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Glass BSDF

The *Glass* BSDF is used to add a Glass-like shader mixing refraction and reflection at grazing angles. Like the transparent shader, only pure white will make it transparent. The glass shader tends to cause noise due to caustics. Since the Cycles path tracing integrator is not very good at rendering caustics, it helps to combine this with a transparent shader for shadows; for more details see here.

Inputs

Color

Color of the surface, or physically speaking, the probability that light is transmitted for each wavelength.

Roughness

Influences sharpness of the refraction; perfectly sharp at 0.0 and smoother with higher values.

IOR

Index of refraction (IOR) defining how much the ray changes direction. At 1. 0 rays pass straight through like transparent; higher values give more refraction.

Normal

Normal used for shading.

Properties

Distribution

Microfacet distribution to use.

GGX:

GGX microfacet distribution.

Multiscatter GGX:

Takes multiple scattering events between microfacets into account. This gives more energy conserving results, which would otherwise be visible as excessive darkening.

Beckmann:

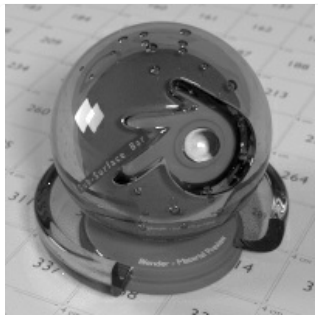
Cycles Only Beckmann microfacet distribution.

Outputs

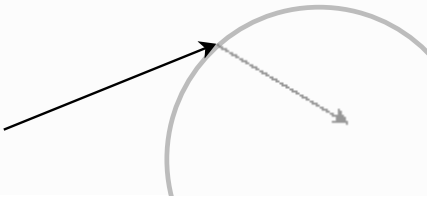
BSDF

Standard shader output.

Examples

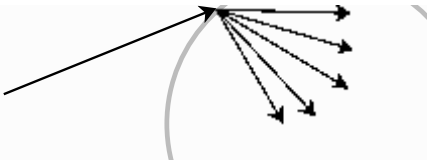


Sharp Glass example.



Sharp Glass behavior.

Rough Glass example.



Rough Glass behavior.

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Last updated on 2025-05-10

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