Skin Shaders | **Ciconia Studio**

[**Online Documentation**](#)

Overview

Create a beautiful subsurface scattering effect for your characters.
These shaders give you access to advanced settings to create endless skin tone results.

Designed to simulate skin translucency, these shaders can also be used for any translucence materials like organic surfaces, cloth simulation, fruits, plants, candles and so on.

Shaders:

- Skin Opaque
- Skin Cutout

Features :

- Built-In and URP support.
- PBR Specular Workflow.
- Forward and Deferred Rendering Path
- Multiple light support
- Mobile Friendly
- Suitable for any translucent models
- Heightmap support for both RP.
- BaseColor, Specular/Smoothness, Normal map, Heightmap, Ambient Occlusion, and Emission Textures support.

- Translucency/Subsurface scattering simulation using a Translucency map and advanced parameter.
- Skin Tone simulation with advanced parameters for endless variation.

Built-in/URP Package :
Supported Unity versions
2019.4.0 and higher

The old version for Unity 2018.x *(Built-in Only)* is also included. These shaders can either be used with Unity 2019.x and 2020.x. *(cf readme)*

HDRP Package :
Supported Unity versions
2019.4.x
2020.3.x

URP Setup

Support Unity versions
2019.4.0 and higher

First delete the Builtin folder and unpack the URP - Skin shaders.unitypackage.

Tutorials

Videos |

URP set up
Tutorial *(The video highlights the ghost shader, however the process is the same for all our shaders)*.

Skin v2020.1.0
Preview

Skin v2018.1.0 *(For Built-in Only)*
Tutorial

Create a translucency map with XNormal
Tutorial

Shader Properties

Main Properties | These properties affect all the maps selected in the Main Properties.

Global --> XY(TilingXY) - ZW(OffsetXY) – Controls the Tiling and the Offset of all maps contained in this layer

Color -->BaseColor Intensity(A) – Specifies the RGB color of the model.

Invert Alpha – Inverts the alpha channel.

Base Color – Selects a color map.

Saturation – Controls the amount of saturate or desaturate of the Base Color map.

Brightness – Controls the amount of brightness of the Base Color Map

Normal Map – Selects a normal map.

Normal Intensity – Controls the normal intensity.

Specular Color -->Desaturate(A) – Controls the RGB Color of the specular reflection. Use the Alpha value to desaturate specular reflection.

Specular Map -->Smoothness(A) – Selects a specular map. The smoothness map can be stored in the Alpha channel.

Specular Intensity – Controls the amount of specular reflection.

Smoothness – Controls the amount of glossiness reflection.

Source – Selects the smoothness map stored in the Specular alpha or Base Color alpha

Fresnel *Controls the ambient and Fresnel reflection*

Intensity – Controls the intensity of the Fresnel reflection.

Ambient – Controls the Ambient reflection.

Power – Controls the thickness of the Fresnel. The higher the value is, the thinner the Fresnel will be.

Height Map – Selects a height map.

Height Scale – Controls the height intensity.

Ambient Occlusion Map – Selects an ambient occlusion map.

Ao Intensity – Controls the intensity of ambient occlusion.

Emission Color – Specifies the HDR color for the emission.

Emission Map – Selects an emission map.

Intensity – Controls the emission intensity.

SSS Skin Properties | These properties control the Translucency and Skin Tone.

Visualize Translucency – Enables or disables the Translucency map and ambient visualization.

Intensity – Enables or disables the light intensity contribution.

Light Attenuation – Defines a mask based on the light shadows. A value of 0 means that the translucency effect will also be visible in shadow areas.

Translucency Color – Specifies the RGB color for the subsurface scattering effect.

Saturation – Controls the amount of saturation or desaturation of the Translucency Color.

Translucency Map *Controls the translucency based on the translucency map selected*

Invert – Inverts the Red channel. If no Translucency map is selected, enabling this property will define a white color by default.

Translucency Map – Selects a translucency map. If no map is selected, the detail mask map will be black by default. The alpha channel can contain a map which can be used to mask the Translucency Ambient and/or the Skin Tone.

Intensity – Controls the intensity of the Translucency map.

Contrast – Controls the amount of contrast of the Translucency map.

Spread – Controls the diffusion amount of the Translucency map.
Set the spread value to 1 to define a Translucency map completely white.

Power – Controls the Brightness of the Translucency map.

Normal Contribution – Defines if the normal of the mesh in addition to the normal map (if selected) are used to display the translucency effect. A value of 0 means that no normal is used.

This property can be used to simulate the increase in thickness of a surface and thus reduce the light passing through.

Scattering – For URP only. Controls the amount of translucency diffusion depending on the light direction. Combined with the spread properties, it can create smoother translucency falloff.
Affects both Translucency Map and Ambient Translucency.

Ambient Translucency *Controls the translucency based on the mesh normal*

Exclude - Use Translucency Alpha – Use as exclusion the map stored in the Translucency Map alpha channel.

Invert Alpha – Inverts the alpha channel of the Translucency Map.

Ambient Power – Controls the Power.

Thickness – Controls the thickness of the Translucency.

Desaturate – Defines the amount of desaturation of the translucency ambient. This property is related to the translucency color.

Skine Tone *Controls the blending of the Skin Tone and the Base Color map.*

Enable – Enables or disables the Skin Tone contribution.

Blend Mode – Selects between Screen, ColorDodge and SoftLight for deferent blending result (cf Demo scene).

To darken a skin tone from a map with light skin, it will be necessary to use softLight and also modify the parameters from the BaseColor map (cf Head_CS Skin Tanned and Head_CS Skin Darker materials)

Exclude - Use Translucency Alpha – Use as exclusion the map stored in the Translucency Map alpha channel.

Color – Specifies the RGB color for the Skin Tone.

Skin Contrast – Controls the amount of saturation or desaturation of the skin Color.

Fill – Evenly fills the color model. This property is related to the skin Contrast. Can only be used if the value of the Skin Contrast property is greater than 0.

Cutout Properties | These properties control the cutout values of the model.

Invert – Inverts the grayscale value of the selected map. If no detail mask is selected, enabling this property will define a white color by default.

Use BaseColor Alpha – Enables or disables the use of the alpha map of the main Base Color map

Cutout Mask – Selects a Cutout map. If no map is selected, the Cutout map will be black by default. Black value means no Transparency.