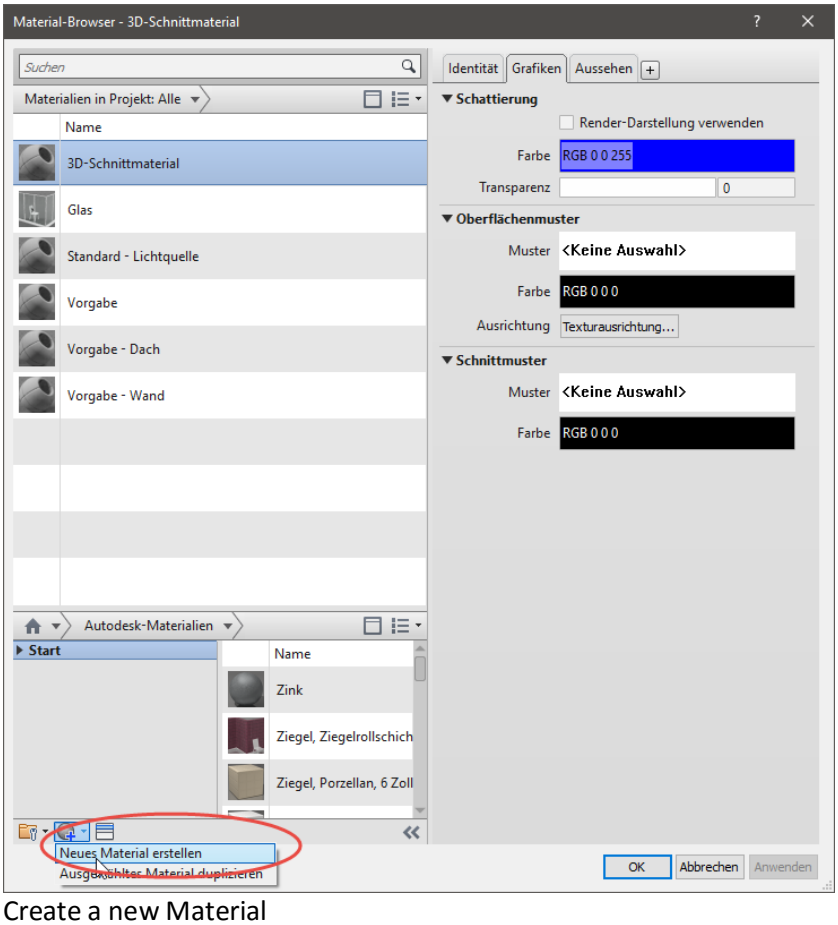


9 NEW MATERIAL IN REVIT

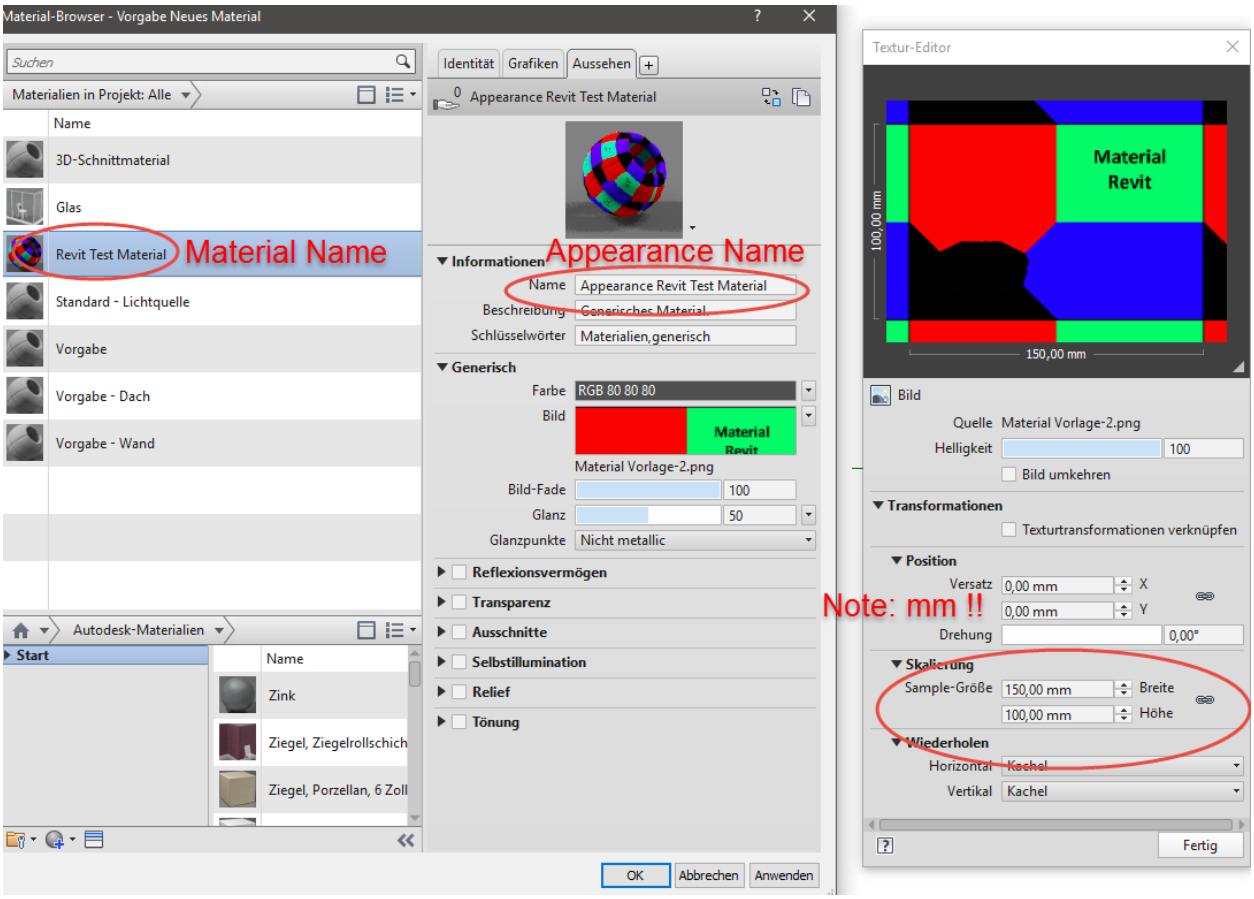
Create a new Material-Map in Photoshop



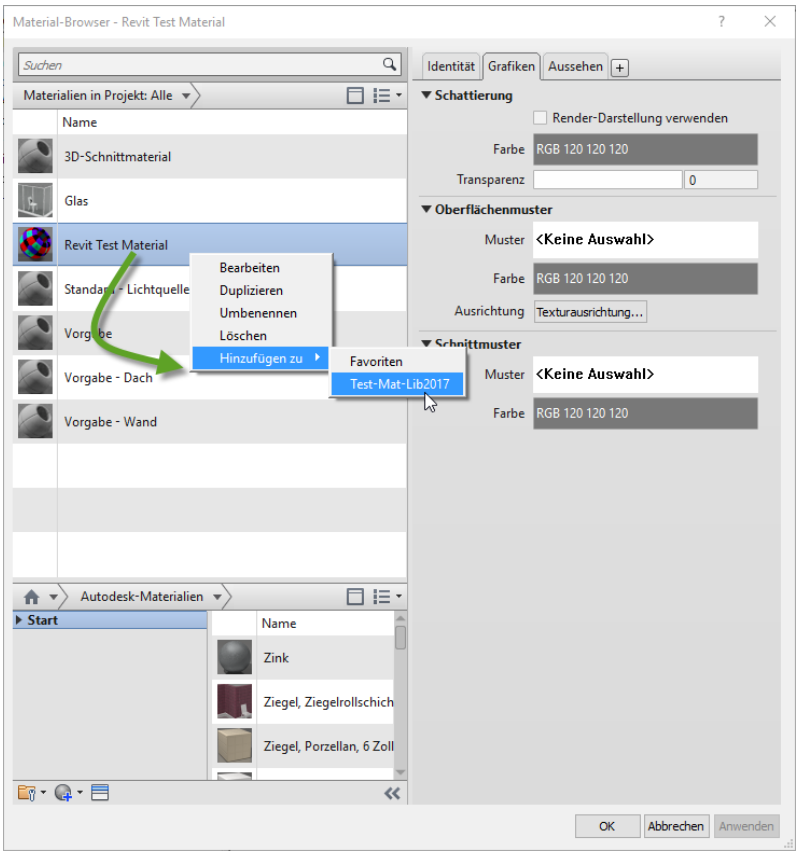
PNG 150x100mm, 150DPI Photoshop
Start a new Family in Revit



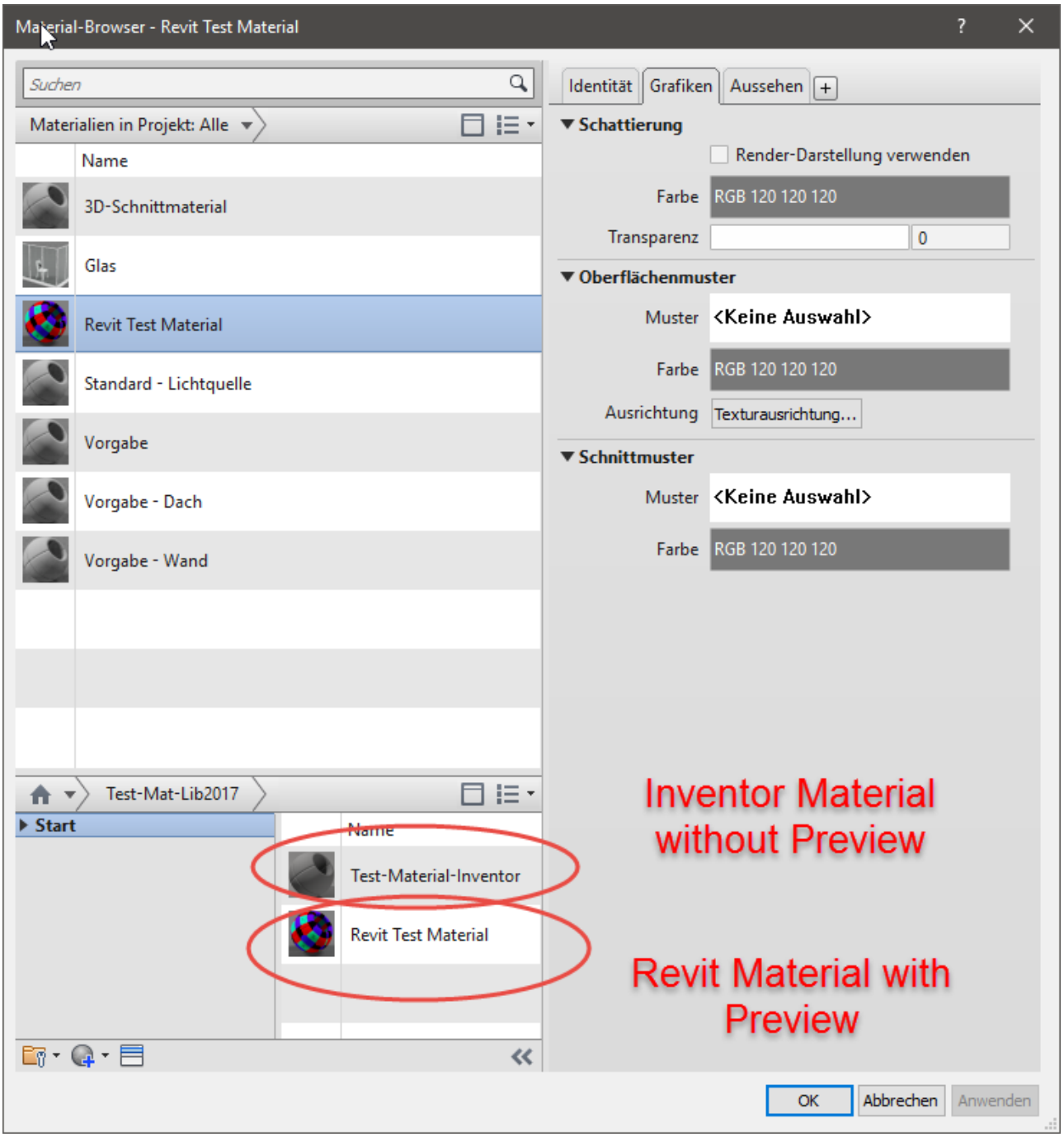
Create a new Material



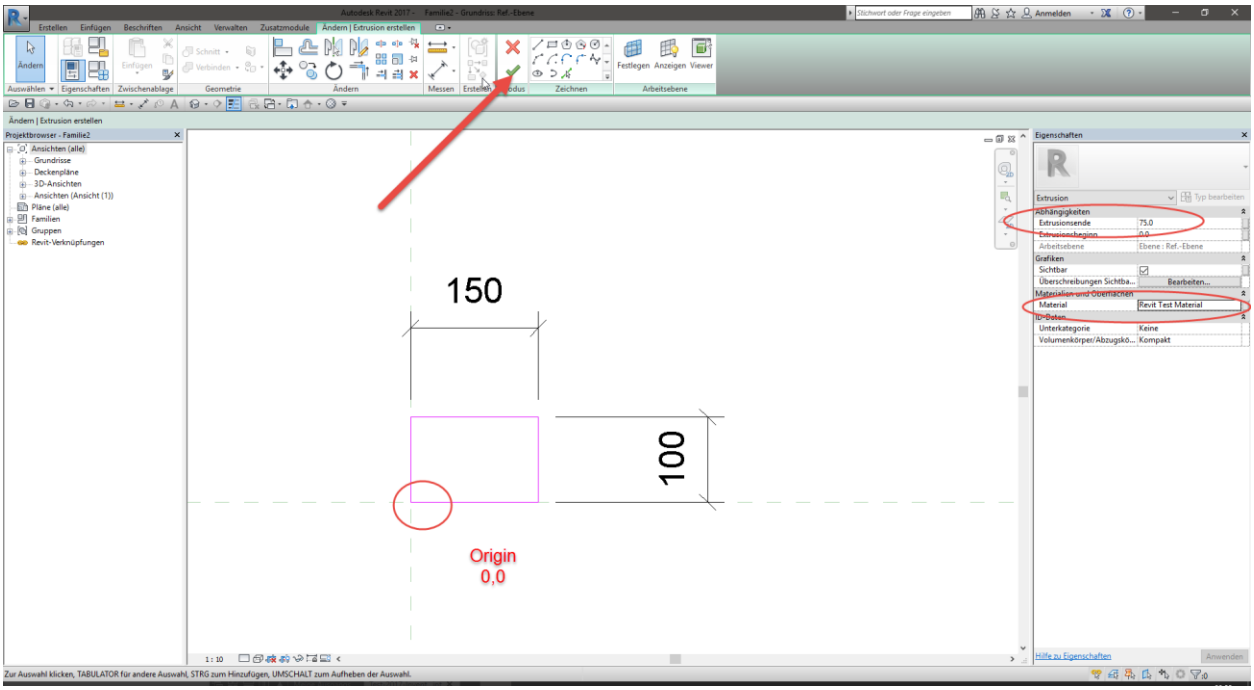
Note: Map-Size is mm instead of cm in Inventor !



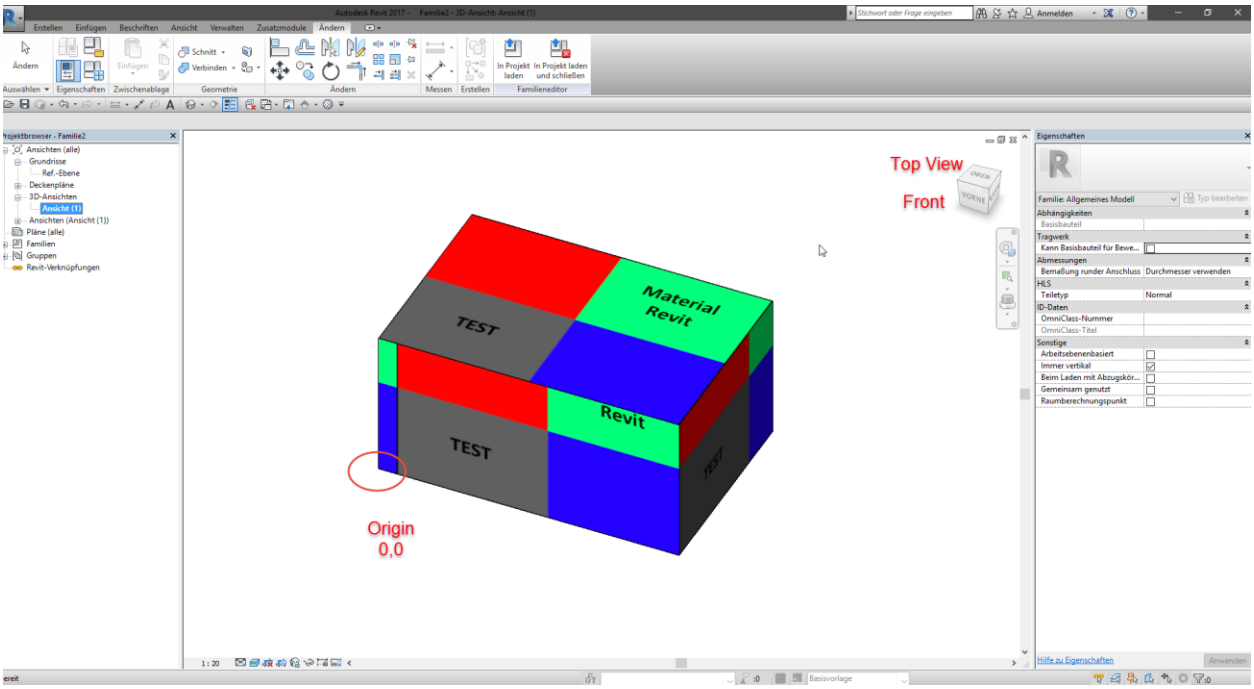
Export to Mat-Library


Material-Browser - Revit Test Material
Suchen
Materialien in Projekt: Alle
Name
3D-Schnittmaterial
Glas
Revit Test Material
Standard - Lichtquelle
Vorgabe
Vorgabe - Dach
Vorgabe - Wand
Test-Mat-Lib2017
Start
Name
Test-Material-Inventor
Revit Test Material
Identität
Grafiken
Aussehen
Schattierung
Render-Darstellung verwenden
Farbe
RGB 120 120 120
Transparenz
0
Oberflächenmuster
Muster
<Keine Auswahl>
Farbe
RGB 120 120 120
Ausrichtung
Texturausrichtung...
Schnittmuster
Muster
<Keine Auswahl>
Farbe
RGB 120 120 120
Inventor Material without Preview
Revit Material with Preview
OK
Abbrechen
Anwenden

10 FAMILY WITH NEW MATERIAL



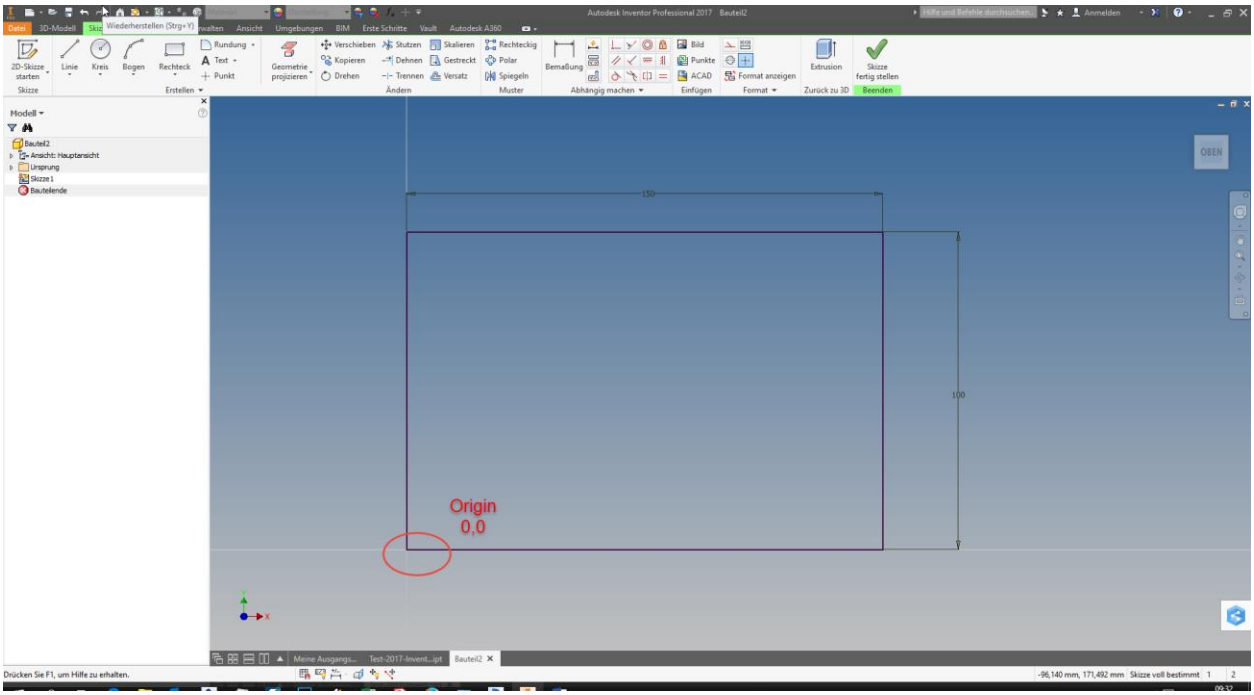
Starting a Sketch for Extrusion on 0,0 on Reference Level View, add Material

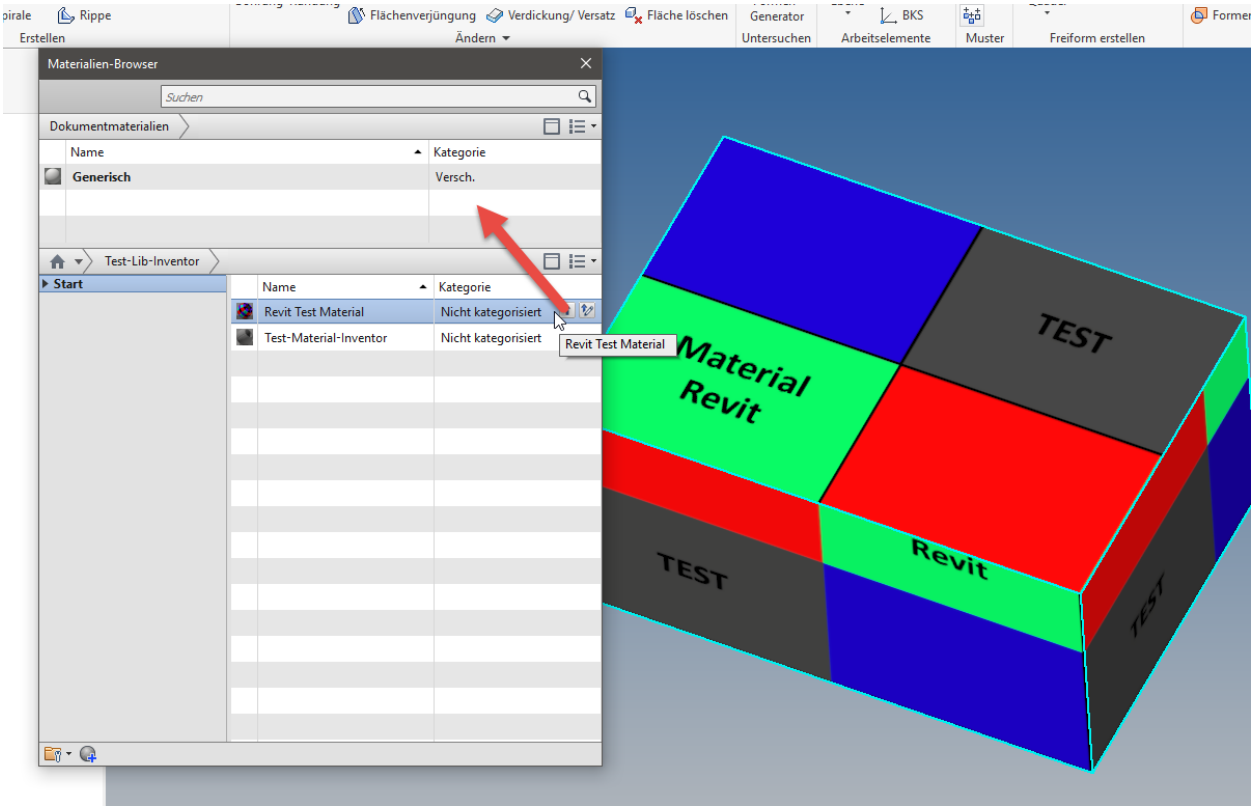


Everything is fine.

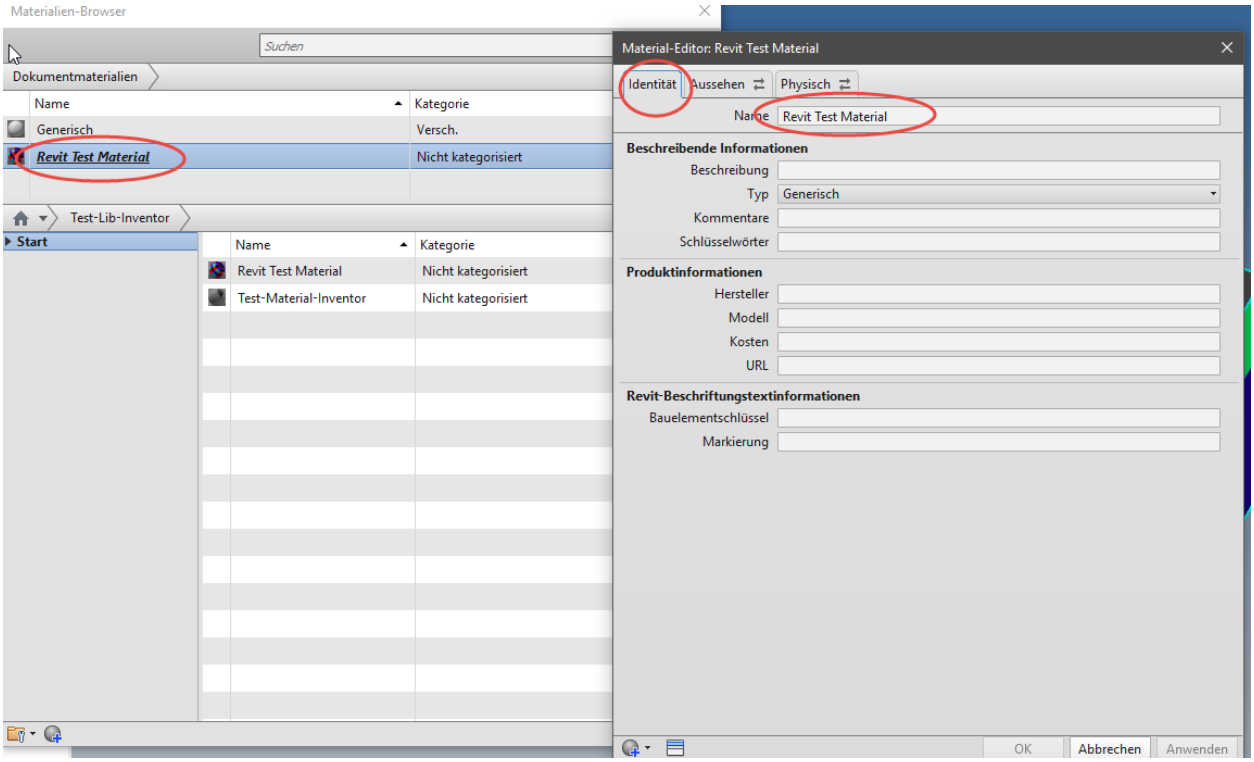
Saved as ***Test-2017-Revit-Material.rfa***

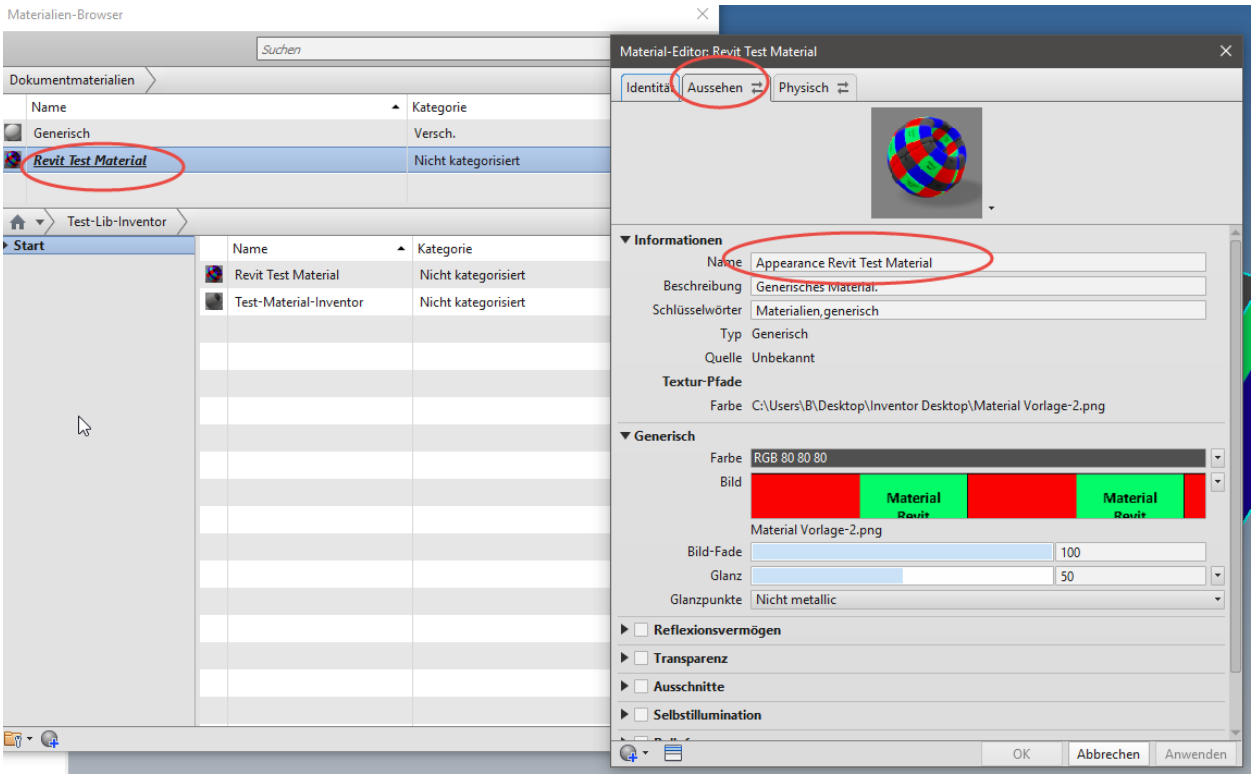
11 New Inventor Part with Revit Material

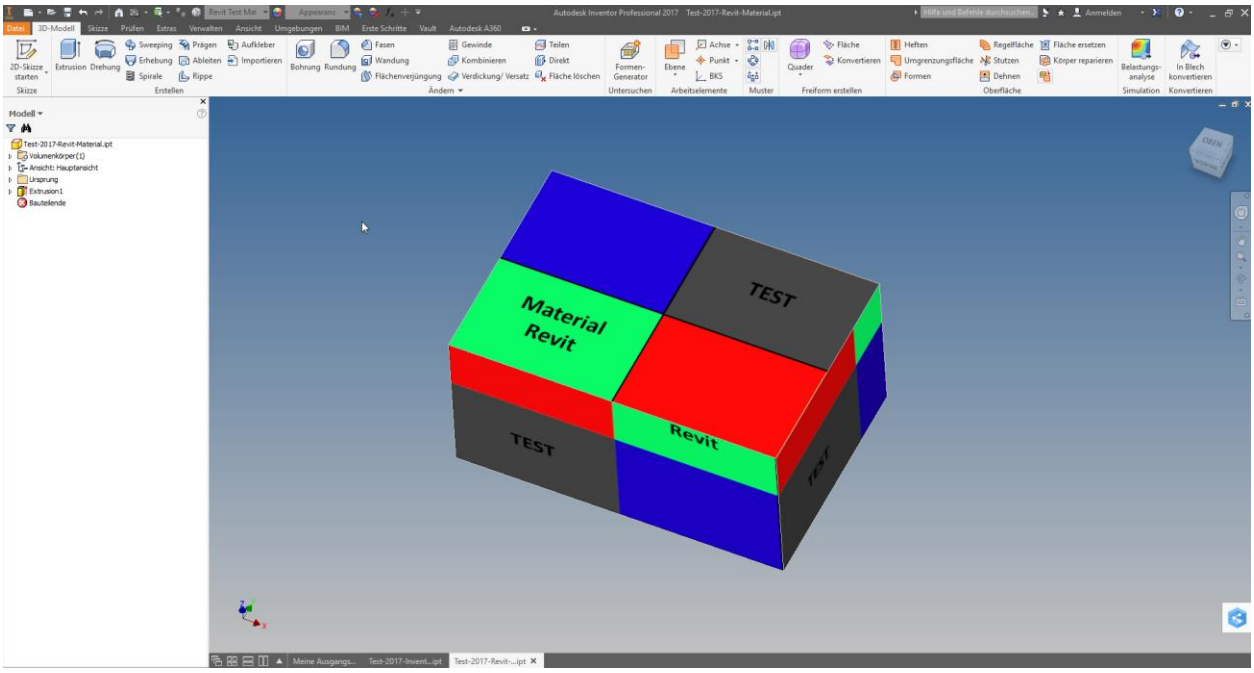




Add the Material to the Part, ignore “No physical Material”

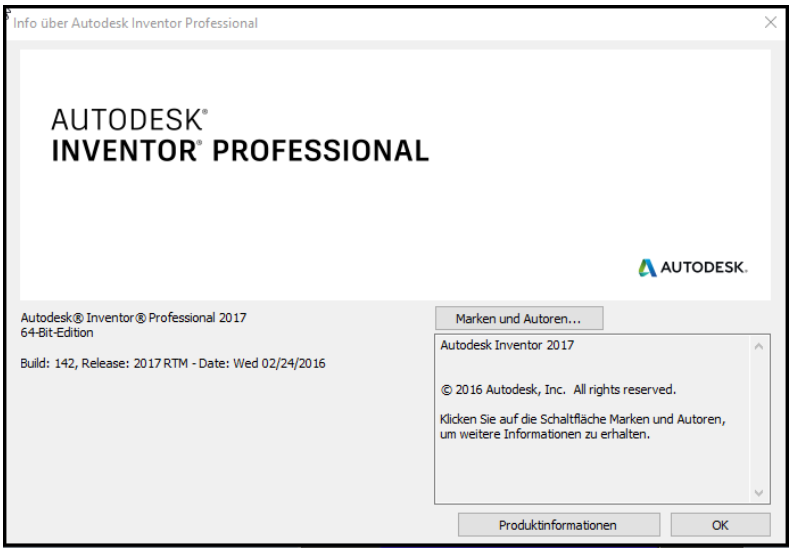

Materialien-Browser
Suchen
Dokumentmaterialien
Name
Kategorie
Generisch
Versch.
Revit Test Material
Nicht kategorisiert
Test-Lib-Inventor
Start
Name
Kategorie
Revit Test Material
Nicht kategorisiert
Test-Material-Inventor
Nicht kategorisiert
Material-Editor: Revit Test Material
Identität
Aussehen
Physisch
Name
Revit Test Material
Beschreibende Informationen
Beschreibung
Typ
Generisch
Kommentare
Schlüsselwörter
Produktinformationen
Hersteller
Modell
Kosten
URL
Revit-Beschriftungstextinformationen
Bauelementschlüssel
Markierung
OK
Abbrechen
Anwenden

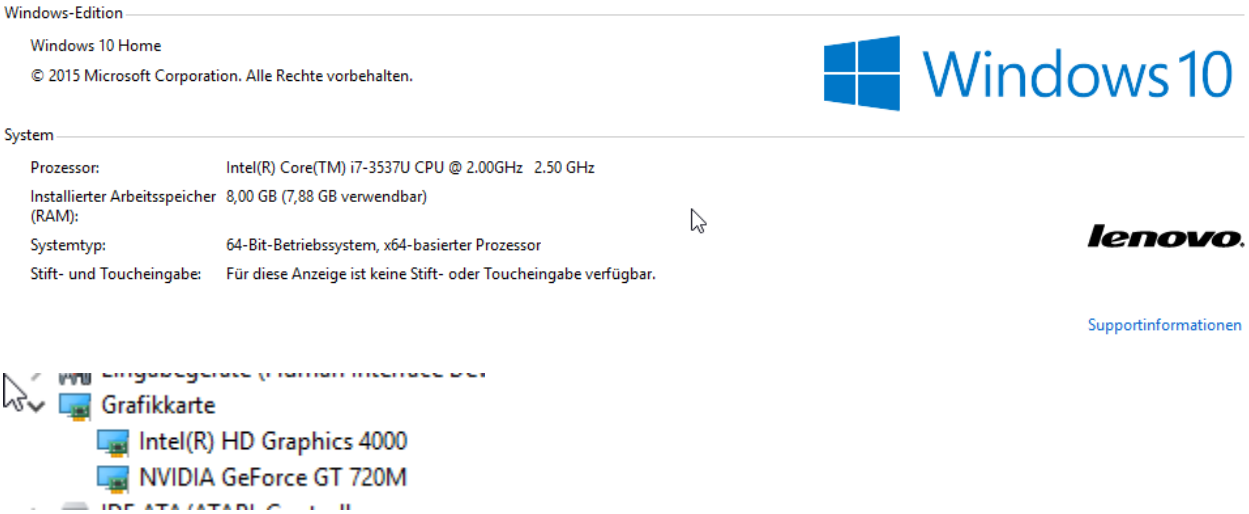
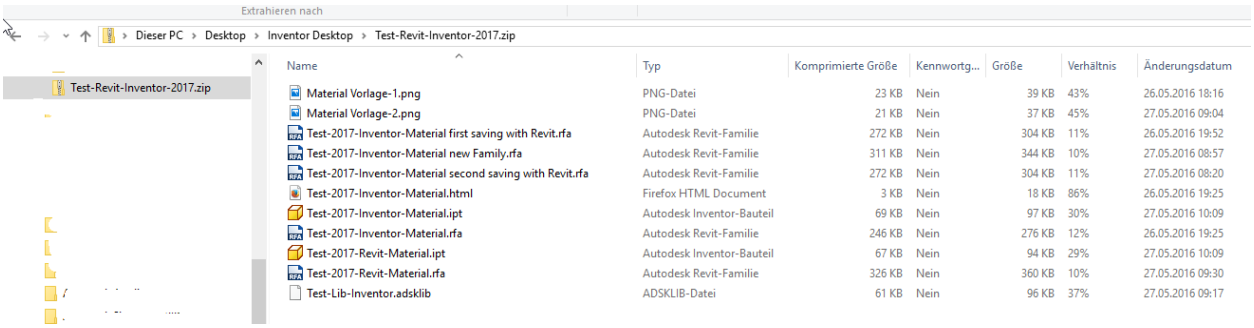

Materialien-Browser
Suchen
Dokumentmaterialien
Name
Kategorie
Generisch
Versch.
Revit Test Material
Nicht kategorisiert
Test-Lib-Inventor
Start
Name
Kategorie
Revit Test Material
Nicht kategorisiert
Test-Material-Inventor
Nicht kategorisiert
Material-Editor: Revit Test Material
Identität
Aussehen
Physisch
Informationen
Name
Appearance Revit Test Material
Beschreibung
Generisches Material.
Schlüsselwörter
Materialien,generisch
Typ
Generisch
Quelle
Unbekannt
Textur-Pfade
Farbe
C:\Users\B\Desktop\Inventor Desktop\Material Vorlage-2.png
Generisch
Farbe
RGB 80 80 80
Bild
Material
Material
Material Vorlage-2.png
Bild-Fade
100
Glanz
50
Glanzpunkte
Nicht metallic
Reflexionsvermögen
Transparenz
Ausschnitte
Selbstillumination
OK
Abbrechen
Anwenden



Saved as ***Test-2017-Revit-Material.ipt***

12 System Information





13 SUBMITTED FILES