Corona Scanned Material

This page provides information on the Corona Scanned Material in Cinema 4D.

Overview

The Corona Scanned Material allows you to use Chaos Scans with Corona.

There are some materials that are impossible to recreate with any number of parameters and maps in a generalized material, as they have a unique way of responding to light. This is where Chaos Scans comes in. Each material in the library is meticulously scanned to capture how it interacts with light so that you can drag-and-drop it into your scene for 100% accuracy in both look and scale.



Tutorial: Chaos Scans with Corona for Cinema 4D

Basic

File – The file name with the data for the scanned material; usually has a . vrscan extension.

Select a file to load – Open the pop-up dialog to select a scanned material file to load (*folder icon*)

Reload - Refreshes the .vrscan file loaded in the material. (recycle icon)

Download Chaos Scan – This button redirects you to the Chaos Scans download web page. (*2D-sphere icon*)

The material preview remains empty until the scanned material is loaded. Additionally, a scanned material file can be loaded by dragging and dropping it in the **File** field.

All scanned materials are listed in the C4D's **Project Asset Inspector**, like any other materials in the scene project.

File info – Displays some useful information contained in the .vrscan fil e, such as the actual material sample size.

Tiling scale – This sets the number of repetitions (tilings) for the material.

2-Sided – Forces the back-facing polygons to be shaded in the same way as the front-facing ones. When disabled, the back-facing polygons appear black. This can be useful for objects like curtains. Note that this option is always considered enabled when rendering transparent materials.

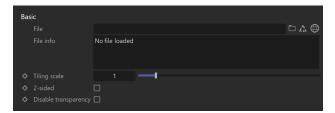
Disable transparency – Disables transparency for materials that store such information. This can be useful for speeding up the rendering, especially when the transparency produces little or no effect.

Triplanar mapping – Enables the triplanar mapping for the scanned material

Random offset – Enables the random offset for the scanned material.

Random rotation – Enables the random rotation for the scanned material.

The Random offset and rotation parameters are only available when the Triplanar mapping is enabled; otherwise, they remain inactive.



Appearance

Filter color

Enable – This enables the color filtering parameters.

Level – This parameter defines the intensity of the Filter color parameters.

Color – A color for the material sample that can be used to tint the material. (It affects the color of the reflections as well. Acts as a post effect.) See the Fi Iter Color example below.

Texture – This parameter sets either a texture map or a procedural shader to use for color filtering.

Mix mode – This parameter defines how the texture map or shader combines with the color parameter.

Mix strength – This parameter defines the texture's percentage that is mixed with the color parameter. It works like opacity for the texture.

Paint color

Enable – This enables the paint color parameters.

Level - This parameter defines the intensity of the Paint color parameters.

Color – This parameter changes the color of the material without losing the texture or changing the reflection color. For example, it can be used to change the color of wood or leather without losing the material texture.

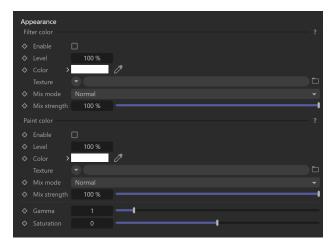
Texture – This parameter sets either a texture map or a procedural shader to use for color painting.

Mix mode – This parameter defines how the texture map or shader combines with the color parameter.

Mix strength – This parameter defines the texture's percentage that is mixed with the color parameter. It works like opacity for the texture.

Gamma - Controls the color curve correction of the material.

Saturation – Controls the saturation of the material (including Filter Color an d Paint Color if used) as a post-effect. See the Saturation example below.



Clearcoat

Strength – Specifies the strength of the coat reflections.

Texture – This parameter sets either a texture map or a procedural shader to use for the clear coat.

IOR – Determines the IOR of the coat layer, and from that, controls the strength of the reflections. A value of 1.0 does not produce any reflections and disables the coat layer. Higher values produce stronger clear coat reflections. The .*vrscan* files typically contain the correct value for this parameter, and it is set automatically when the file is loaded.

Bump multiplier – The coat layer has a built-in bump map stored in the material sample file. This allows control over the strength of that bump.

Coloring - Colors the coat reflections.

Glossiness – Controls the sharpness of reflection. A value of 100% means perfect glass-like reflection; lower values produce blurry or glossy reflections.

Glossiness variation – Controls the effect of glossiness growth under shallow observation angles. This parameter represents a real physical effect proper to materials like brushed metals, plastics, etc. The parameter range is 0-100%. Higher values produce a faster transition of the glossiness to 1 when the observation angle goes to zero.



Bump & Displacement

Bump

Enabled – This enables the use of bump parameters.

Intensity – Specifies the intensity of the bump effect.

Texture – Defines the texture map or shader that will be used for the bump.

Displacement

Enabled – Enables the use of displacement properties for the material.

Min level – Sets the displacement distance applied to areas with black (0.0) texture. Measured in world space units.

Max level – Defines the strength of the displacement effect. It is the world space displacement distance applied to the areas with white (1.0) textures.

Enable water level – When enabled, this option enables the clipping of the displacement starting from the 0.0 values or black areas of the texture map or shader.

Water level - Sets the clipping distance in world space units.

Texture – Defines the texture map or shader that will be used for the displacement.

 $\textbf{Mode}-\mathsf{Defines}$ the mode used to calculate the displacement. Available modes are:

Normal – Classic displacement that is done along surface normal; the shader is evaluated as monochromatic.

Vector tangent – Vector displacement that is evaluated in tangent space.

Vector object – Vector displacement that is evaluated in object space.

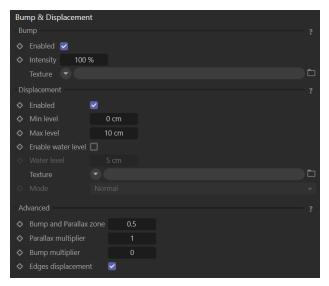
Advanced

Bump and Parallax Zone – Determines the point where additional bump and parallax no longer exist, and only natural height effects remain. This option is especially useful for shallow angles of view to the material, where it might appear flat or less detailed. A value of 0 adds no additional bump and parallax. A value of 1 adds additional bump and parallax equally regardless of the view angle. All scanned materials, by default, have the most suitable value loaded for this parameter to achieve the most realistic look. If you need full control over the bump and the parallax, set the value to 1 and work with the Parallax and Bump Multipliers.

Parallax Multiplier – Adjusts additional parallax and edge displacement strength

Bump Multiplier – Adjusts the additional bump.

Edges Displacement – Uses a special technique that makes the edges of the geometry appear slightly jagged inwards. This option is useful when rendering close-ups of materials with bumps. It is faster than actual displacement and helps to achieve better realism.



Advanced

Visibility

Visible directly – When enabled, this makes the Corona Legacy material directly visible to the camera.

Visible in reflections – When enabled, this makes the Corona Legacy material directly visible in reflections.

Visible by GI – When enabled, this makes the Corona Legacy material directly visible for GI calculation.

Visible in refractions – When enabled, this makes the Corona Legacy material directly visible in refractions.

Propagate masks – This parameter specifies the propagation of non-shading render elements (masks) after interaction with the material.

Never – Mask passes are never propagated through the material, i.e. the material is always visible in masks.

Through reflection – Mask passes are propagated through the material if reflection occurs.

Through refraction – Mask passes are propagated through the material if refraction occurs.

Always – Mask passes are always propagated through the material, i. e. the material is never visible in masks.

Invisible in masks – This mode makes the material invisible in masks.

Advanced options

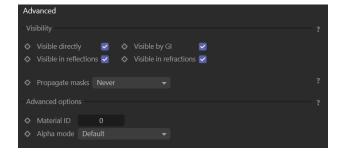
 $\label{eq:material ID} \textbf{Material ID} - \text{This parameter defines an ID for the material that can be used in the Corona Compositing tag or in the Corona Data shader.}$

Alpha mode – This parameter specifies how the objects with the material are visible in the alpha channel.

Default – This is the default mode. In this mode, the material alpha value is derived from its opacity and refract components.

Always black – In this mode, the material alpha value is black (material shows as transparent).

Always white – In this mode, the material alpha value is white (material shows as opaque).



Example: Tiling Factor

This example shows the effect of the Tiling Factor parameter. The .*vrscan* material used for the example is Leather.



Tiling factor = 0.5



Tiling factor = 0.75



Tiling factor = 1



Tiling factor = 1.25



Tiling factor = 2

Move the slider to see the example renders.

Example: Saturation

This example shows the effect of the Saturation parameter. The .vrscan material used for the example is Leather.



Saturation = 0.5



Saturation = 1



Saturation = 2

Move the slider to see the example renders.

Example: Filter Color

This example demonstrates the effect of the Filter Color parameter. In the second image, Filter Color is set to 0.5 and rgb (45, 10, 0).

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