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1

WELCOME

THE COREL KPT COLLECTION FILTERS

Welcome to Corel® KPT® Collection, the revolutionary KPT series of filters designed to help you create dazzling and unique effects.

Corel KPT Collection includes 24 extraordinary filters that produce dazzling and unique effects for print and the Web.

KPT FiberOptix

The KPT® FiberOptix™ filter lets you create realistic hair, fur, rain showers, and more. You can control the length, color, and tint of each fiber you create on a source image. Using a mask, you can create fibers in specific shapes; for example, you can create hair that grows as text.

KPT Frax4D

The KPT® Frax4D™ filter lets you create 3-D sculptures out of fractal space. You can wrap these sculptures with any environment map. You can also rotate sculptures and render them as images.

KPT Blurrrrr

The KPT® Blurrrrr™ filter lets you manipulate the pixels in a source image to soften, smooth, and blend its edges and colors.

KPT Equalizer

The KPT® Equalizer™ filter lets you use a variety of filters to add interesting effects to images by manipulating their frequencies; for example, you can sharpen or blur images.

KPT FraxPlorer

The KPT® FraxPlorer™ filter lets you create an infinite variety of fractal patterns. You can also customize fractals using various color, contrast, distortion, and zooming tools.

KPT ShapeShifter

The KPT® ShapeShifter™ filter lets you apply interesting effects to objects; for example, you can apply bevels, graphics and text layers, and dimensions. You can also use environment and bump maps to achieve reflections and surface texture. You can

create multiple objects at once; for example, by loading a mask with the shapes of each letter in a font set, you can turn the shapes into 3-D buttons for a Web site.

KPT Noize

The KPT® Noize™ filter lets you explore a variety of mathematically generated noise patterns that can be used as textures, patterns, or noise maps. You can select a noise family, mutate it to explore its variations, and apply it to a source image.

KPT Gel

The KPT® Gel™ filter lets you use paint tools to create 3-D images, text treatments, and objects such as buttons and borders. You can use lighting effects, tinting, and transparency to control the qualities of effects.

KPT Goo

The KPT® Goo filter lets you create effects that simulate the look of gelatin finger-painted on a source image. You can smear, splatter, swirl, pinch, or bulge images to create unique results. You can also use animation controls to save effects as movies.

KPT LensFlare

The KPT® LensFlare™ filter lets you apply interesting effects on a source image to simulate the photographic reflections created by a bright light shining on a camera lens. For example, you can create glows, halos, and streaks of light.

KPT Materializer

The KPT® Materializer™ filter lets you create complex textures, stunning backgrounds, and dazzling text treatments on source images. You can import bump maps and scale, pan, and rotate them to achieve interesting effects. You can also use lighting controls to manipulate surface textures.

KPT Projector

The KPT® Projector™ filter lets you use warping effects to create 2-D perspective distortions and 3-D transformations on source images. You can also create infinite planar tiling at any angle, and you can use anisotropic light filtering.

KPT Reaction

The KPT® Reaction™ filter lets you use patterns and diffusion options to create realistic simulations of organic textures, such as the growth pattern of coral or the stripes on a zebra.

KPT Turbulence

The KPT® Turbulence™ filter lets you create waves on a surface image. As the waves distort the image, they become animated and fluid. You can apply color blends to the waves. You can also take a snapshot of the waves that you can apply to a source image, or you can save the waves in motion as a movie.

KPT RadWarp

The KPT® RadWarp™ filter lets you use a simulated camera effect called barrel distortion to warp the edges of images. You can also correct barrel distortion on images.

KPT Channel Surfer

KPT® Channel Surfer™ lets you apply effects to individual channels in an image. You can blur or sharpen a channel, or adjust its contrast or value. You can adjust the amount and transparency of the effect, and control how the effect blends with the source image.

KPT Fluid

KPT® Fluid™ lets you manipulate images by applying liquid-like transformations and distortions that simulate dragging a brush across a wet surface. You can control the effect by setting the thickness of the fluid as well as the brush size and velocity. You can use various preview techniques to fine tune the effect, and choose to save the fluid in motion as a movie.

KPT FraxFlame II

KPT® FraxFlame II™ lets you explore and mutate an infinite variety of flame fractals. You can also customize fractals with various color, contrast, and distortion techniques.

KPT Gradient Lab

KPT® Gradient Lab™ lets you create complex color blends with various levels of transparency. You can also customize gradients with interesting shapes, styles, and pixel distortions.

KPT Hyper Tiling

KPT® Hyper Tiling™ lets you create and save intricate tiling effects by reducing the source image to create a tile. The tile is then repeated to create a hyper tiling effect. You can create different blends between the source image and the effect, and change the perceived distance from the effect. You can also change the depth, transparency, position, and size, of the effect, and rotate it through space.

KPT Ink Dropper

KPT® Ink Dropper™ lets you create the effect of dropping colored liquid (ink) on glass, canvas, or into another liquid. You can also create your own background images. You can choose the color of the liquid, and change its intensity and transparency. You can also change the size of the individual drops, and the rate at which they disperse on the surface.

KPT Lightning

KPT® Lightning™ lets you create powerful, customized lightning bolts. You can control every aspect of a lightning bolt, from setting its length and color, to determining its path

and how much it zags and wanders. The lightning effect can then be realistically integrated into your source image using one of several blend modes.

KTP Pyramid Paint

KTP® Pyramid Paint™ uses the Lab color mode to let you transform source images into effects that resemble paintings, and perform various color and contrast adjustments to them.

KPT Scatter

KPT® Scatter™ is a 2-D particle system that lets you scatter a range of particles over a source image. You can scatter large masses of particles over an effect, or create densely packed particles to emulate intricate effects such as paint strokes or mosaics. You can also create special effects based on the way particles interact with the properties of a source image.

About the User Guide

The Corel KPT Collection User Guide assumes you are already familiar with basic Mac OS® and Windows® concepts — menus, dialog boxes, and mouse operations, such as clicking and dragging. If you need more information on these subjects, or about the Apple® Finder™ or the Windows desktop, refer to the Mac OS® User Manual or the Microsoft® Windows® User Guide, respectively.

User Guide Conventions

The Corel KPT Collection User Guide is for both Mac OS and Windows platforms. By convention, Mac OS commands precede Windows commands in the text. For example, Command/Ctrl + I, is equivalent to the Mac OS Command + I and the Windows Ctrl + I, and indicates that you must hold down the Command or Ctrl key, and press I. The term “folder” refers to directories as well as folders. The Corel KPT Collection interface for Mac OS and Windows platforms is identical, unless otherwise specified.

About Corel Corporation

Founded in 1985, Corel Corporation (www.corel.com) is a leading technology company specializing in content creation tools, business process management and XML-enabled enterprise solutions. The company’s goal is to give consumers and enterprise customers the ability to create, exchange and instantly interact with visual content that is always relevant, accurate and available. With its headquarters in Ottawa, Canada, Corel’s common stock trades on the Nasdaq Stock Market under the symbol CORL and on the Toronto Stock Exchange under the symbol COR.

Corel Customer Support Services

Corel Customer Support Services can provide you with prompt and accurate information about product features, specifications, pricing, availability, services and technical support.

Online Support Services

For information about online support services, visit www.corel.com. Please note, some of the services are available only in English.

Telephone Support Services

Web services	Description
Corel® Knowledge Base	Allows you to read, print and download documents that contain answers to many technical questions.
Newsgroups (peer-to-peer forums)	Allow you to exchange information, tips and techniques with other users of Corel products.
Downloads	Allow you to download product patches, updates and trial versions.

For detailed information regarding telephone support services, please visit www.corel.com.

Live telephone support services are available for all Corel products from warranty support (30 days) to fee-based Priority and Premium Services. OEM, “white box,” jewel case (CD only), trial, and Academic versions of Corel products are eligible for fee-based support services only.

North America

For pricing, purchasing, or general inquiries about Corel products, you can call Customer Service toll-free at 1-800-772-6735.

To speak directly to a technician please dial 1-613-274-0500. The hours of operation are 8:30 a.m. to 7:30 p.m., Monday to Friday, Eastern Standard Time (EST).

Outside North America

For pricing, purchasing, or general inquiries about Corel products, you can call Customer Service toll-free at 1-800-267-35127. If the country you are calling from is listed below, please call the corresponding number.

Please note that these numbers may change as we adapt our services to fit user needs. Check the international support numbers page at www.corel.com for the most up to date contact details.

Contact Customer Service for pricing, purchasing, general inquiries, or replacement CDs. Contact Technical Support Services should you require technical assistance operating your Corel software.

Country	Customer Service	Technical Support
Argentina	0800 777 3203	57 1 523 1240
Australia	1 800 658 850	61 2 8844 4101
Austria	0192 89600	0192 89600
Belgium (Dutch)	0240 06733	0240 06733
Belgium (French)	0240 06777	0240 06777
Brazil	0800 14 1212	55 11 5696 5797
Chile	54 0800 777 320357	1 523 1240
China	10 800 610 2323	10 800 610 2673
Colombia	01 800 091 9370	57 1 523 1240
Czech Republic	0224 239645	0224 239645
Denmark	352 58008	352 58008
Finland	922 906040	922 906040
France	0170 706090	0170 706090
Germany	06922 2220288	06922 2220288
Hong Kong	800 964 514	800 964 515
Hungary	204 117089	204 117089
Indonesia	1 803 61 539	1 803 61 544
Ireland	0124 77724	0124 77724
Israel	44 1628 581601	44 1628 581601
Italy	0236 003600	0236 003600
Japan	81 3554 53274	81 3531 93013
Luxembourg	44 1628 581603	44 1628 581603
Malaysia	1 800 807 895	1 800 807 899
Mexico	1 800 1234 854	57 1 523 1240
Netherlands	0207 132700	0207 132700
New Zealand	0508 267 351	0800 908 592
Norway	229 71908	229 71908
Poland	071 3477279	071 3477279

Portugal	44 1628 581601	44 1628 581601
Singapore	800 6161 853	800 6161 854
South Africa	0860 223 388	0860 223388
South Korea	82 2 3444 5166	82 2 3444 5166
Spain	0914 141500	0914 141500
Sweden	0856 610555	0856 610555
Switzerland (German)	0158 03280	0158 03280

Mail and Fax Support Services

You can send inquiries to Corel Support Services representatives by mail or fax.

Corel Support Services
1600 Carling Avenue
Ottawa, Ontario, Canada
K1Z 8R7
Fax: 1-613-761-9176

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GETTING STARTED

WHAT IS COREL KPT COLLECTION?

Corel KPT Collection is an extraordinary collection of filters that produce dazzling and unique effects for print and the Web. Whether you are a professional designer, artist, Web author, or hobbyist, the Corel KPT Collection filters will help you take your work to a new creative level, and enhance your productivity.

In this section, you'll learn about

- installing Corel KPT Collection
- accessing and quitting Corel KPT Collection filters
- the workspace
- using panels and sliders
- previewing filter effects
- customizing the workspace
- storing workspace and panel settings
- working with presets

INSTALLING COREL KPT COLLECTION

You can install Corel KPT Collection in host applications compatible with Mac OS and Windows.

TO INSTALL COREL KPT COLLECTION IN MAC OS

- 1 Insert the Corel KPT Collection CD into the computer's CD drive.
- 2 Browse to the **Corel KPT Collection** folder.
- 3 Double-click the **Corel KPT Collection installer** icon.
- 4 Follow the instructions on your screen.

TO INSTALL COREL KPT COLLECTION IN WINDOWS

- 1 Insert the **Corel KPT Collection** CD into the computer's CD drive.
- 2 Click **Install**.
- 3 Follow the instructions on your screen.

ACCESSING AND QUITTING FILTERS

You can access a Corel KPT Collection filter from the host application. You can quit a Corel KPT Collection filter in two ways. You can quit a filter and apply the effect to the source image in the host application. You can also quit a filter without applying the effect to the source image in the host application.

TO ACCESS A FILTER

Do one of the following:

- In Adobe® Photoshop®, click **Filters ▶ Corel KPT Collection**, and click a filter.
- In Painter, click **Effects ▶ Corel KPT Collection**, and click a filter.
- In Corel PHOTO-PAINT, click **Effects ▶ Corel KPT Collection**, and click a filter.
- In Bryce®, click a flyout arrow in the **Pictures** dialog box in **Picture editor**, click **Corel KPT Collection**, and click a filter.

Note

If you want to access a Corel KPT Collection filter in Bryce for the first time, you must first click a flyout arrow in the **Pictures** dialog box, click **Select plug-ins folder**, choose the folder where Corel KPT Collection is installed, and click **Choose/OK**.

To quit a filter

Click one of the following buttons:

- **OK** — to quit a filter and apply the effect
- **Cancel** — to quit a filter without applying the effect

Using panels and sliders

You can set the style in which panels display. You can also move sliders.

To set a panel display style

- 1 Click the filter name.
- 2 From the **Filter options** list box, choose one of the following styles:

- **Panel auto popup** — to automatically expand panels as you move the pointer over them
- **Panel manual popup** — to manually expand panels by clicking the **Cycler** button in the title bar
- **Panel solo mode** — to expand the current panel and automatically collapse those not in use

Note

In **Panel auto popup** mode, sliders expand to display a panel with additional controls you can use to adjust slider settings incrementally, and view previous slider settings (indicated by the location of the gray arrow).

In **Panel manual popup** mode, you can expand a panel by clicking the **Cycler** button in the right corner of its title bar.

In **Panel solo mode**, you can collapse an expanded panel by double-clicking its title bar.

To move a slider

- Drag the black slider arrow.

Previewing filter effects

The **Preview** window lets you dynamically view the results of your work. You can apply a background to the **Preview** window. You can also move and size the **Preview** window.

To apply a background to the Preview window

- Click the flyout arrow in the **Preview** window, and choose one of the following options from the **Preview options** list box:
 - **Preview against black** — to display an effect against a solid black background
 - **Preview against white** — to display an effect against a solid white background
 - **Preview against checkerboard** — to display an effect against a background of gray squares
 - **Preview against dark checkerboard** — to display an effect against a background of dark gray squares
 - **Preview against gradient** — to display an effect against a grayscale gradient background

Note

The effect only displays against the background while it is in the **Preview** window. The background is not applied to the source image in the host application, and does not impact the final render of the effect.

To move the Preview window

- Drag the title bar.

To size the Preview window

- 1 Click the flyout arrow in the **Preview** window.

- 2 From the **Preview options** list box, choose one of the following **Preview** window sizes:

- **Small preview**
- **Medium preview**
- **Large preview**

Customizing the workspace

You can apply a fun icon style to the common workspace. If the KPT workspace is smaller than the resolution of your screen, you can also display or hide common workspace controls.

To apply a fun icon style to the common workspace

- 1 Click the **KPT** logo.
- 2 Choose **Smileys!** from the **Global options** list box.

To display or hide common workspace controls

- 1 Click the **KPT** logo.
- 2 Choose **Black out screen** from the **Global options** list box.

Storing workspace and panel settings

Storing workspace settings lets you save different workspace layouts. For example, you can arrange all panels on one side of the workspace and enlarge the **Preview** window, and then save this layout for later use.

Storing panel settings lets you save and compare different versions of a filter effect.

The workspace and panel settings you save are retained from one session to another, so you can use them again and again. When you no longer need stored workspace and panel settings, you can clear them. You can also restore default workspace or panel settings.

To STORE WORKSPACE SETTINGS

- Click a gray memory dot in the **Layout** panel.

Note

Empty memory dots display gray, full memory dots display green, and memory dots currently in use display yellow.

To STORE PANEL SETTINGS

- Click a gray memory dot in the **Recall** panel.

To USE STORED WORKSPACE OR PANEL SETTINGS

- Click a green memory dot in one of the following panels:
 - **Layout** — to use stored workspace settings
 - **Recall** — to use stored panel settings

To CLEAR STORED WORKSPACE OR PANEL SETTINGS

- Hold down **Option/Alt**, and click the corresponding green memory dot in one of the following panels:

- **Layout** — to clear stored workspace settings
- **Recall** — to clear stored panel settings

To RESTORE DEFAULT WORKSPACE OR PANEL SETTINGS

- Click the memory dot in the center of one of the following panels:
 - **Layout** — to restore default workspace settings
 - **Recall** — to restore default panel settings

Working with PRESETS

Some Corel KPT Collection filters provide you with preset effects. You can load a preset effect. You can also save an effect you create as a preset. You can create multiple presets categories in which to organize the presets you store.

You can import and export presets.

To load A PRESET

- 1 Click the **Presets** button.
- 2 Double-click a preset thumbnail in the **Presets library** panel.

If the preset is stored in a category, you must first choose the category from the middle-left tile of the **Presets library**

panel, then double-click a preset thumbnail.

Note

You can preview a preset by single-clicking a preset thumbnail. A larger version of the preset thumbnail displays in the upper-left tile of the **Presets library** panel.

To save an effect as a preset

- 1 Click the **Presets** button.
- 2 Choose a category from the middle-left tile of the **Presets library** panel.
- 3 Click **Add preset**.

A preset thumbnail displays in the **Presets library** panel.

Note

You can also delete a preset from a category by clicking a preset thumbnail, and clicking **Delete preset**.

To create a presets category

- 1 Click the **Presets** button.
- 2 Click the flyout arrow in the **Presets library** panel, and click **Create new category**.
- 3 A text box displays in the middle-left tile of the **Presets library** panel.
- 4 Type a name.
- 5 Press **Return/Enter**.

Each category can store up to 24 presets.

To import a preset

- 1 Click the **Presets** button.

- 2 Click **Import** in the **Presets library** panel.

If you want to import a preset to a specific category, you must first choose the category from the middle-left tile of the **Presets library** panel, and then click **Import**.

- 3 Choose the folder where the file is stored in the **From** dialog box.
- 4 Click the file.
- 5 Click **Open**.

The preset displays as a thumbnail in the **Presets library** panel.

To export a preset

- 1 Click the **Presets** button.
- 2 Choose a category from the middle-left tile of the **Presets library** panel.
- 3 Click a preset thumbnail.
- 4 Click **Export**.
- 5 In the **Save as** dialog box, type a filename in the **Save as** box.
- 6 In the **Where** box, choose the folder where you want to export the file.
- 7 Click **Save**.

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KPT MATERIALIZER

WELCOME TO KPT MATERIALIZER

KPT Materializer lets you apply surface texture to an image or to a preselected portion of an image. You can use KPT Materializer to emboss, distort, tint, add reflectivity, or otherwise create the illusion of surface material. Because standard KPT lighting controls are present, you can apply an unlimited number of lights and lighting properties as you work with the surface material.

The following controls are available in KPT Materializer:

- **Lighting** controls provide control over an unlimited number of lights and all of their associated properties. Add lights right where you want them. Set individual light brightness, sheen, and spread—or set ambient lighting, to add light equally to all areas of the texture. For more about lighting controls, refer to “Working with Lights” on page 13.
- **Material** controls adjust properties of the resulting surface material. Add a

color tint to the surface, controlling what color and how much is added. Adjust the depth of the bumps on the surface. Distort the underlying image “over” the bumps of the texture. Switch between a metallic or plastic surface, affecting how the surface interacts with lights. You can also decide how reflective the material is by setting how much of a selected environment map is blended into the material. For more about adjusting material properties, refer to “Controlling Surface Material” on page 17.

- **Environment** controls let you load or save environment map images, which can then be blended into the surface material. For more about environment maps, refer to “Using an Environment Map” on page 22.
- **Texture** controls affect the texture map you’re applying. Position the texture horizontally or vertically. Rotate or scale it. Add some smoothing or invert the texture for a different look. For more about texture controls, refer to “Adjusting Texture Appearance” on page 23.

SETTING SLIDERS

Each KPT Materializer panel includes standard KPT sliders. Sliders are the mechanism for adjusting a panel’s settings. When you move a slider, the panel expands to give you additional slider controls.

Refer to “Using panels and sliders” on page 8 for more information about working with sliders.

Using the Color Picker

The Color Picker lets you set a light or tint color for surface material.

Several KPT Materializer panels include color swatches for accessing the Color Picker.

When active, the Color Picker displays two floating bars. The top bar displays shades of gray, from black to white. The bottom bar displays a spectrum of colors and shades.



The Color Picker.

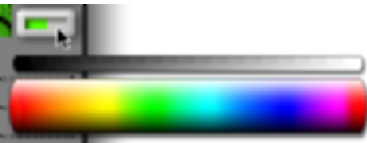
The grayscale bar is divided into two sections. The top area of the section is broken down into increments of grayscale values to make it easier to choose precise grayscale shades. The bottom of the bar is continuous blend of grays.



The two sections of the grayscale bar.

To choose a color or shade of gray

- 1 Click and hold a color swatch to activate the Color Picker.



Click a color swatch.

Note

To access the color picker from the 3D Lighting panel, click the color circle in the bottom left corner of the panel.

- 2 To select a color, drag your cursor over the color bar and release the mouse button over the color you want to select.

As you move over the colors, the color swatch shows both the new and the original color.

- 3 To select a shade of gray, drag your cursor over the top bar and release the mouse button over the shade of gray you want to select.

Working with Lights

The 3D Lighting panel lets you position light sources in 3D space and set their colors and brightness.



The 3D Lighting panel.

Note

Once you get a light exactly right, add it to the preset library. Then, you can access it easily for use with other projects.

Adding AND Deleting Lights

When you first access the 3D Lighting panel, it has three lights. You can add more lights to illuminate the image from additional angles or to mix light colors on the surface material.

To add a light source

- Click the Add Light icon.



Add Light icon.

To delete a light source

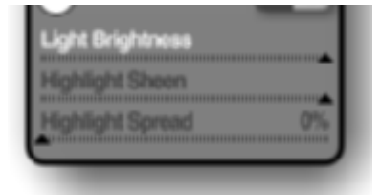
- 1 Select a light source in the light preview.
- 2 Press Option/Alt and click the Add Light icon or press Delete.

Setting Highlights AND Brightness

KPT Materializer's lights can be used to create complex lighting effects. To facilitate creative lighting, you can control light brightness, as well as light highlights.

Overall light brightness is controlled by a combination of light intensity and the size and spread of light highlights. The Light Brightness, Highlight Sheen, and Highlight Spread sliders are used to adjust how a light affects the texture you're applying.

- The Light Brightness slider controls



Use these sliders to control overall light brightness.

light intensity.

- The Highlight Sheen slider controls the intensity of highlight.
- The Highlight Spread slider controls the size of highlights that appears on your texture.

By combining these three settings, you can control how a light affects your textures. For example, large highlights combined with high brightness can make texture appear very bright. Small, bright highlights can make texture look shinny.

Lights can also be set to cast Soft (fuzzy-edged) or Sharp highlights.

To set soft or sharp highlights

- 1 Click on a light.

- 2 Click the Sharp/Soft toggle button to toggle between Sharp or Soft highlight edges.



Toggle between Sharp and Soft type toggle.

To SET light BRIGHTNESS

- 1 Click a light source.
- 2 Drag the Light Brightness slider. Drag to the right to increase brightness, or left to decrease it.

To SET highlight SIZE

- 1 Click a light source.
- 2 Drag the Highlight Spread slider. Drag to the right to increase highlight size, or left to decrease it.

To SET highlight INTENSITY

- 1 Click a light source.
- 2 Drag the Highlight Sheen slider. Drag to the right to increase highlight brightness, or left to decrease it.

SETTING AMBIENT LIGHT

Ambient light applies equally to all pixels, regardless of elevation.

Adjusting the Distort slider causes some refraction to take place, causing image distortion, without any other effect. With ambient light, it's possible to distort a source image without applying any shading.

For example, delete all lights and turn Ambient Glow up to full. Turn off all tinting. The surface bump has no visible shading effect.



Use the Ambient slider to apply light equally to all pixels.

To SET AMBIENT light

- 1 Make sure that no light source is selected.
- 2 Drag the Ambient Glow slider. Drag to the right to increase ambient light, or left to decrease it.

TURNING LIGHTS ON AND OFF

The On/Off toggle button lets you turn a light on or off.

To TURN A light ON OR OFF

- 1 Click on a light.

- 2 Click the On/Off toggle button to toggle between on and off.



On/Off light toggle.

Positioning Lights

The sphere in the center of the control represents your object in three-dimensional space. The balls surrounding the large sphere in the center represent light sources.



Drag light circles to reposition lights.

By dragging these light sources to different positions around the ball, you can adjust the lighting angle on your surface material.

Tip You can also drag the large sphere to reposition all the lights at once.

Sending Lights to Front or Back

The Front/Back button lets you quickly move a light to the front or back of your surface material.

To send a light to front or back

- 1 Click on a light.

- 2 Click the Front/Back button to change between in front of or behind the surface material you're applying.



The Front/Back button.

Setting Light Color

A light's color can tint the color of all the surface material you're working with. Light color is reflected in highlights.

You can mix light colors. For example, if you have a blue light source and a yellow light source, your surface material has a greenish highlight.

To change a light's color

- 1 Click one of the light sources in the light control.
- 2 Click the color dot in the bottom left corner of the 3D Lighting panel. The Color Picker appears. While pressing the mouse button, drag the cursor over the color you want to use.

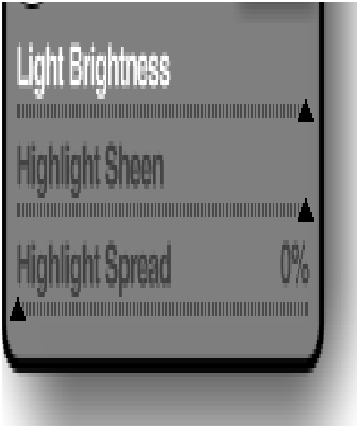
When you release the mouse button, the color is selected. Refer to "Using the Color Picker" on page 13 for more about using the color picker.



The Light color dot.

CONTROLLING SURFACE MATERIAL

The Material panel provides control over the properties of the surface material you're applying.



The Material panel lets you control surface material properties.

You can add a color tint to the surface, controlling what color and how much is added. You can control the surface depth, creating deep or shallow bumps and valleys. You can distort the underlying image “over” the texture, stretching it to fit the “terrain”. You can determine how reflective material is by adjusting how much of a selected environment map is blended into the material. You can affect how the surface interacts with light by switching between a metallic or plastic surface.

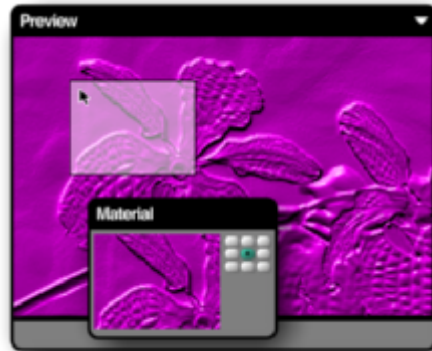
Note

Once you get a texture just right, add it to the preset library. Then, you can access it easily for use with other projects.

POSITIONING THE REAL-TIME PREVIEW RECTANGLE

The Preview window shows the results of settings you make to control the surface material. After an adjustment to a slider is made, the Preview window changes to show the results.

Within the Preview window is a small, movable rectangle, referred to as the Preview rectangle. The contents of the Preview rectangle is displayed at the top of the Material panel. Because this rectangular area is smaller than the Preview window, it updates rapidly, allowing you to see “real-time” changes as you adjust a slider.



Position the Preview rectangle within the Preview window, then watch the Material panel for a real-time preview when adjusting a slider.

Use this small viewer as you fine-tune slider adjustments. By positioning the Preview rectangle, you can select which area of the larger image is used in the real-time preview.

To position the Preview Rectangle

- Click the Preview rectangle. While pressing the mouse button, drag the rectangle over the portion of the image you want used in the real-time preview.

SETTING TINT COLOR

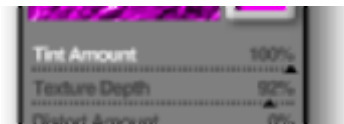
KPT Materializer lets you tint surface material to a selected color, then raise or lower the amount of tint that is applied. You can think of the Tint setting as looking at the underlying image through a “colored camera filter”.

To set tint color

- Click the color dot in the bottom left corner of the 3D Lighting panel. The Color Picker appears. While pressing the mouse button, drag the cursor over the color you want to use.

To adjust how much tint is applied

- Adjust the position of the Tint Amount slider or click the number below and type in a value. The higher the tint amount value, the more color is added to surface material.



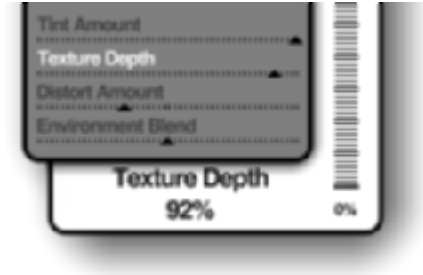
The Material panel Tint Amount slider.

SETTING TEXTURE DEPTH

You can adjust the apparent depth of the bumps on the surface material.

To adjust how much texture depth is applied

- Adjust the position of the Texture Depth slider or click the number below and type in a value. The higher the depth setting, the more dramatic the difference becomes between high and low elements of the material.



The Material panel Texture Depth slider.

SETTING THE AMOUNT OF DISTORTION

Distort Amount settings are used to distort the underlying image “over” the bumps of the surface texture. The “height” of the texture is used to define the amount of distortion. The Distort setting relies upon the texture being transparent, so that the underlying image can be seen.

The Distort slider allows you to create ripples in the color map of the texture, based on the texture map. These ripples are not created by flowing color over the surface of the bumps, but rather are created

by refracting color, as if the bump was a glass pane placed over the top. However, distortion can create the illusion of a flowing surface if used properly.



By using a high-frequency noise map as the texture, and turning distort all the way up, the illusion of the surface being wrapped over the noise map is lost, but the result looks like a standard glass distortion filter.



This simple example uses the Distort feature to simulate refraction. It gives the illusion of having placed the image underneath a rippled water-like surface—all achieved by using some tinting, an environment map, and a bit of distortion.

If the source image is on a layer that has transparency, transparent edges will be

“rippled” by the texture map, altering the transparency of the layer. Where there are peaks, edges ripple outwards. Edges are not, however, rippled out over the edge of a selection. Selections themselves are not changed by KPT Materializer.

The following is important to remember. Small adjustments to the amount of distortion work best.

- Slight positive offsets from 0 create some realistic results, as if the texture was folding, bunching, denting, stretching the texture over peaks.
- Slight negative offsets create opposite effects.
- More extreme values tend to reduce realism, creating water-like refractions, as if the surface was the surface of a pond on top of the image.



KPT Materializer deals with layers that have transparency.

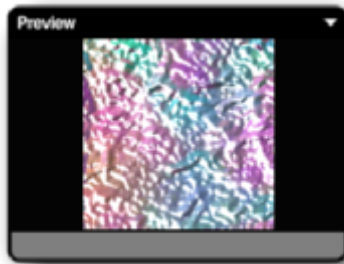
To distort an image over the surface texture

- Adjust the position of the Distort slider in the Material panel or click the number below and type a value.

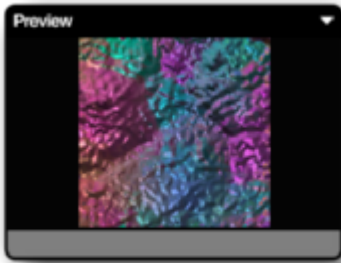
Switching Between Plastic or Metallic

You can use either a plastic or metallic surface for the texture you're applying. Although the difference may be subtle, metallic surfaces interact differently with lights than do plastic surfaces.

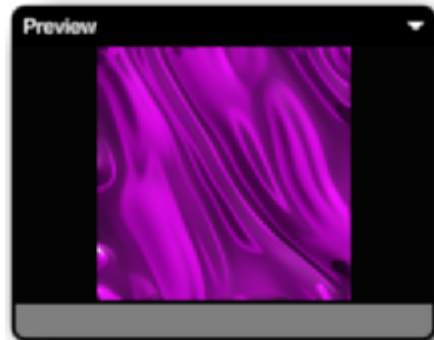
Plastic...



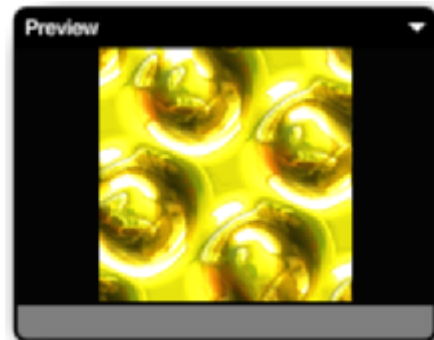
Metal...



A colorful backdrop after applying KPT Materializer, using the image's own saturation channel. Lighting is identical. Note that the plastic sample appears to be more brightly lit, because the highlight goes straight to white, rather than just increasing the luminance of the surface. This means that with a metal surface, you can apply more lighting without it overflowing and creating large areas of no detail.



This example of the texture uses a metallic surface to give the silk a shimmer. Highlights are light purple instead of white. Technically, it should be a "plastic" surface, but some materials seem to prefer metallic highlights.



This image was heavily lit with bright highlights to give it large areas of "blow-out" where highlight covers a large surface of the texture. There's also an environment map blended in there, which helps increase the light over the surface and also adds some detail to what would otherwise be a rather bland texture.

TO SWITCH BETWEEN A PLASTIC OR METALLIC SURFACE

- Click the Plastic/Metal button in the Material panel to change between

plastic or metallic for the material you're applying.



The Plastic/Metal button.

Using an Environment Map

An environment map image contributes to the visual appearance of a texture. An environment map image is usually a photograph, like a photo of a reflective gazing ball. Any spherical object can be used as an environment map image. Spherical objects work better than flat objects, allowing the 3D capabilities of KPT Materializer to be exploited.

An environment map can be any RGB or grayscale image stored on your system. To simulate realistic-looking materials, the environment map should be a photograph of a spherical object, such as a garden gazing ball.

If you use a photograph of a metallic ball, the surface looks metallic. Metallic or solid colors generally work best. Complicated textures like a rainbow-striped beach ball won't work as well. If you have KPT Spheroid Designer, KPT Glass Lens, Bryce 4, or another 3D rendering program, you can render spherical objects and use them as environment maps with excellent results.

Loading an Environment Map Image

Use the Environment panel to load an environment image. You can also load presets from the Environment Presets Library. Refer to “Working with presets” on page 10 for more about using the Environment Presets Library.



Use the Environment panel to load an environment map image, which can then be blended with lighting.

Several environment maps are provided as a starting point. Feel free to examine and edit these within your painting application, and use them to create new environment maps.

To load an environment map image

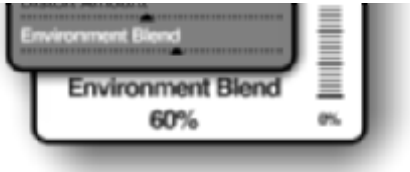
- 1 Click Load button in the Environment panel.
- 2 Locate the file you want to use and click OK. A preview of the image appears in the panel.

Note

You can also save an environment map as a preset or load an environment map from the preset library.

Blending the Environment Map

The Environment Blend slider on the Material panel controls how reflective the material is by determining how much of an environment map is blended in.



The Environment Blend slider on the Material panel determines how much of the environment map is blended with lighting.

Use the following guidelines when setting the Environment Blend slider, although the slider can be positioned anywhere in-between, to fine-tune a blending effect.

- With Environment Blend at 100%, lights are ignored and the environment map is used without modification.
- With Environment Blend at 0%, only the additional lights are used to light the surface material and the environment map is ignored.
- With Environment Blend at 50%, the environment map and additional lighting are given equal weight, causing the surface material to be lit by a synthesis of the two.

To blend an environment map with lighting

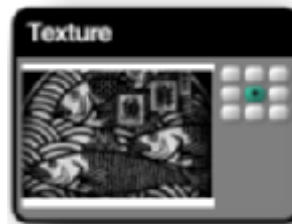
- Adjust the position of the Environment Blend slider in the Material panel or click the number below and type a value.

Adjusting Texture Appearance

A texture map (sometimes called a bump map) defines the “roughness” or “height” of the texture applied to your source image. The texture map defines the peaks and troughs that are applied to the resulting surface. A texture map is essential to creating the illusion of a surface material. Without peaks and troughs, lighting and reflectivity artifacts would appear uniform over the entire image.

In KPT Materializer, a texture map is either a channel of the source image (hue, luminance, saturation, red, green, or blue), or it's another image, which you load to be used as the texture map. KPT Materializer uses the grayscale of whatever is used as the texture's “height map.”

Once you've chosen what to use (image or channel of the source image), you can then adjust a variety of parameters to change the texture map's appearance. You can scale, tile, rotate, invert, or offset the texture map.



The Texture panel is used to adjust texture appearance.

Any manipulations done to the texture map when a channel is selected does not alter that channel for the source image.

KPT Materializer does not adjust channels, it just uses the selected channel as a reference.

Note Once you get a texture just right, add it to the preset library. Then, you can access it easily for use with other projects.

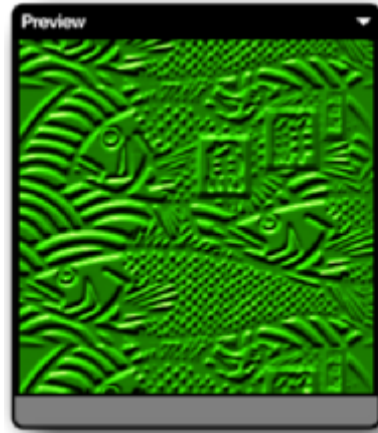
CHOOSING A TEXTURE'S HEIGHT MAP

You can select to use a channel of the source image or load a separate image to use as the texture's "height map."

If you choose to use the source image, the available channels are: Hue, Luminance, Saturation, Red, Green, and Blue. KPT Materializer uses the grayscale of that particular channel of your source image as the height map.

When selecting a channel of the source image, a commonly used choice is Luminance. With luminance, you can emboss, based on the brightness of the texture map. A picture of a person's face against a neutral background often has a strong red component, so choosing the Red channel will cause the face to be embossed "higher" than the background. Choosing Saturation can also provide interesting results.

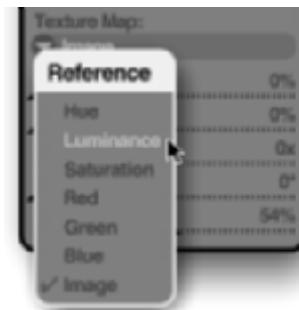
If you choose to load a separate image, KPT Materializer uses the grayscale of that image as the texture's "height map."



An example of using the Luminance channel to "emboss" the source image.

TO SELECT A CHANNEL OF THE SOURCE IMAGE AS THE TEXTURE'S HEIGHT MAP

- Click the triangle under Texture Map in the Texture panel and select which channel of the source image you wish to use as the "height map".



Choose a channel of the source image to use as the texture's "height map."

To use a separate image as the texture's height map

- 1 Click the triangle under Texture Map in the Texture panel and select Image.
- 2 Locate the file you want to use and click OK. A preview of the image appears in the panel.

Positioning the Texture Map

You can change the location of the texture map—the peaks and troughs—on the source image. You can offset the texture map horizontally or vertically, or rotate it. When you rotate it, KPT Materializer automatically tiles the map to ensure that it covers the source image.



You can rotate a texture map for interesting effects.

To offset the texture map horizontally

- Adjust the position of the Horizontal Offset slider in the Texture panel or click the number below and type in a value.

To offset the texture map vertically

- Adjust the position of the Vertical Offset slider in the Texture panel or click the number below and type in a value.

To rotate the texture map

- Adjust the position of the Rotate slider in the Texture panel or click the number below and type in a value.

Scaling the Texture Map

You can scale the texture map up or down in size. When scaled, the texture map is automatically tiled, to ensure that it covers the source image.

Scaling a texture map can create some interesting “wallpaper” effects. Combined with lighting, rotation, and tint controls, you can easily create colorful tiled image backgrounds. Use a separate texture map image to increase dramatic effect.



An example of scaling the texture map image.

To SCALE A TEXTURE MAP

- Adjust the position of the Scale slider in the Texture panel or click the number below and type in a value.

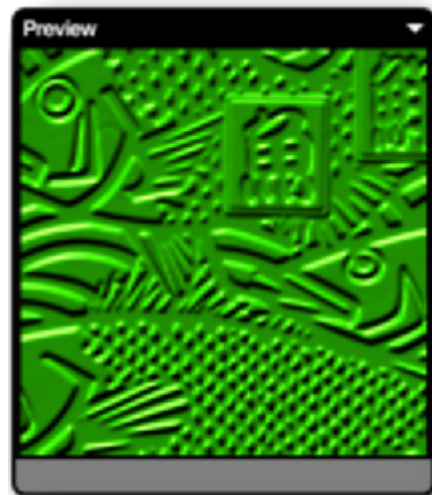
SMOOTHING THE TEXTURE MAP

You can blur a texture map to smooth out sharp edges that don't look correct when embossed onto a source image.

When a texture is rough with lots of sharp transitions, smoothing can reduce the sharpness. A smoother map produces more flowing results.



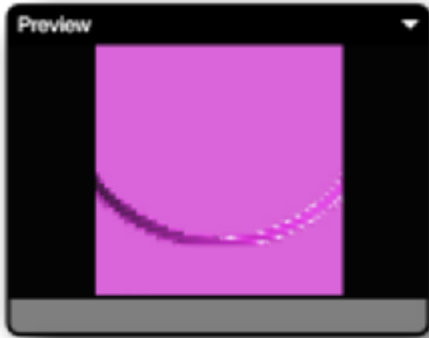
A texture with high contrast areas can look rough or pixelated. Dark and light pixels next to each other can create a "sheer face" slope between high and low texture.



After some smoothing is applied, the slopes between dark and light pixels are more gradual.

When sharp transitions are desired, adjusting the smoothing slider can help accomplish that look.

When a texture map is scaled up, pixels start to become more obvious. Smoothing can help to hide that effect.



A circular texture map is scaled up significantly. Pixels that make up the circle are highly visible.



After smoothing, there is less pixilation, but the shape has changed. If you want a short, non-pixelated gradient, create the texture map at a greater scale, so you won't need to scale up and smooth as much.

Note

Internal texture maps used by KPT Materializer are 16-bit. When working with a grayscale texture map (which can only be 8-bit), applying a small bit of smoothing can reduce the graininess a little. A small amount of smoothing can be good, even if you've made a very smooth, flowing texture map.

To SMOOTH A TEXTURE MAP

- Adjust the position of the Smooth slider in the Texture panel or click the number below and type in a value.

INVERTING THE TEXTURE MAP

You can invert a texture map for interesting effects. When a “carved” image is not what you want, try the Invert button and “emboss” it instead.



The Invert button inverts the texture map for interesting effects.

To INVERT A TEXTURE MAP

- Click the Invert button in the Texture panel.

Using the PRESETS Library

KPT Materializer includes a library of preset Environment Maps. You can also add environment maps of your own creation to the library for future use.

Refer to “Working with presets” on page 10 for details about using the Presets Library.

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