LamaDielectric



This material is used to render transparent surfaces like glass, acrylics, and gemstones. They can be colorless or colored, as well as having the correctly colored shadow and level of absorption/fogginess.

Dielectric Parameters

Reflection Tint

True dielectric materials would retain the white color. Make subtle changes here to avoid losing all physicality as this control result is multiplied against reflected ways.

Transmission Tint

Similar to above, true dielectric materials would retain the white color. Make subtle changes here to avoid losing all physicality as this control result is multiplied against the interior and rays reflected from the inside. It's best to use the *Interior > Absorption* parameters below for realism.

Fresnel Mode

- **Artistic - Reflectivity** This result controls the amount of reflection from the normal direction as well as interior bending of the rays. Presets for common materials are provided for you to use.
- **Scientific - IOR** This result controls the amount of ray bending and as a physical effect, the reflection result using the index or refraction. You may recall materials like crown glass and water IOR are 1.5 and 1.33 respectively.

Roughness

Microfacets or tiny bits of roughness can scatter light in a way that has a blurry result. The less rough, the mirror-like and smooth/slick the material may look. High values will simply look diffuse.

Normal/Bump

Here is where you supply a signal, either a texture or procedural pattern, to create a bump to the surface to "fake" surface details like small bumps or scratches. This means an artist doesn't have to model these tedious and often repetitious parts of a model.

Tail Parameters

Mix

How strong the tail effect should be in a linear fashion.

Length

Defines the roughness of the tail, full roughness at 1.0 will stretch the furthest with 0.0 being no roughness or no length.

Anisotropy Parameters

Anisotropy

This control determine the direction light travels, more forwards (positive) or more backwards (negative) toward the light source when it travels through the object.

Direction

This allows you to alter the direction of the anisotropy using a tangent map/pattern.

Rotation

You can rotate the specified direction around the normal a full 360 degrees.

Interior Parameters

These parameters control the bulk of a dielectric material. When you think of what makes a glass object look like it does...the color and clarity, it's the absorption.

Absorption Color

This is the volume color. This allows the object and shadow to be correctly tinted. A value of white is no absorption, no tint or shadow. A black value is totally opaque, black and solid. If a color is supplied and this is the top of a Lama Stack, it will be the coating color.

Absorption Radius

The maximum reach in scene units of light before it is absorbed.

Scatter Color

This defines the color of the light that gets scattered rather than absorbed by the above absorption controls.

Scatter Anisotropy

This defines the scattering direction of the light, it can be forward (positive) or backwards (negative) scattering. A value of 0 is isotropic, all directions.

Shadow Parameters

Density

This controls how opaque the resulting shadow is after taking into account the above parameters controlling Fresnel, coloring, absorption, etc. A value of 0 is a fully transparent or invisible shadow.

Coloring

Controls the resulting coloring of the shadow where 0 is black and 1 is the same as the color set as Transmission Tint.

Fresnel Front

This sets the influence of the Fresnel setting on the shadow after a ray passes through front-facing geometry.

Fresnel Back

This sets the influence of the Fresnel setting on the shadow after a ray passes through back-facing geometry.

Advanced Parameters

Exterior IOR

This defines the exterior medium IOR be it air (the default), water, or a layered material like a varnish on top using a Stack node.

Energy Compensation

This allows you to add energy to the result as microfacet or very rough materials may lose energy and artificially darken the result.

Surface Mollification

This defines the roughness based on curvature and may help reduce fireflies or bright pixels/artifacts in rendering.

Motion Mollification

This defines the roughness based on the motion of the object and may help reduce fireflies or bright pixels/artifacts in rendering.

Lobe Name

Defines the Arbitrary Output Variabe (AOV) name for the resulting Light Path Expression (LPE)

Interior Id

If several stacked dielectric lobes with extinction have the same Lobe Name, they need to have different defined Interior Ids. If their Lobe Names are different then the Id is irrelevant.

Matte

This defines the name of the lobe output of the final lobe weight to an Arbitrary Output Variable (AOV)