

Edge Blend Shader Outline

The edge blend shader allows for greater control over Fresnel type effects for many aspects of your materials, allowing for increased realism or interesting stylization. Each aspect of the shader is driven by edge blending (Diffuse and Specular etc), and these values can all be changed independently of each other. You're able to apply different colors or even different textures on the outside edges of objects, customizing values to fake things like subsurface scattering or tailoring your own toon settings. This document will go over each slider available in the shader as well as provide some usage tips or ideas for you to take advantage of.

Inner Diffuse

This is your main diffuse color/texture and behaves the same as DAZ Default shaders.

Inner Diffuse Strength

Value which modifies the overall brightness of the Inner Diffuse, behaves the same as the DAZ Default shaders. Use this value when flagging surfaces for AoA's special lights using diffuse strength.

Outer Diffuse

This parameter is specific to the outside edge of your surface. Modify this value to change the diffuse settings for outside edges in relation portions facing the camera.

Outer Diffuse Strength

This parameter is specific to the outside edge of your surface. Modify this value to change the diffuse strength for outside edges in relation portions facing the camera.

Diffuse Threshold

This sets the ratio between Inner Diffuse and Outer Diffuse, with lower values showing less of the Outer Diffuse value and higher values showing more. A value of 0 here will render the surface only showing Inner Diffuse, effectively disabling the edge blend effect for these settings.

Diffuse Strength Threshold

This sets the ratio between Inner Diffuse Strength and Outer Diffuse Strength, with lower values using less of the Outer Diffuse Strength value and higher values using more. A value of 0 here will render the surface only using Inner Diffuse Strength, effectively disabling the edge blend effect for these settings.

Inner Spec

This is your main specular color/texture and behaves the same as DAZ Default shaders.

Inner Specular Strength

Value which modifies the overall brightness of the Inner Specular, behaves the same as the DAZ Default shaders.

Outer Spec

This parameter is specific to the outside edge of your surface. Modify this value to change the specular settings for outside edges in relation portions facing the camera.

Outer Specular Strength

This parameter is specific to the outside edge of your surface. Modify this value to change the specular strength for outside edges in relation portions facing the camera.

Specular Threshold

This sets the ratio between Inner Spec and Outer Spec, with lower values showing less of the Outer Spec value and higher values showing more. A value of 0 here will render the surface only showing Inner Spec, effectively disabling the edge blend effect for these settings.

Specular Strength Threshold

This sets the ratio between Inner Specular Strength and Outer Specular Strength, with lower values using less of the Outer Specular Strength value and higher values using more. A value of 0 here will render the surface only using Inner Specular Strength, effectively disabling the edge blend effect for these settings.

Inner Gloss

This value specifies the glossiness for the inner portions of the surface facing the camera, behaves the same as DAZ Studio Default shaders.

Outer Gloss

Value for glossiness set to the outer edges of your surfaces, use this to specify higher or lower values of gloss on outer edges in relation to those facing the camera

Glossiness Threshold

This sets the ratio between Inner Glossiness and Outer Glossiness, with lower values using less of the Outer Glossiness value and higher values using more. A value of 0 here will render the surface only using Inner Glossiness, effectively disabling the edge blend effect for these settings.

Inner Ambient Color

This is your main ambient color/texture and behaves the same as DAZ Default shaders.

Inner Ambient Strength

Value which modifies the overall brightness of the Inner Ambient Color, behaves the same as the DAZ Default shaders. Use this value when flagging surfaces for AoA's special lights using ambient strength.

Outer Ambient Color

This parameter is specific to the outside edge of your surface. Modify this value to change the ambient settings for outside edges in relation portions facing the camera.

Outer Ambient Strength

This parameter is specific to the outside edge of your surface. Modify this value to change the ambient strength for outside edges in relation portions facing the camera.

Ambient Color Threshold

This sets the ratio between Inner Ambient Color and Outer Ambient Color, with lower values showing less of the Outer Ambient Color value and higher values showing more. A value of 0 here will render the surface only showing Inner Ambient Color, effectively disabling the edge blend effect for these settings.

Ambient Strength Threshold

This sets the ratio between Inner Ambient Strength and Outer Ambient Strength, with lower values using less of the Outer Ambient Strength value and higher values using more. A value of 0 here will render the surface only using Inner Ambient Strength, effectively disabling the edge blend effect for these settings.

Bump - Displacement

Switches between bump or displacement effects for the specified map, with 0 using bump mapping and 1 using displacement mapping.

Usage Tips

Using the outer edge can be a great way to fake rim lighting, setting the outer edges of your surfaces brighter than your inner settings can give the illusion of objects being back lit without requiring calculations for extra lights.

For surfaces like hair the outer edge can also be used to mimic scattering type effects, stray hairs collect more light than hair that is bundled so bright values here can fake this.

Mixing together different diffuse colors and specular colors can lead to a number of interesting results, some of which can produce results like oil saturated water or something like tie dying. Combine this with displacement effects (to produce more edges for the edge blending to show up on) for some fun experiments.

Being able to have different textures on the outside edges can work to your advantage. Using slightly blurred versions of diffuse textures can give soft edges to your models, while specular maps in your Outer Gloss channel can be used to fake fine hairs.

Setting your Outer Diffuse to black while applying your diffuse map to Outer Ambient Color can be a better way to fake subsurface scattering effects than brighter values alone, using slightly blurred diffuse maps for this can push the effect further.