Vectorworks Studio / Rendering

PBR Textures
in Vectorworks 2027

From four shader menus to a new way of describing how surfaces behave under light.

By Brandon PT Davis



Glazed tile · Vectorworks 2027 · Realistic RS

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What happened to the four shader menus?

If you used textures before Vectorworks 2027, opening **Edit Texture** was fairly straightforward. The four menus were Color, Reflectivity, Transparency, and Bump. If I wanted to put an image of brick on a wall, I knew where to start. I could add some bump for the mortar joints and get back to the model.

The first time you open the 2027 editor, that familiar list is gone from new textures. There's Base, Specular, Transmission, Coat, Emission, and Geometry. Switch from **Basic** to **All** and the list gets longer. It can be frustrating to need a new vocabulary for a finish you already knew how to make.

If you're new to textures, here's how I think about it. The image gives the surface its pattern and color. The texture tells Vectorworks what should happen when light hits that surface. A photograph of blue tile can give you the color and the grout lines. It takes a separate roughness setting to make the tile reflect a bright light more sharply than the grout.

PBR stands for **physically based rendering**. Vectorworks 2027 uses **OpenPBR**, a shared way to describe how a material responds to light. For most scenic finishes, I'd open **Basic**, start with Base Color and Specular Roughness, and add settings as the finish calls for them.

Before 2027	Where I'd look in 2027	What I'm trying to change
Color	**Base → Color**	The pigment or image on the surface.
Reflectivity	**Specular** for highlights, **Base → Metalness** for bare metal	How the surface catches light. Add **Coat** for a separate varnish layer or **Emission** for a glowing surface.
Transparency	**Transmission** for glazing, **Geometry → Opacity** for cutouts	Whether light passes through a material or the surface disappears in masked areas.
Bump	**Geometry → Bump/Normal** or **Displacement**	How light catches small details, and whether larger relief needs to change the rendered edge.

A **texture** is the resource you apply to a model. An **image map** feeds one property inside that resource. **Map Type**, in Object Info, sets how the whole finish wraps the object. Those are three different decisions, and knowing which one you're making saves a lot of time.

Make your first texture

Follow the glazed tile. Set color and scale first, then adjust the sheen.

See what a map changes

Watch the reflection where the tile glaze meets the grout.

Fix a finish that looks wrong

Start with what you can see, like a pattern that repeats too often.

Vectorworks Help · PBR textures · Basics of Textures · The earlier workflow

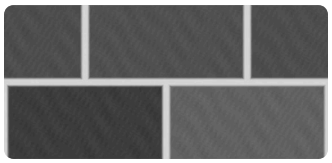
IMAGE CHANNELS

Read the files in a PBR map set

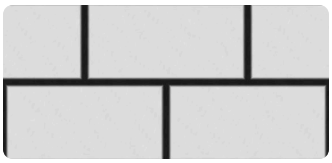
You might download a material and find four or five images in the folder. They usually describe the same patch of surface. I like to put them next to each other and find a feature I recognize. In this tile, the grout lines are in the same place in the color, roughness, height, and normal images. If the whole finish needs one value, set it directly. I'd reach for a map when two areas on the same surface need different behavior.



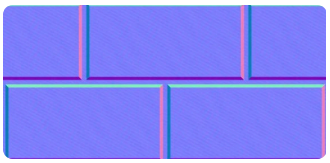
Base color
Teal glaze and pale grout



Roughness
Dark glaze, light grout



Height
Light tile faces, dark joints



Normal
Color shifts at the tile edges

File name or label	Vectorworks property	How to read it
Color, Albedo, Diffuse	Base → Color	RGB pigment. Use a clean, evenly lit image. A shadow baked into the file stays in place when you relight the model.
Roughness	Specular → Roughness	Dark is smoother and gives sharper reflections. Light is rougher and gives softer reflections. Invert an actual Glossiness or Smoothness map to use it here.
Metallic, Metalness	Base → Metalness	Black is nonmetal and white is bare metal. On painted steel, a mask can limit the metal response to chips and scratches that expose the steel.
Height, Bump	Geometry → Bump/Normal	Grayscale relative relief. Changes shading as light rakes the surface. A bump effect leaves the silhouette flat.
Normal	Geometry → Bump/Normal	RGB direction data, often purple-blue. Load the original RGB file. If the relief appears inverted, try the source's alternate normal convention and compare visually.
Height, Displacement	Geometry → Displacement	Height data pushes the rendered surface in or out. Useful where the edge or cast shadow must show the profile. Check response in the final render style.
Opacity, Alpha	Geometry → Opacity	Black is transparent, white is opaque. Use an alpha mask for open holes in a grille, screen or stencil.
Emissive, Emission	Emission → Luminance	A luminance map varies glow brightness across the surface. Use Emission Color for the tint. Use it for a screen or letters in a lit sign.

Packed maps and missing files. AO means ambient occlusion, the darkening associated with creases and contact areas. An ORM image normally packs occlusion, roughness and metalness into its R, G and B channels. Extract the property you need into a separate map. Leave unused properties at their defaults or set a uniform value. Keep the aspect ratio, crops, rotation and orientation aligned across the set.

Vectorworks PBR properties · Adobe Standard Material properties · glTF packed material channels

BASE, SPECULAR AND COAT

Control the way a surface reflects

Specular is the reflected light you notice as a highlight or a recognizable image of a light source. **Roughness** controls how sharp that reflection looks. At a low value you can make out the light's shape. At a high value it spreads into a soft patch.



0.15 · Crisp reflections

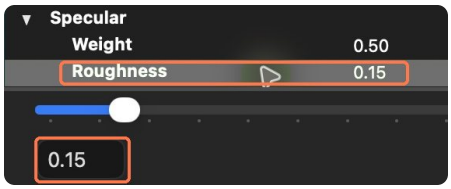


0.40 · Softer highlight



0.75 · Broad highlight

Watch the bright reflection spread across the sphere from left to right. Only **Specular Roughness** changes. Vectorworks 2027 · Realistic RS preview.



Select Roughness under Specular and enter a value.

Base → Color

The main color or pattern of the surface, like blue paint or printed wallpaper. Choose a color for a solid finish or load an image for a pattern. On bare metal, this color also tints the reflections. In All, **Base Weight** controls how much the base contributes, and **Diffuse Roughness** affects how powdery it looks.

Base → Metalness

Tells Vectorworks what the exposed surface is made of. Set 1 for bare brass or steel and 0 for paint, wood or plastic. A painted steel bracket has Metalness 0 on the painted areas and 1 where the steel shows through.

Specular → Weight and IOR

Specular Weight controls how strong the highlight is. Roughness controls how sharp it is. **IOR**, or index of refraction, affects reflection at different angles and how much light bends through glass. Watch the grid in the glass comparison to see that bend.

Coat → Weight and Roughness

Coat adds a second reflective layer, like clear varnish over wood. Weight controls how much of that layer you see. Roughness controls the sharpness of its own reflection.

Compare one change at a time. In the sphere preview, hold color, stage and render style fixed. For a quick test in Vectorworks, compare Roughness around **0.15** and **0.75** to see the range. These are demonstration values. If a metal looks flat, switch to a stage with something distinct to reflect before editing the metalness.

Editor display and older files. Basic shows common properties, **Modified** shows changes from their defaults, and **All** exposes advanced controls. The preview's Stage sets its lighting and background. In older files the legacy shaders roughly correspond to Base, Specular, Transmission and Geometry. The 2027 PBR editor has a separate Emission group for glow. Duplicate a legacy texture before converting so you can compare it with the original.

Vectorworks Help · PBR properties · OpenPBR specification

Choose the effect before the setting

Ask what the light is doing. Does it pass through a pane? Does it pass through a hole? Or does it come from the surface itself? Each answer takes you to a different control.

Look through it

Transmission is light passing through a material, like a window. **Transmission Weight** controls how much passes through, and Color tints it. Raise Specular Roughness to blur the view through the glass, like frosting.

Cut holes in it

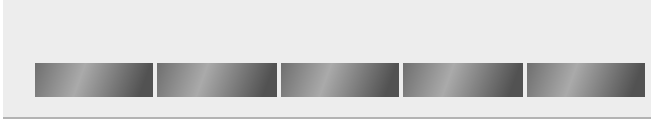
Opacity controls which parts of a surface are visible. For a grille, an image mask can hide the holes. Put that mask in the image's **alpha channel**, the part of the file that stores transparency.

Make it glow

Emission makes a surface give off light, like the face of a backlit sign. **Emission Color** sets the color of the glow. **Luminance** sets its brightness in nits. Check light spill on nearby scenery in your final render.

Give it relief

Bump uses light and shading to suggest raised or recessed detail. A **Normal** map tells Vectorworks which way tiny parts of the surface face. **Displacement** moves the rendered surface, including at the edge.



Bump / normal · Shading suggests relief. Edge stays flat.



Displacement · The rendered edge follows the relief.

Advanced controls that matter for scenery

Fuzz and anisotropy

Fuzz adds the soft sheen you see along the edge of velvet or on fine dust. **Anisotropy** stretches a highlight in one direction, like the streak you see along brushed metal.

Subsurface, scattering and Thin Walled

Subsurface Weight controls how much of a solid's appearance comes from light scattering below its surface. Radius controls how far it spreads. Think wax or faux onyx. Transmission Scatter gives a milky effect within a transmissive material. Use Thin Walled for a sheet represented without solid thickness, such as a single glass surface.

Thin Film, Tangent and Bevel Edges

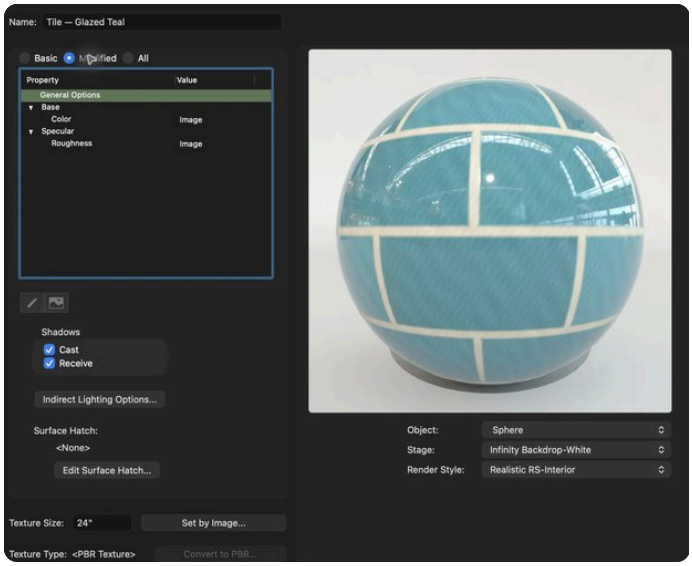
Thin Film adds angle-dependent color. Thickness changes the hue range, IOR changes the optical response, and Weight controls strength. Tangent sets a directional reference. Coat Normal affects detail in the top layer. Bevel Edges is a render appearance control for subtle softened edges.

Vectorworks Help · Basic and advanced controls

Build a texture one decision at a time

Say I'm drawing a tiled floor for a set. I want the tile to catch a clean highlight and the grout to stay dull. I'd get the pattern and scale right first, then work on the sheen.

1. **Make the texture resource.** In the Resource Manager, choose



Live Vectorworks capture. **Modified** shows the two properties with image maps, Base Color and Specular Roughness.

   New Resource → Renderworks Texture → Create. Give it a name you'll recognize in a long list, like **Tile — Glazed Teal**.
2. **Start with Base Color.** In **Edit Texture → Basic**, open **Base** and select **Color**. The image button below the list lets you import a map. For a solid painted finish, you can choose a color and skip the image entirely.
3. **Set the real size of the repeat.** Measure the width represented by the whole image. In the example, that's **24 in**. The image contains several tiles, so that measurement is the repeat width, rather than the width of one tile.
4. **Decide how the surface should catch light.** Start with one value under **Specular → Roughness**. Where the tile and grout need different reflections, load a matching roughness map there. On a sphere in **Realistic RS**, look for the sharper tile highlights and softer grout.
5. **Check the finish on the model.** Apply the texture to a filled 3D object. I use **Shaded** to check size and placement, then a **Realistic RS** style to judge what the finish does under light.

> **Here's what I'd check first.** On an eight-foot run, I expect four repeats of this 24 in image at Scale 1. If showing the finish from the back row, I'd get that pattern right before spending time on tiny surface details.

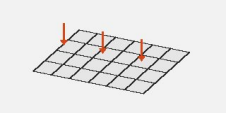
Vectorworks Help · Creating a texture

OBJECT INFO → RENDER

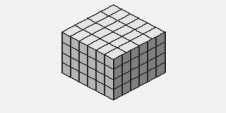
Choose a projection for the geometry

In **Object Info → Render**, **Map Type** controls how the entire finish lands on the object. Image maps such as Base Color and Roughness control the appearance of the finish itself.

Select the textured object, then select **Overall** or the relevant textured face, part or component in the Render tab. The **Map Type** controls how the pattern gets there. The available choices depend on the object.



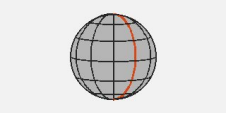
Plane · One projection direction



Auto-Align · One projection per face



Cylinder · One vertical wrap seam



Sphere · Seam and pole convergence

Map Type	What it does	Where to use it
Plane	Projects the image from one flat plane. Geometry at a steep angle to that plane can stretch the pattern.	A deck top, scenic flat or sign face.
Auto-Align Plane	Projects independently and perpendicularly onto each face. The pattern can turn or break at a corner.	A faceted object with several faces that need projection. Check grain direction and joints. Where available, **Follow longest edge** sets the direction of U.
Cylinder	Wraps around an axis. The outer edges of the image meet at a seam.	The side of a column, pipe or drum. Check the top and bottom separately.
Sphere	Wraps around the object with a seam and convergence at the poles.	A round prop or globe. Put a seam and pinching where they will be least visible.
Perimeter	Follows the outline around a supported extrude or sweep.	Scenic fascia wrapping around a platform. Check where the repeat closes. The Overall choice governs when combined with Surface UV on a face.
Surface UV	Uses each surface's own U and V coordinates. These are the two directions along that surface.	A curved or individually textured face where the pattern should follow the surface. Check adjacent faces for alignment. The Overall choice governs when combined with Perimeter on a face.
Roof	Uses the dedicated projection provided for a roof object.	Roof finishes such as shingles.
Imported	Keeps the original mapping of supported imported geometry. The usual mapping adjustments are disabled in this mode.	A mapped SketchUp or 3ds mesh. Change compatible mesh parts to another map type if they need remapping.

Decide what receives the finish

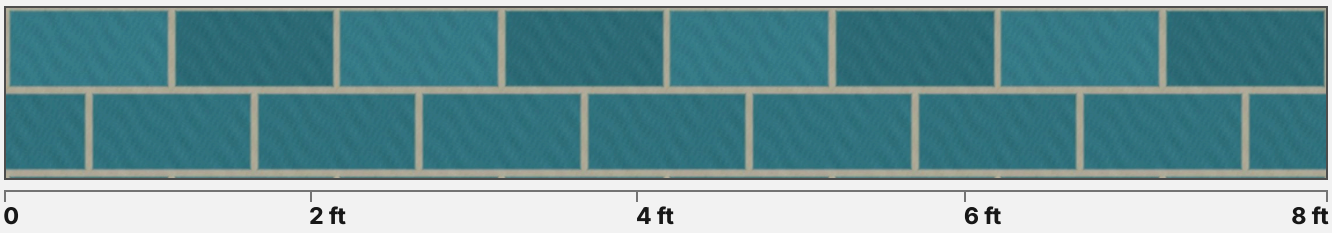
Whole object. Drag the resource onto a supported object or use the Texture tool's **Apply to Object** mode. **One face.** Use **Apply to Face** or hold Cmd on Mac / Ctrl on Windows while dragging a resource onto that face. For recurring assignments, use class or material settings when appropriate. Component-based walls, slabs and other objects expose different controls from a simple extrude.

Projection types and supported objects · Apply by object, face, class or material

REPEAT AND REGISTRATION

Set scale with a known measurement

Measure what the *whole image* represents. In **Edit Texture**, **Texture Size** is the real-world width of one horizontal repetition. Pixel dimensions control image detail. The resource size controls its physical repeat.



Repeat diagram · 24 in texture resource on an 8 ft run. Scale 0.5 gives eight repeats. Scale 1 gives four. Scale 2 gives two.

Texture Size and Set by Image

In the square tile example, the full image represents 24 in. If you know a feature dimension but the full image width is unknown, click **Set by Image**, span that feature with the sizing line, and enter its **Feature Size**. For example, if a 6 in feature spans a quarter of the image width, the full repeat is 24 in.

Scale, Rotation and Offset

Set local **Scale** in Object Info → Render. A value of 2 doubles the projected repeat. **Rotation** turns the projected pattern. **Offset H** and **Offset V** shift it along the mapping axes. Align the grain first, then move the seam or grout line into place.

Attribute Mapping tool

Manipulate the projection directly on compatible objects in Plane, Cylinder, Sphere or Surface UV. Where the tool is unavailable, use the object's Render controls.

Repeat, Flip and world origin

Repeat H/V controls whether the image tiles beyond its first placement. Flip mirrors it. World-origin controls, where available, can help patterns line up across adjacent objects when their scale and projection also agree. Use **Reset to Default Mapping** to remove the selected surface's mapping adjustments.

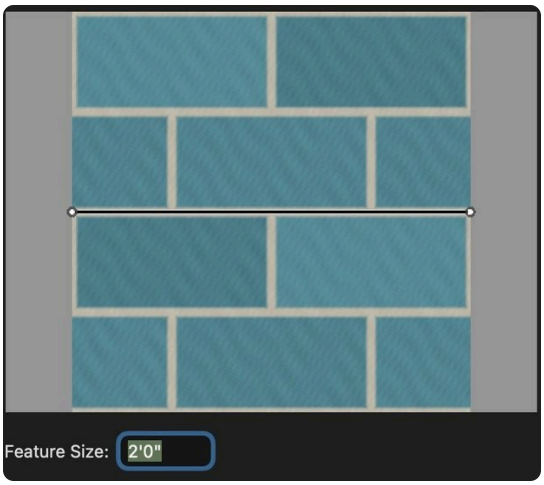
> **A fast seam check.** Preview a wall rather than a sphere to spot the repeated tile. On the model, inspect one corner and one panel joint. If a seam is visible at every repetition, fix the source image. If it is only visible where a cylinder closes, reposition the mapping or check how many repeats fit its circumference.

Texture Size and Set by Image · Object Info mapping controls

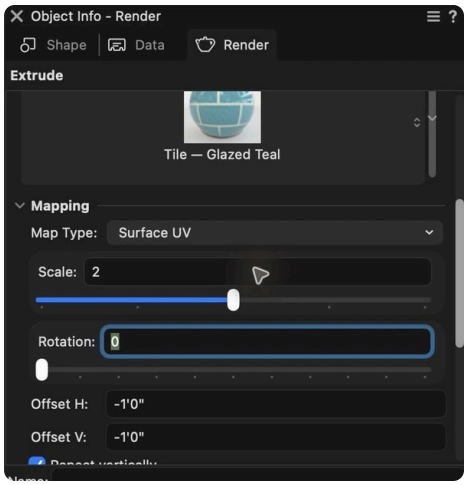
IN VECTORWORKS 2027

Texture Size and mapping in Vectorworks

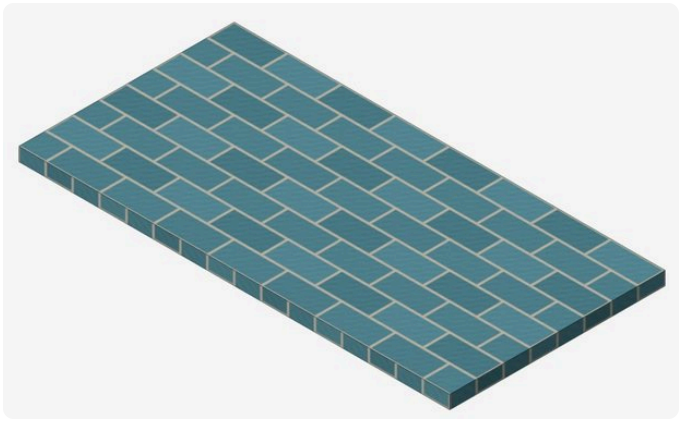
Start in the texture resource to set the physical repeat. Switch to the object's Render tab for adjustments on one instance.



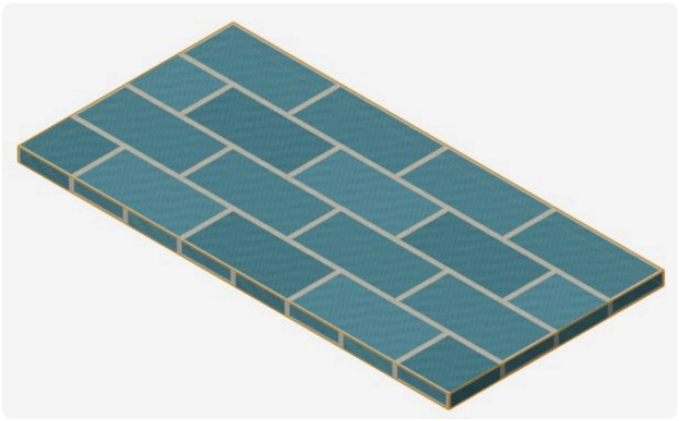
Set Image Size. The line spans the full tile image. Feature Size is 2 ft, so one horizontal repeat is 2 ft.



Object Info → Render. The deck uses Surface UV. The Scale field changes the selected object's repeat.



Scale 1 · Four 24 in repeats along the deck's long edge.



Scale 2 · Two 48 in repeats along the same edge.

Both views use the same 8 × 4 ft extrude, texture resource, view and Shaded render mode. One image repeat contains multiple individual tiles.

COMPARE ONE SETTING

Color and reflection maps

Start with the left render, then look at the right. The object, camera and lighting stay the same so you can see what one change does.

In the first pair, look for tile and grout. The thumbnail marked **Map file** is the image that adds that pattern. In Vectorworks, open the texture from the Resource Manager. **Base → Color** means expand Base, then select Color. The orange outlines show where to click.

Base Color

Edit Texture → Base → Color



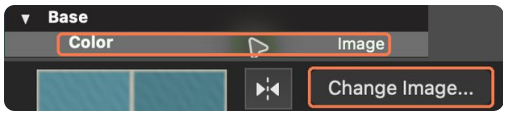
Solid white



Base Color image



Map file



Select Color. Click the image button to add a map or Change Image to replace it.

The image supplies the tile and grout pattern. The highlight and surface shape stay the same. Vectorworks 2027 · Realistic RS preview

Roughness map

Edit Texture → Specular → Roughness



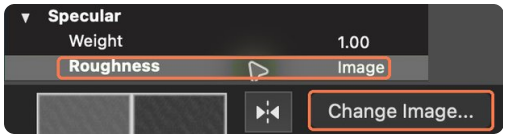
Uniform roughness · 0.45



Roughness image



Map file

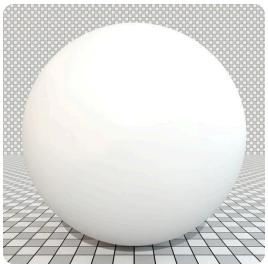


Select Roughness. Click the image button to add a map or Change Image to replace it.

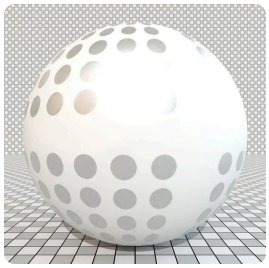
Watch the reflection cross a joint. With the map, the glazed faces show a sharper stripe and the lighter grout scatters it. Vectorworks 2027 · Realistic RS preview

Metalness map

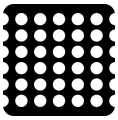
Edit Texture → Base → Metalness



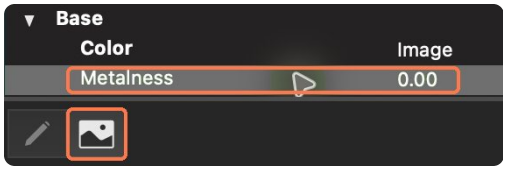
Metalness · 0



Metalness image



Map file



Select Metalness, then click the image button.

The dots in the mask pick up metallic reflections. The rest of the sphere retains its diffuse finish. Vectorworks 2027 · Realistic RS preview

COMPARE ONE SETTING

Highlights and finish layers

Metalness

Edit Texture → Base → Metalness

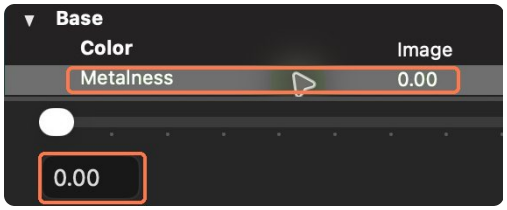


Metalness · 0



Metalness · 1

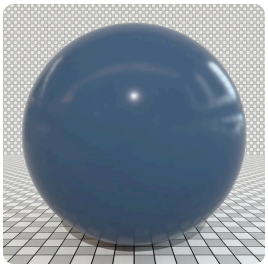
The same white base color reads as a pale solid at 0 and a silver reflector at 1. Roughness stays at 0.45. Vectorworks 2027 · Realistic RS preview



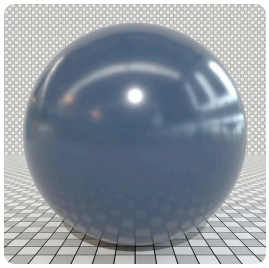
Select Metalness and enter a value.

Specular Weight

Edit Texture → Specular → Weight

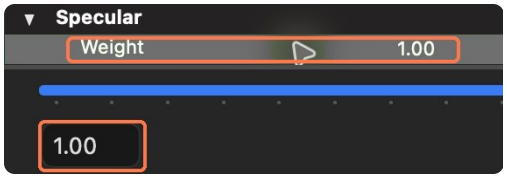


Weight · 0.08



Weight · 1

Look for the highlight on the upper part of the sphere. Raising Weight makes it brighter at the same roughness. Vectorworks 2027 · Realistic RS preview



Select Weight under Specular and enter a value.

Coat Weight

Edit Texture → Coat → Weight

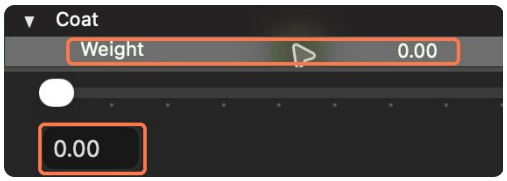


Coat Weight · 0



Coat Weight · 1

A tighter highlight appears on top of the matte base. The base roughness stays at 0.76 in both views. Vectorworks 2027 · Realistic RS preview



Select Weight under Coat and enter a value.

COMPARE ONE SETTING

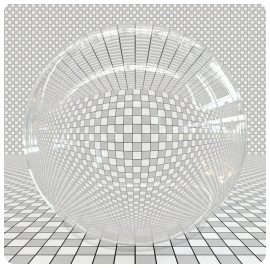
Glass and transmitted light

Transmission Weight

Edit Texture → Transmission → Weight

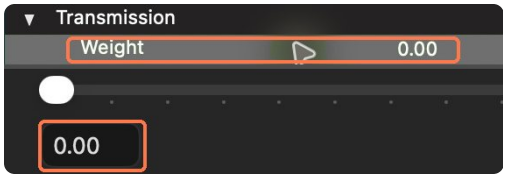


Transmission · 0



Transmission · 1

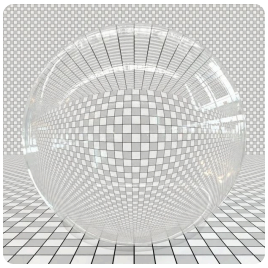
The grid shows through the sphere at 1. The sample geometry and roughness stay the same. Vectorworks 2027 · Realistic RS preview



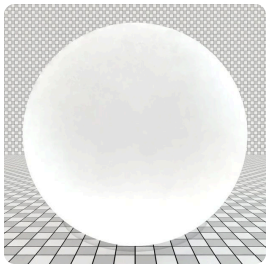
Select Weight under Transmission and enter a value.

Roughness on glass

Edit Texture → Specular → Roughness



Roughness · 0



Roughness · 0.60

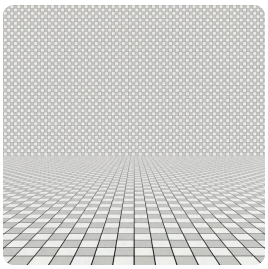
Watch the grid blur as roughness rises. Transmission stays at 1. Vectorworks 2027 · Realistic RS preview



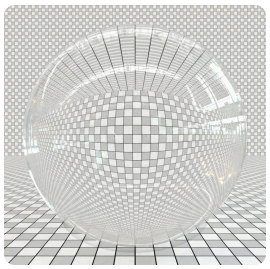
Set Specular Roughness to 0.60 for the frosted view.

Index of refraction

Edit Texture → Specular → IOR



IOR · 1.00



IOR · 1.50

At 1.00 the grid reads straight through the sphere. At 1.50 the curved surface bends the grid. Vectorworks 2027 · Realistic RS preview



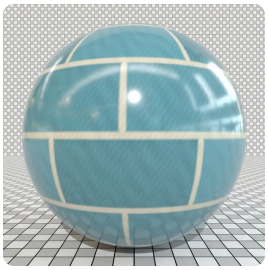
Select IOR and enter a value.

COMPARE ONE SETTING

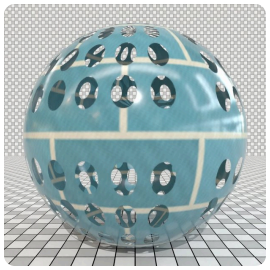
Cutouts and illuminated surfaces

Opacity mask

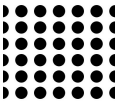
Edit Texture → Geometry → Opacity



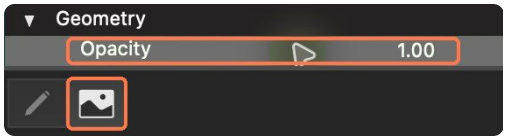
Solid face



Opacity mask applied



Map file

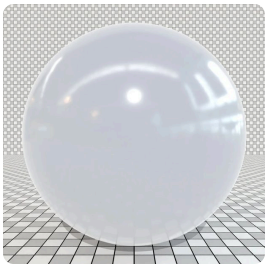


Select Opacity, then click the image button.

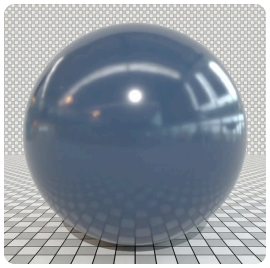
The dark mask areas open holes in the tile-covered sphere. Put the grayscale mask in the image's alpha channel for Vectorworks. Vectorworks 2027 · Realistic RS preview

Emission map

Edit Texture → Emission → Luminance



Uniform · 300 nits



Luminance image



Map file



Select Luminance, then click the image button.

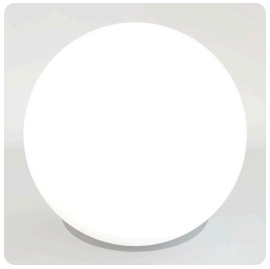
The same lit sample renders much dimmer with this image than at 300 nits. Test the graphics on a flat sign face to judge legibility and brightness. Vectorworks 2027 · Realistic RS preview

Emission Luminance

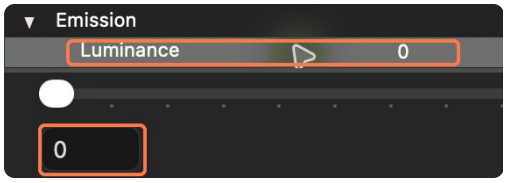
Edit Texture → Emission → Luminance



Luminance · 0 nits



Luminance · 300 nits



Select Luminance and enter the value in nits.

The sphere brightens under the same preview lighting. Check spill on nearby scenery separately in your render. Vectorworks 2027 · Realistic RS preview

COMPARE ONE SETTING

Surface detail and silhouette

Grayscale height as bump

Edit Texture → Geometry → Bump/Normal



Bump off



Grayscale height image



Map file



Load the height image and set Map Type to Bump Map.

Light picks out the height difference at the grout lines. The sphere's outline stays put. Vectorworks 2027 · Realistic RS preview

RGB normal map

Edit Texture → Geometry → Bump/Normal



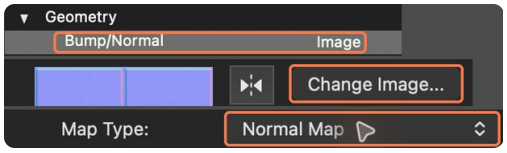
Normal map off



RGB normal image



Map file



Load the RGB image and set Map Type to Normal Map.

The RGB map redirects highlights near the tile edges. Roughness stays at 0.15 and the mapped sample uses Strength 2. Vectorworks 2027 · Realistic RS preview

Bump strength

Edit Texture → Geometry → Bump/Normal



Bump off



Bump Strength · 1



With a bump map loaded, adjust Strength.

The tile gains shading detail within the same outline. The same grayscale height image supplies the relief. Vectorworks 2027 · Realistic RS preview

Displacement

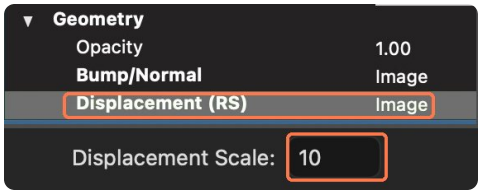
Edit Texture → Geometry → Displacement (RS)



Displacement off



Displacement Scale · 10



Load the image, then adjust Displacement Scale.

Look where the grout meets the sphere's edge. Bump stays fixed in both views so you can judge the change in silhouette. Vectorworks 2027 · Realistic RS preview

COMPARE ONE SETTING

Fabric sheen and pattern placement

Fuzz Weight

Edit Texture → All → Fuzz (RS) → Weight



Fuzz Weight · 0



Fuzz Weight · 1

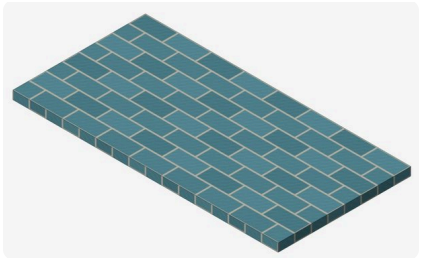
Look for the soft rim around the sphere. It grows brighter as Fuzz Weight increases under the same preview lighting. Vectorworks 2027 · Realistic RS preview



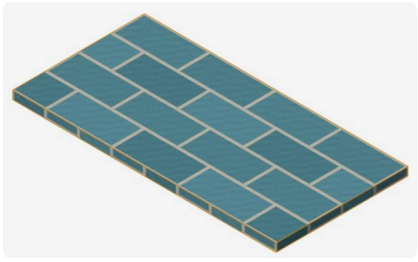
Choose All, expand Fuzz (RS), and select Weight.

Mapping Scale

Object Info → Render → Mapping → Scale

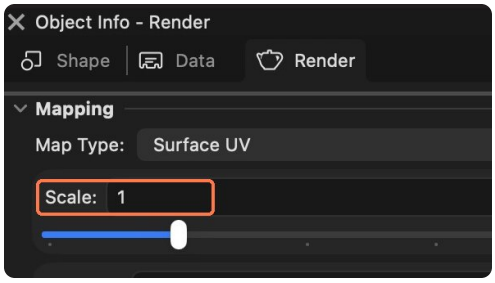


Scale 1 · 24 in repeat



Scale 2 · 48 in repeat

The same eight-foot deck shows four repeats at Scale 1 and two at Scale 2. Vectorworks 2027 · Shaded



Select the textured object and enter Scale under Mapping.

Mapping Rotation

Object Info → Render → Mapping → Rotation

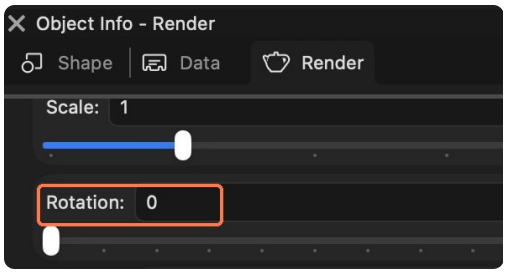


Rotation · 0°



Rotation · 90°

The tile courses turn a quarter turn. Repeat size stays fixed. Vectorworks 2027 · Shaded



Select the textured object and enter Rotation under Mapping.

WORKED EXAMPLE · GLASS

Frosted glazing



Clear glass
Vectorworks library · Glass Clear



Frosted glass
Vectorworks library · Glass Frosted-Attr

The library swatches show the same test shape with two glass presets. Compare the definition of the bands viewed through each surface.

Place a checkerboard or window frame behind the pane. In **Base**, keep Metalness at 0. Set **Transmission → Weight** near 1 and Color near white. Start with **Specular → IOR** around 1.5. Duplicate the texture and change only **Specular → Roughness** to compare clear and frosted faces. Use **Geometry → Thin Walled** for a single surface. Test solid glazing with its modeled thickness.

Check the difference. Frosting softens the pattern behind the glass. If you can see right through cut holes with hard edges, check whether an opacity mask was used.

WORKED EXAMPLE · METAL

Brushed brass



Brushed brass
Vectorworks library · Metal Brass Brushed

Set **Base → Metalness** to 1 for exposed brass and use a warm Base Color. Give it a bright rectangular surface or environment to reflect. Compare two **Specular Roughness** values with the lighting fixed. Add **Roughness Anisotropy** for a directional brushed highlight and check its orientation on the rail. For painted hardware, set Metalness to 0. On chipped paint, a metalness map can reveal only the exposed metal.

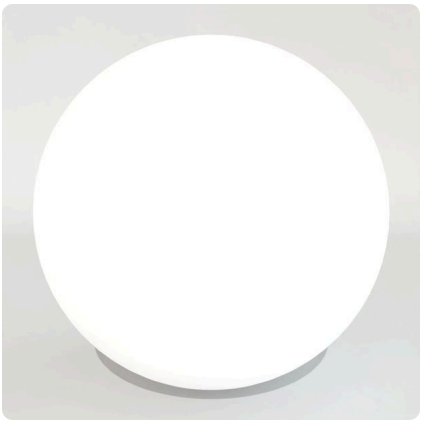
Check the difference. A narrow reflection reads as polished. A broad reflection reads as satin. If the rail looks flat in both versions, improve what it can reflect before changing the texture.

WORKED EXAMPLE · GLOW

Light from a marquee face



0 nits
Vectorworks · Realistic RS-Interior



300 nits
Vectorworks · Realistic RS-Interior · same preview light

Both Vectorworks previews use the same lighting. At 300 nits the sphere appears brighter and its shaded side becomes harder to see.

Give the sign housing an opaque finish. Apply the glow texture to the sign face only. Under **Emission**, choose a warm Color and compare 0 with a higher **Luminance**, such as 300 nits. A luminance map can limit the glow to lettering or artwork.

Check the difference. Turn off the stage light and verify the face still reads as lit. In your final render style, check light spill on nearby scenery separately. Exposure and render settings affect how the glow appears.

WORKED EXAMPLE · FABRIC

A soft highlight across a drape



Woven denim
Vectorworks library · Textile Denim Blue

The woven blue swatch is a starting point for scale and texture. For a velvet drape, model or use existing drape folds. Start with a deep **Base Color**, Metalness 0, and moderately high **Specular Roughness**. Switch to **All** and try a related tint in **Fuzz → Color**. Compare two Fuzz Weight values while keeping the camera, texture color and raking light fixed.

Check the difference. Look for a soft sheen along the folds in Realistic RS. If the whole curtain reads as polished plastic, back off the sharp specular response. For translucent backing, test Transmission separately with a light behind the cloth.

WORKED EXAMPLE · ROCK

Relief on a carved scenic rock



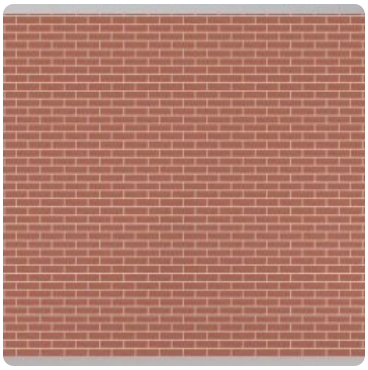
Gray stone
Vectorworks library · Stone Gray

The stone swatch shows surface grain on a simple sphere. To test a carved scenic rock, model the large shape and important breaks. Use a stone Base Color map, Metalness 0 and broad specular highlights. Load a matching grayscale height map or RGB normal map into **Geometry → Bump/Normal** for pores and small fractures. Try **Displacement** with a height map for a second test if the ridges need to affect the rendered edge.

Check the difference. Compare a straight-on view with a grazing view. Lower displacement if the profile looks exaggerated. Keep geometry for the larger forms that must read in drawings or close-up views.

WORKED EXAMPLE · WALL

Pattern scale and seams



Running-bond brick
Vectorworks library · Brick Modular Running Bond

Use the brick courses in this Vectorworks preview as a visual ruler. On a wall, compare course height with a known dimension and check the pattern across a return.

For a wall with glazed tile, I'd start by checking the real-world width of the pattern and using matching **Base Color** and **Roughness** maps. Use the Texture tool's **Apply to Face** mode to dress the audience-facing flat and its return individually. In **Object Info → Render**, use **Rotation** to align the courses and **Offset H/V** to land grout lines at the corner and at panel joints. Choose a separate finish for the backs of the flats.

Check the difference. At Scale 1, four repeats fit along an 8 ft run. At Scale 2, two fit. Compare the actual Vectorworks deck screenshots in Texture Size and mapping in Vectorworks to see the same scale change on an extrude.

CHECKS BEFORE THE FINAL RENDER

Diagnose what you see

Use **Shaded** to check placement, size and broad material appearance. Test the finished surface with the **Realistic RS** render-style type wherever the full PBR response matters. A photograph, the editor's preview and the final stage view all have different lighting.

Symptom	First check	Next move
Object is white or wireframe	Is it filled 3D geometry in Shaded with textures enabled?	Check the actual object or face assignment in the Render tab.
Pattern is the wrong size	Check the resource's horizontal Texture Size against a known dimension.	If only one object needs correction, check its local Scale. Use Rotation and Offset after the repeat reads correctly.
Pattern streaks around a return	Check whether a Plane projection is hitting a perpendicular face.	Try Auto-Align Plane or a separately mapped face. Use Perimeter if a supported extrude needs a continuous wrap.
Metal or gloss looks dull	Check the light or environment being reflected.	Verify Metalness for the visible substrate and check if an inverted glossiness map was supplied.
Grout looks raised or the detail is missing	Check whether the imported file is height or RGB normal data and whether it matches the color map.	Try a raking light. For inverted-looking RGB normals, check the source convention. For too much relief, lower its intensity or use a gentler map.
Glass, fuzz or glow changes between previews	Check the render style and the property's (RS) label.	Test Realistic RS where supported, then check under the actual scenic lighting. Inspect emission spill and transmission separately.

Keep the file workable. Image resolution affects file size and rendering performance. Use only enough detail for the closest intended view. Duplicate or archive before downsizing a map used in several textures. In a subscribed installation, **Tools → Check File Health → Texture Size** can identify oversized texture images. A **Surface Hatch** is a separate option for communicating the pattern in Hidden Line drawings.

Further reference

- Adobe Substance 3D · OpenPBR · Visual comparisons of material properties
- Vectorworks 2027 new features · The texture modernization release note
- Vectorworks render styles · Shaded, Realistic and Realistic RS
- Vectorworks file health · Texture resolution checks
- Basics of Textures · Brandon PT Davis's walkthrough of legacy texture concepts