



NVIDIA vMaterials SOLIDWORKS Visualize

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NVIDIA vMaterials – SOLIDWORKS Visualize

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1 Introduction

This document guides you through the steps that are necessary to use vMaterials 2 in SOLIDWORKS Visualize 2021 on Windows.

1.1 Prerequisites

- [Microsoft Windows 10](#)¹
- [SOLIDWORKS Visualize](#)²

1. <https://www.microsoft.com/en-us/windows/get-windows-10>

2. <https://www.solidworks.com/product/solidworks-visualize>

2 Installing vMaterials 2 and Material Exchange

1. Download the vMaterials 2 installer for your operating system (Windows, Linux, Mac) from <https://developer.nvidia.com/vmaterials>.
2. Run the vMaterials 2 installer.
 - 2.1. If you have not yet installed the NVIDIA Material Exchange package, you will be prompted to install it. In this case click Next.
 - 2.2. Accept the End User License Agreement for Material Exchange:

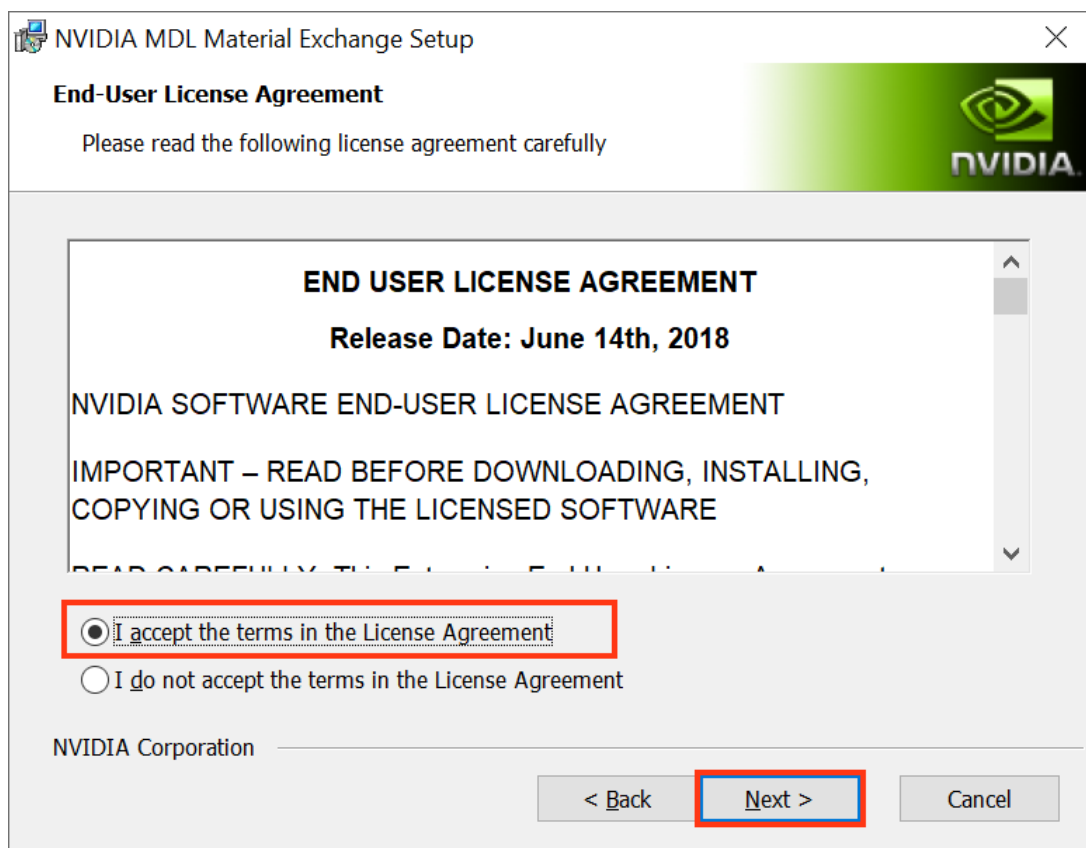


Fig. 2.1 – Accepting the End User License Agreement for Material Exchange

- 2.3. In the next dialog, you define the configuration of Material Exchange. Click Complete to choose a complete installation. Material Exchange will be installed in folder C:\Program Data\NVIDIA Corporation\mdl.

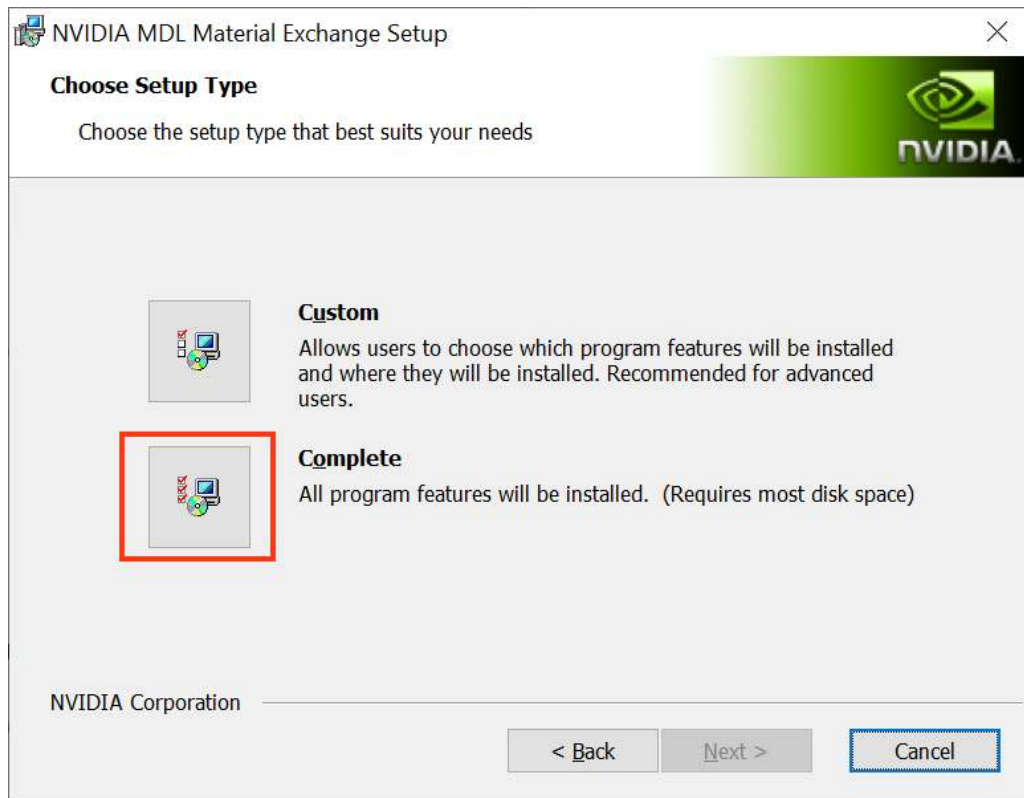


Fig. 2.2 – Choosing to install all program features for Material Exchange

2.4. In the next dialog, click Install to complete the Materials Exchange installation.

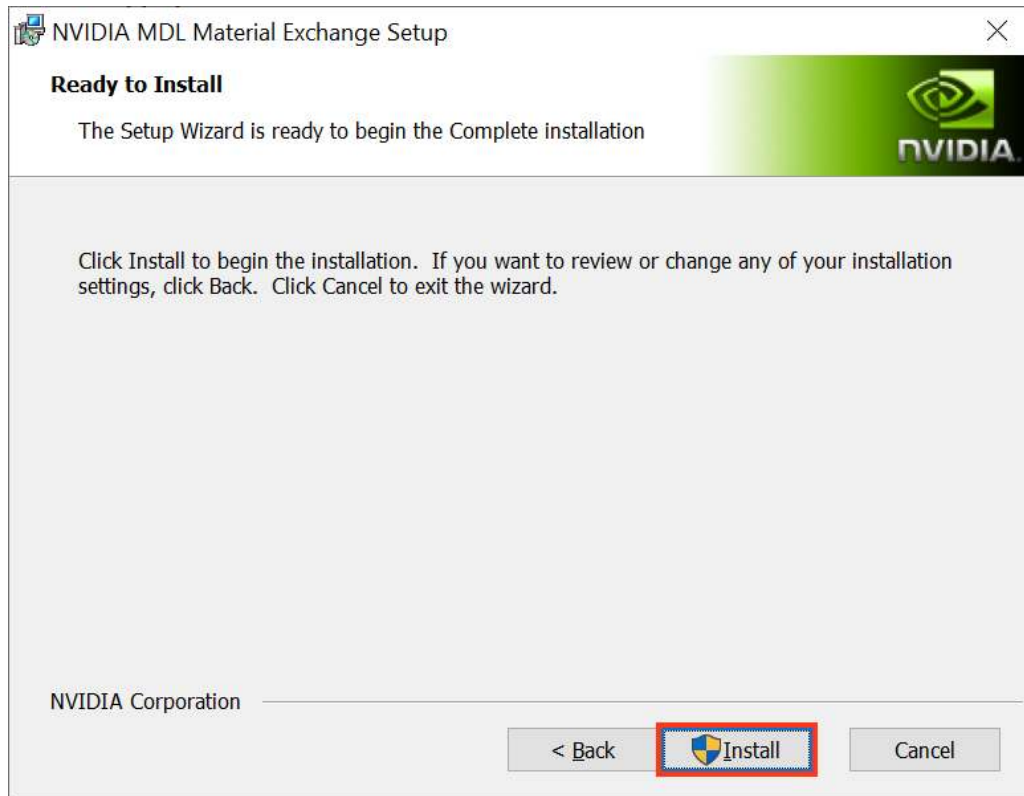


Fig. 2.3 – Completing the installation

- 2.5. Once the Material Exchange package has been installed, vMaterials 2 installation will proceed.

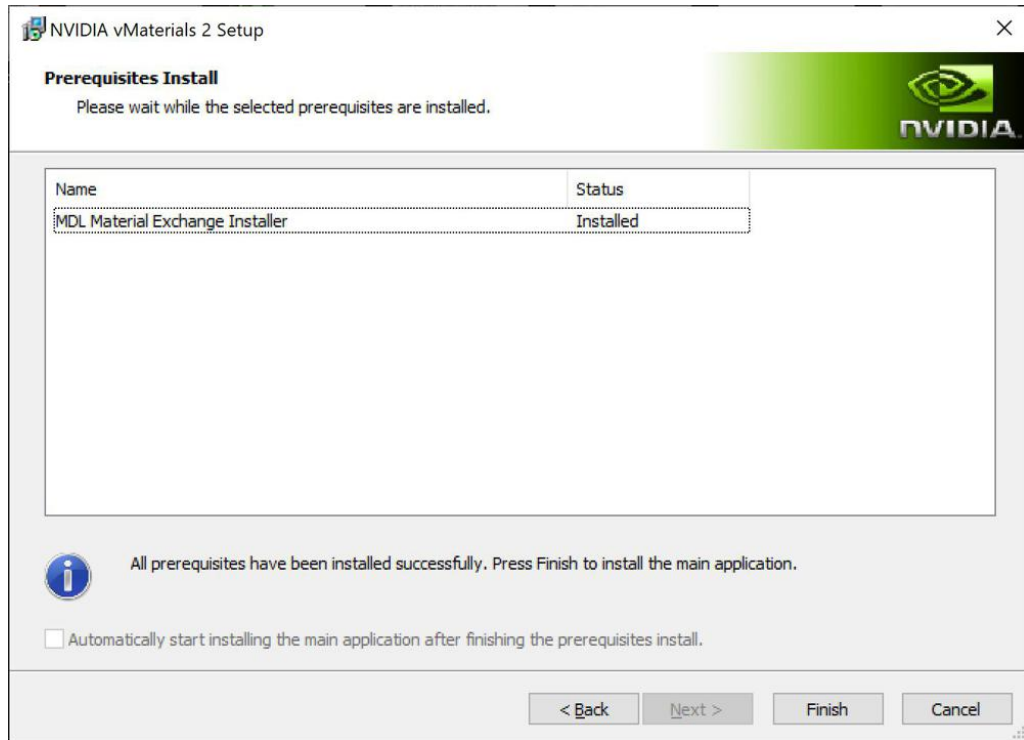


Fig. 2.4 – Completion of the Material Exchange package installation

3. Click Next after the vMaterials 2 welcome dialog.



Fig. 2.5 – The vMaterials 2 welcome dialog

4. In the next dialog, accept the End User License Agreement for vMaterials 2 and click Next.

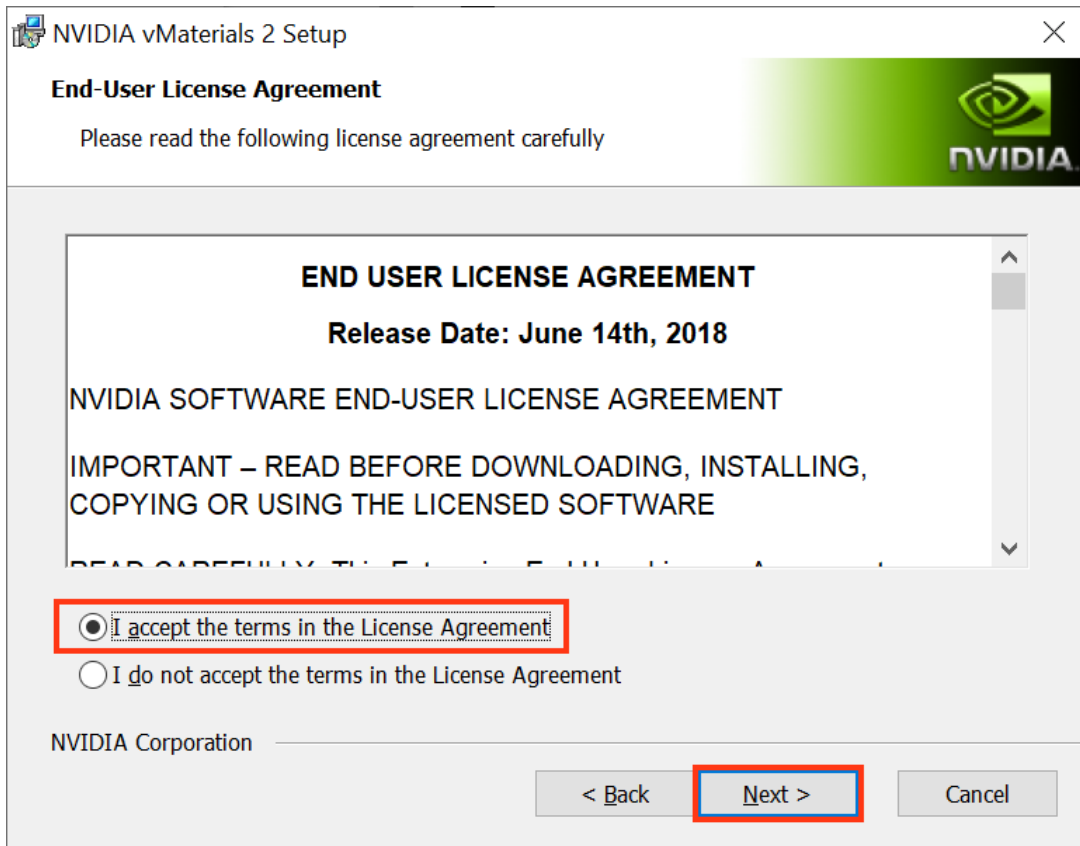


Fig. 2.6 – Accepting the End User License Agreement for vMaterials 2

5. In the next dialog, you will be asked about the configuration of vMaterials 2. Click Complete to choose a complete installation. vMaterials 2 will be installed in a folder based on your username:

C:\Users*username*\Documents\mdl

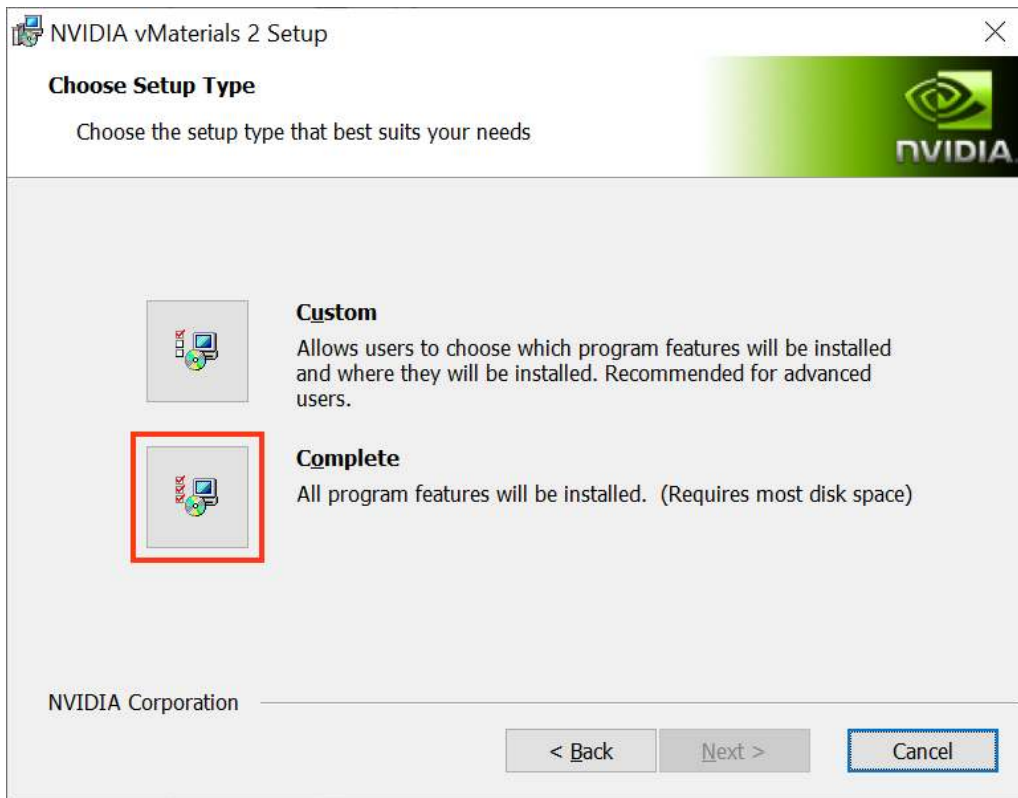


Fig. 2.7 – Choosing the complete installation of vMaterials 2

6. In the next dialog, click Install to copy vMaterials 2 files to your chosen folder.

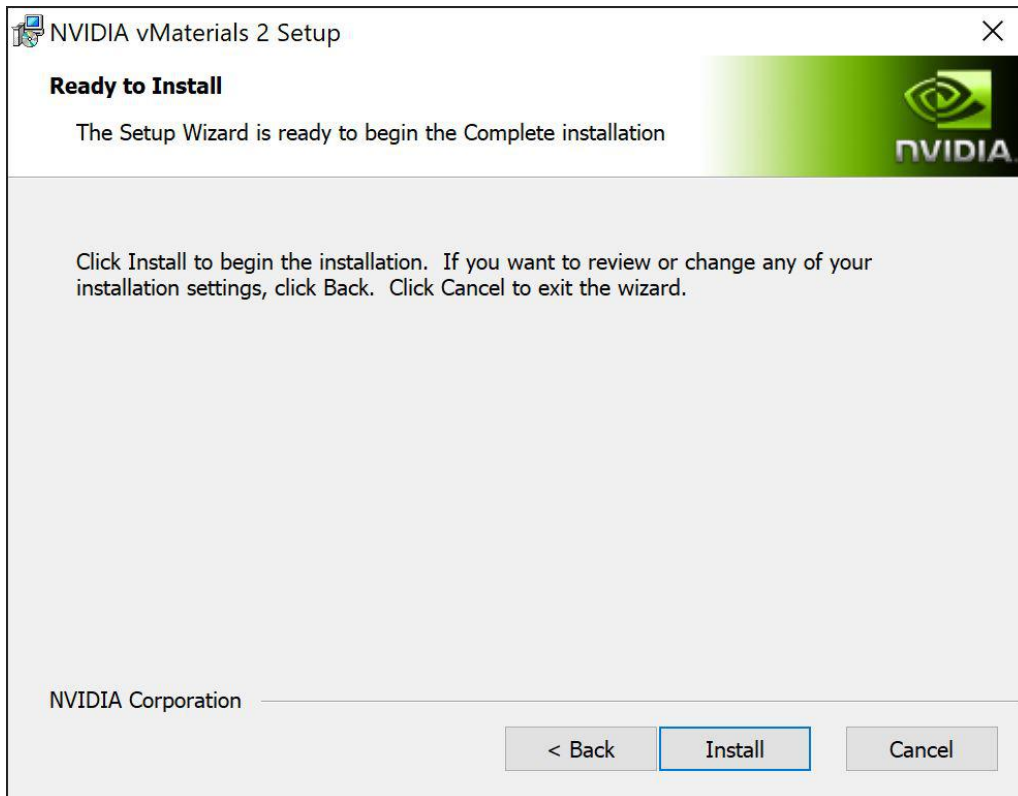


Fig. 2.8 – Installing vMaterials 2 files

7. A dialog displays the progress of the installation.

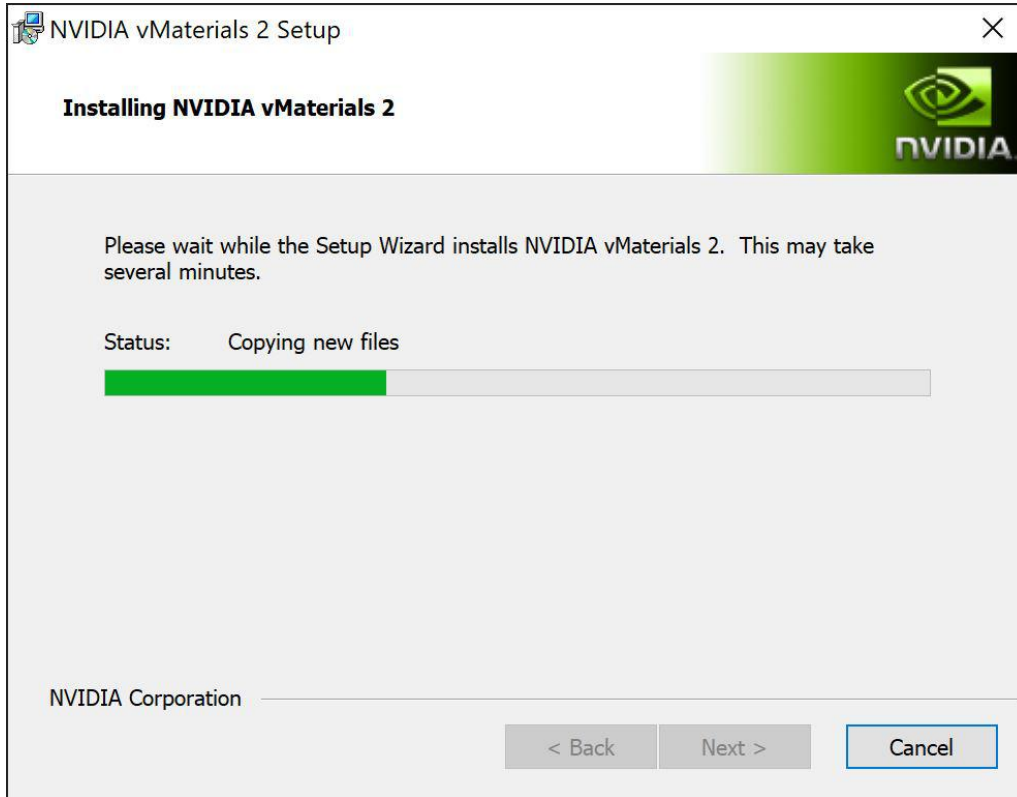


Fig. 2.9 – Installation status display

8. Once the installation is complete, click Finish.

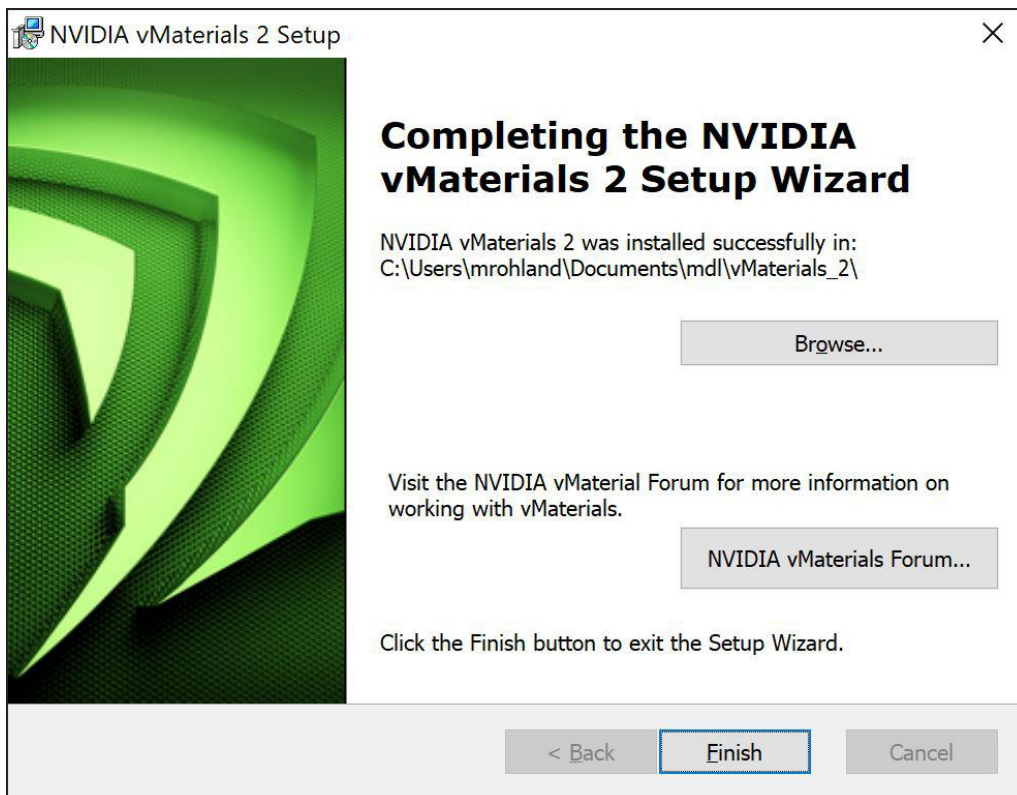


Fig. 2.10 – Completing the vMaterials 2 installation

3 SOLIDWORKS Visualize and vMaterials 2

SOLIDWORKS Visualize requires vMaterials to be located in the Appearances folder of the installation. This folder can easily be checked (or changed) in Visualize under [Tools ► Options ► General ► Library Paths ► Appearances]. When the vMaterials catalog is located in this folder, Visualize will display it in its library under Appearances.

3.1 Copying or linking the vMaterials folder

1. Launch Visualize. If Visualize was running during the installation of vMaterials 2, you must restart Visualize.
2. Open the Options window under [Tools ► Options] and go to [General ► Library Paths].
3. Select the folder under Appearances.

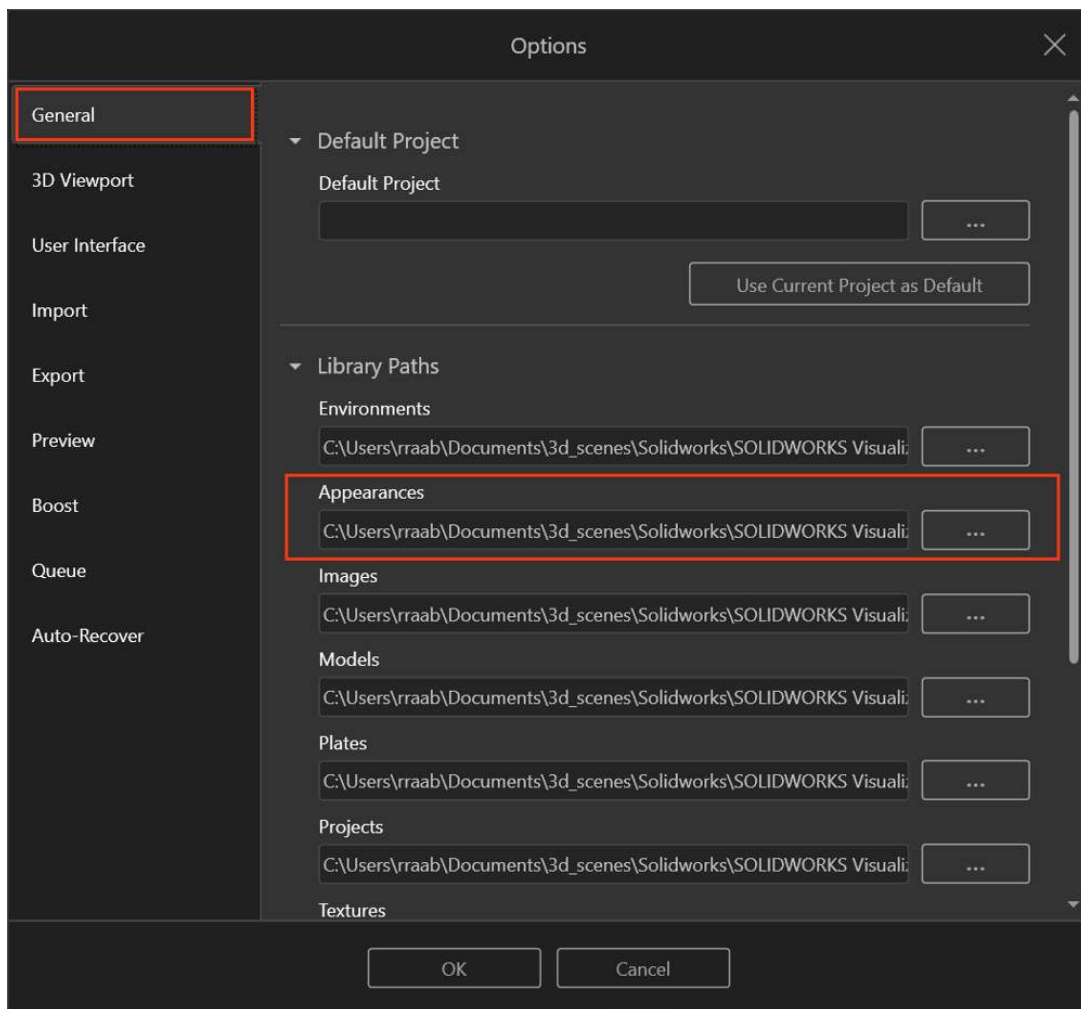


Fig. 3.1 – The Appearances folder in the Library Paths list

4. In your file browser, copy vMaterials to the Appearances folder from the previous step, either from your custom installation directory or from the default directory. The default directory is:

```
C:\Users\username\Documents\mdl\vMaterials_2
```

where you replace *username* with your login user name.

To save disk space, you can create a *hard link* (also called a *directory junction*) in the Appearances folder to the vMaterials installation folder, rather than creating an actual copy. The operating system treats the link like a regular directory.

For more information about links, see [The Complete Guide to Creating Symbolic Links](#).³

3.2 Using the Windows Command Shell

For the next part of the installation process, you use the [Windows Command Shell](#).⁴ The following folder locations are assumed:

Appearance folder

```
C:\Users\username\Documents\SOLIDWORKS Visualize Content\Appearances
```

vMaterials installation folder

```
C:\Users\username\Documents\mdl
```

1. Enter *windows-key* + R, type cmd and click OK. The Windows Command Shell opens.
2. Enter the following command (on a single line) and hit enter:

```
mklink /J  
"C:\Users\username\Documents\SOLIDWORKS Visualize Content\Appearances\vMaterials_2"  
"C:\Users\username\Documents\mdl\vMaterials_2"
```

3. After the command runs successfully you should see an output like this (on one line):

```
Junction created for  
C:\Users\username\Documents\SOLIDWORKS Visualize Content\Appearances\vMaterials_2  
<<====>>  
C:\Users\username\Documents\shaders_and_materials\mdl\vMaterials_2_Trunk
```

3.3 Using the installed vMaterials

You can now use vMaterials in the Visualize interface.

1. Restart Visualize.
2. vMaterials are displayed in the File Libraries tab under Appearances.

3. <https://www.howtogeek.com/howto/16226/complete-guide-to-symbolic-links-symlinks-on-windows-or-linux/>

4. <https://docs.microsoft.com/en-us/windows-server/administration/windows-commands/windows-commands>

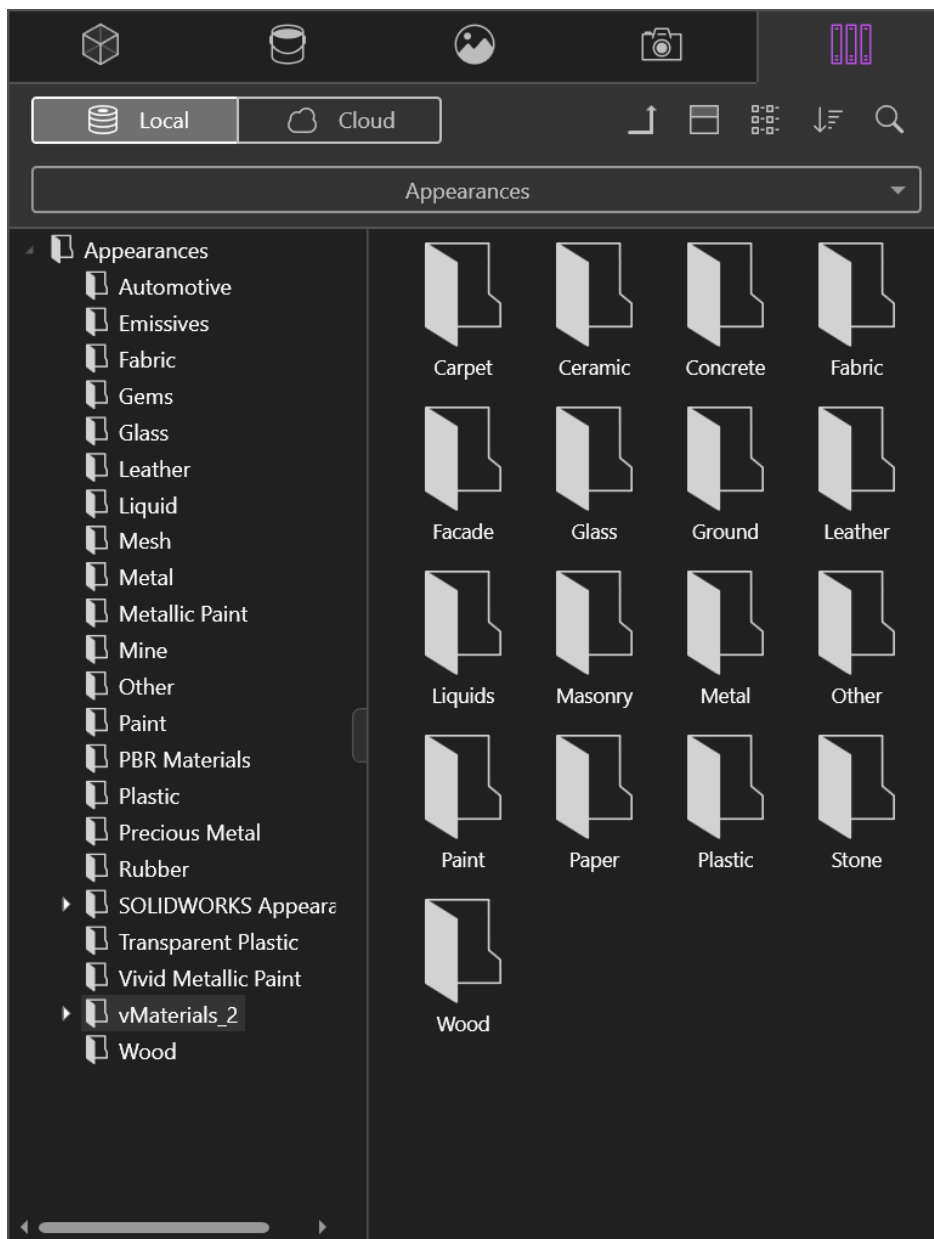


Fig. 3.2 – vMaterials in the Appearances list

3. To assign a vMaterial, drag and drop it into your scene. This will assign the first appearance defined in the MDL file.
4. MDL files from the vMaterials catalog typically contain multiple appearances. To access these, switch to the Appearances tab after assignment.

Thumbnails for new appearances will be generated automatically. This takes extra computing time and may slow down rendering in the viewport. Wait until all pending thumbnails have been generated to have full viewport rendering performance.

3.4 Using vMaterials from a different installation location

A copy (or a hard link) of vMaterials must be created in the SOLIDWORKS Visualize Appearances folder. This is described in detail under `solidworksvisualize:install` “Copying or linking the vMaterials folder” (page 8).