

# V-Ray Material Options

The Common tab is part of the V-Ray Material parameters.

## Parameters

---

**Cutoff** – A threshold below which reflections/refractions is not traced. V-Ray tries to estimate the contribution of reflections/refractions to the image, and if it is below this threshold, these effects are not computed. Do not set this to *0.0* as it may cause excessively long render times in some cases.

**Double-sided** – When enabled, V-Ray calculates separately the shading for the back faces of surfaces with this material. When disabled, the back faces are shaded the same as the front faces.

**Reflect On Back Side** – When disabled, V-Ray calculates reflections for the front side of objects only. When enabled, V-Ray calculates the reflections for the back sides of objects too.

**Use Irradiance Map** – When enabled, the irradiance map is used to approximate diffuse indirect illumination for the material. If disabled, Brute Force GI is used in which case the quality of the Brute Force GI is determined by the **Subdivs** parameter of the **Irradiance Map** (Renderer > Global Illumination > Irradiance Map). This can be used for objects in the scene which have small details that are not approximated very well by the irradiance map.

**Energy Preservation** – Determines how the diffuse, reflection, and refraction color affect each other. V-Ray tries to keep the total amount of light reflected off a surface to less than or equal to the light falling on the surface (as in the real life). For this purpose, the following rule is applied: the reflection level dims the diffuse and refraction levels (a pure white reflection will remove any diffuse and refraction effects), and the refraction level dims the diffuse level (a pure white refraction color will remove any diffuse effects). This parameter determines whether the dimming happens separately for the RGB components or is based on the intensity:

**Monochrome** – Causes dimming to be performed based on the intensity of the diffuse/reflection/refraction levels.

**Color** – Causes dimming to be performed separately on the RGB components. For example, a pure white diffuse color and pure red reflection color will yield a surface with a cyan diffuse color (because the red component is already taken by the reflection).

**Glossy Rays As GI** – Specifies on what occasions glossy rays are treated as GI rays:

**Never** – Glossy rays are never treated as GI rays.

**GI Rays** – (Default) Glossy rays are treated as GI rays only when GI is being evaluated. This can speed up rendering of scenes with glossy reflections.

**Always** – Glossy rays are always treated as GI rays. A side effect is that the Secondary GI engine is used for glossy rays.

**Refl. Gloss. Interpretation** – These options control how Reflection Glossiness is interpreted. When **Use Glossiness** is selected, the **Glossiness** value is used as is, and a high Glossiness value (such as *1.0*) results in sharp reflection highlights. When **Use Roughness** is selected, the **Reflection Glossiness** inverse value is used. For example, if Reflection Glossiness is set to *1.0* and Use Roughness is selected, this results in diffuse shading. Conversely, if Glossiness is set to *0.0* and Use Roughness is selected, this results in sharp reflection highlights. Note that the Roughness parameter itself has no bearing on the results of this option.

**Use Environment Override** – Enables the use of the **Environment Override** color.

**Environment Override** – A color or texture that is used as an environment for the material.

**Environment Priority** – Specifies the environment override priority when several materials override it along a ray path.



**Previous:**

V-Ray Material Translucency