

## 12.1.21 Editors - Geometry Nodes Editor - Header - Add Menu - Texture

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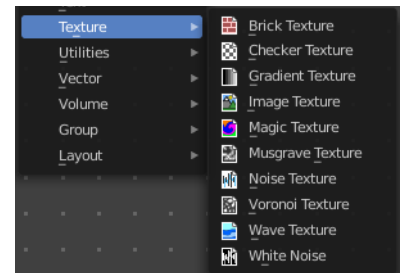
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## Add menu - Texture

Texture nodes.



### Brick Texture

The Brick Texture node is used to add a procedural brick texture.

#### Inputs

##### **Color 1, Color 2 and Mortar**

Color of the bricks and mortar.

##### **Scale**

Overall texture scale.

##### **Mortar Size**

The size of the filling between the bricks known as “mortar”; 0 means no mortar.

##### **Mortar Smooth**

Blurs/softens the edge between the mortar and the bricks. This can be useful with a texture and displacement textures.



## ***Bias***

The color variation between Color 1/2. Values of -1 and 1 only use one of the two colors; values in between mix the colors.

## ***Brick Width***

The width of the bricks.

## ***Row Height***

The height of the brick rows.

## **Properties**

### ***Offset***

Determines the brick offset of the various rows.

### ***Frequency***

Determines the offset frequency. A value of 2 gives an even/uneven pattern of rows.

### ***Squash***

Amount of brick squashing.

### ***Frequency***

Brick squashing frequency.

## **Outputs**

### ***Color***

Texture color output.

### ***Factor***

Mortar mask (1 = mortar).

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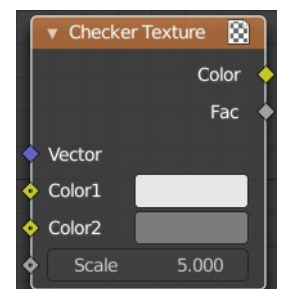
## **Checker Texture**

Adds a checker texture.

## **Inputs**

### ***Vector***

Vector input.



## **Color 1**

The first checker color.

## **Color 2**

The second checker color.

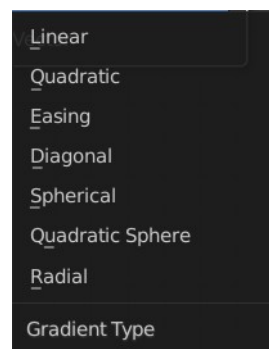
## **Scale**

The scale of the checker texture.

## **Properties**

### **Gradient Type**

What gradient type to use.



## **Output**

### **Color**

The checker texture output.

### **Factor**

Factor output.

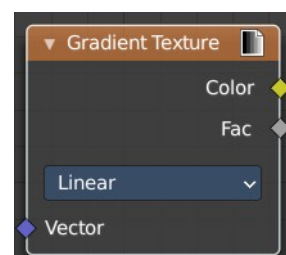
## **Gradient Texture**

Add a gradient texture.

## **Inputs**

### **Vector**

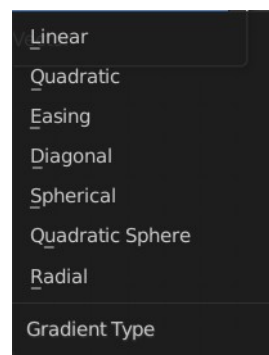
Vector input.



## **Properties**

### **Gradient Type**

What gradient type to use.



## Output

### **Factor**

Factor output.

### **Color**

Color output.

## Image Texture

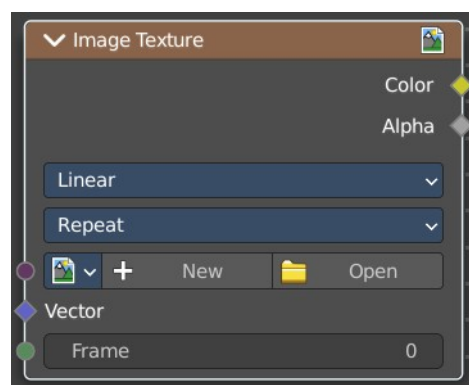
The Image Texture is used to add an image file as a texture.

### Inputs

#### **Image**

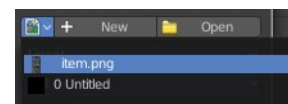
The Image input. Open an image, choose an existing image, or generate a new image.

When you click at Open then a file browser opens up. When you click at New then a popup dialog opens. up where you can create a new image.



#### **Image Browser**

The image browser at the left allows you to pick an already existing texture.



#### **New/Open**

Create a new image, or open an image.

#### **Image Edit Box**

The name of the image.

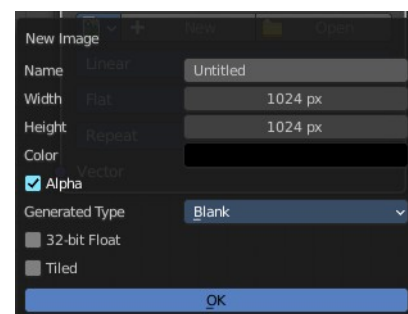
#### **Fake User**

Keep the texture in the blend file even if it is not used.

#### **New Image**

Create a new image.

The settings of this image can be further adjusted in the sidebar of the UV Editor.



## Open Image

Open an image.

## Remove

Remove the image. Note that it is still in the blend file as long as it has users, and as long as you haven't purged it. By saving and reloading the blend file for example.

## Vector

Texture coordinate for texture look-up. If this socket is left unconnected, UV coordinates from the active UV render layer are used.

## Frame

The frame of an image sequence, if available.

## Properties

### Interpolation

Method to scale images up or down for rendering.

#### Linear

Regular quality interpolation.

#### Closest

No interpolation, use only closest pixel for rendering pixel art.

#### Cubic

Smoother, better quality interpolation. For bump maps this should be used to get best results.

### Extension

Extension defines how the image is extrapolated past the original bounds:

#### Repeat

Will repeat the image horizontally and vertically giving tiled-looking result.

#### Extend

Will extend the image by repeating pixels on its edges.

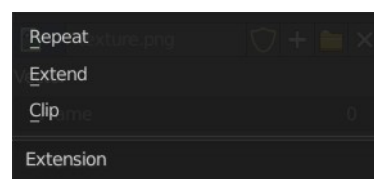
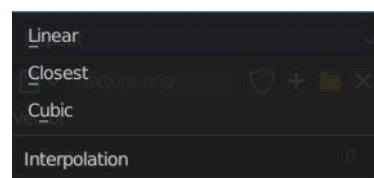
#### Clip

Clip to the original image size and set all the exterior pixels values to transparent black.

## Outputs

### Color

RGB color from image. If the image has alpha, the color is premultiplied with alpha if the Alpha output is used,





and unpremultiplied or straight if the Alpha output is not used.

## ***Alpha***

Alpha channel from image.

---

## **Magic Texture**

The Magic Texture node is used to add a procedural psychedelic color texture.

### **Inputs**

#### ***Vector***

Texture coordinate to sample texture at; defaults to Generated texture coordinates if the socket is left unconnected.

#### ***Scale***

Scale of the texture.

#### ***Distortion***

Amount of distortion.

### **Properties**

#### ***Depth***

Number of iterations.

### **Outputs**

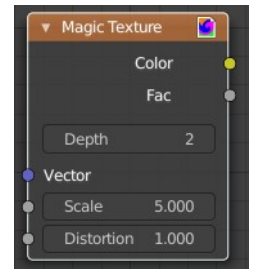
#### ***Color***

Texture color output.

#### ***Factor***

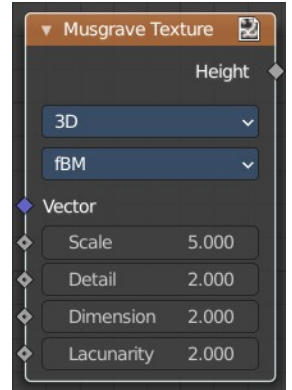
Texture intensity output.

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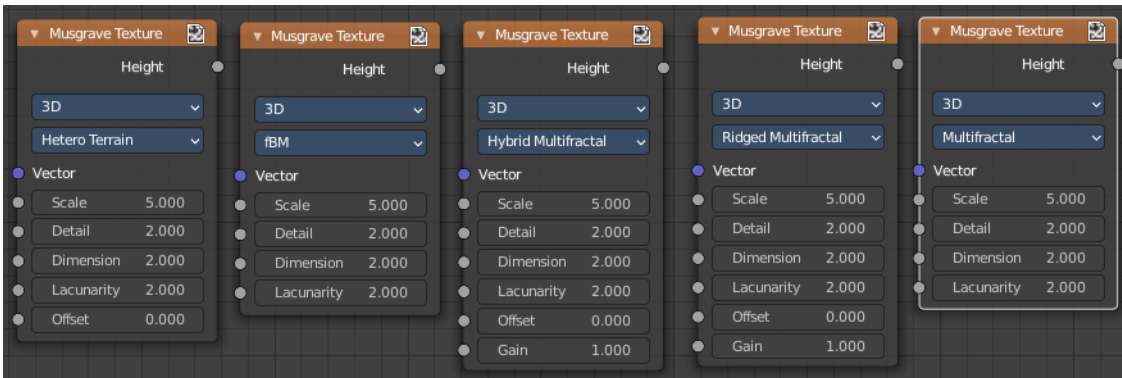
## Musgrave Texture

The Musgrave Texture node evaluates a fractal Perlin noise at the input texture coordinates. Compared to the noise texture, the Musgrave Texture allows greater control over how octaves are combined.



### Inputs

The available input types change, dependent of the chosen Type and dimensions.



### Vector

Texture coordinate to evaluate the noise at. Defaults to Generated texture coordinates if the socket is left unconnected.

### W

Texture coordinate to evaluate the noise at. Appears with 4 dimensions.

### Scale

Scale of the base noise octave.

### Detail

Number of noise octaves. The fractional part of the input is multiplied by the magnitude of the highest octave. Higher number of octaves corresponds to a higher render time.

### Dimension

The difference between the magnitude of each two consecutive octaves. Larger values corresponds to smaller magnitudes for higher octaves.

## **Lacunarity**

The difference between the scale of each two consecutive octaves. Larger values corresponds to larger scale for higher octaves.

## **Offset**

An added offset to each octave, determines the level where the highest octave will appear.

## **Gain**

An extra multiplier to tune the magnitude of octaves.

## **Properties**

### **Dimensions**

The dimensions of the space to evaluate the noise in.

#### **1D**

Evaluate the noise in 1D space at the input W.

#### **2D**

Evaluate the noise in 2D space at the input Vector. The Z component is ignored.

#### **3D**

Evaluate the noise in 3D space at the input Vector.

#### **4D**

Evaluate the noise in 4D space at the input Vector and the input W as the fourth dimension.

Higher dimensions corresponds to higher render time, so lower dimensions should be used unless higher dimensions are necessary.

## **Type**

Type of the Musgrave texture.

### **fBM (fractal Brownian Motion)**

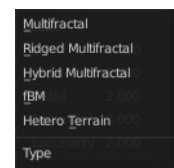
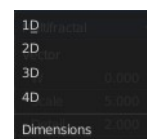
Produces an unnatural homogeneous and isotropic result. Uses an additive cascade, the values are simply added together.

### **Multifractal**

The result is more uneven (varies with location), more similar to a real terrain. Uses a multiplicative cascade.

### **Hybrid Multifractal**

Creates peaks and valleys with different roughness values, like real mountains rise out of flat plains. Combines the additive cascade with a multiplicative cascade.



## Ridged Multifractal

Creates sharp peaks. Calculates the absolute value of the noise, creating “canyons”, and then flips the surface upside down.

## Hetero Terrain (Heterogeneous Terrain)

Similar to Hybrid Multifractal creates a heterogeneous terrain, but with the likeness of river channels.

## Outputs

### Height

Greyscale texture output.

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## Noise Texture

Add a noise texture.

## Inputs

### Vector

Vector input

### Scale

The scale of the noise texture.

### Detail

The detail of the noise texture.

### Roughness

The roughness of the noise texture.

### Distortion

The distortion of the noise texture.

## Properties

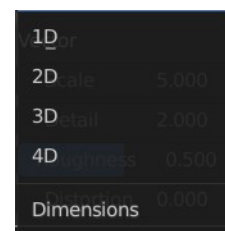
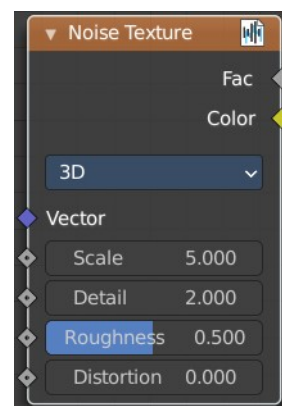
### Dimensions

How many dimensions to use for the noise texture.

## Output

### Factor

Factor output.



## Color

Color output.

## Voronoi Texture

Add a voronoi texture.

### Inputs

#### Vector

Vector input

#### Scale

The scale of the voronoi texture.

#### Randomness

The detail of the voronoi texture.

### Properties

#### Dimensions

How many dimensions to use for the voronoi texture.

#### Feature Output

Feature output mode.

#### F1

Computes the distance to the closest point as well as its position and color.

#### F2

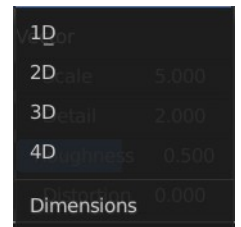
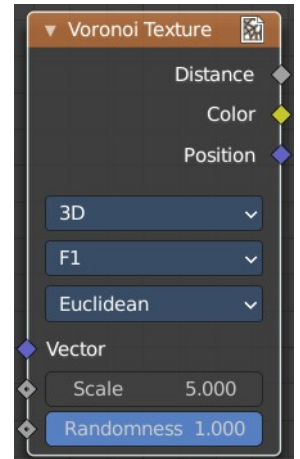
Computes the distance to the second closest point as well as its position and color.

#### Smooth F1

Smoothed version of F1. Weighted sum of neighbor voronoi cells.

#### Distance to Edge

Computes the distance to the edge of the voronoi cell.

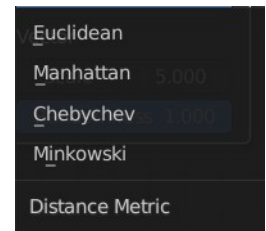


## N-Sphere Radius

Computes the radius of the n-sphere inscribed in the voronoi cell.

### **Distance Metric**

Distance calculation mode. The modes are different mathematical methods.



## Output

### **Factor**

Factor output.

### **Color**

Color output.

## Wave Texture

The Wave Texture node adds procedural bands or rings with noise distortion.

## Inputs

### **Vector**

Texture coordinate to sample texture at; defaults to Generated texture coordinates if the socket is left unconnected.

### **Scale**

Overall texture scale.

### **Distortion**

Amount of distortion of the wave (similar to the Marble texture in Blender Internal).

### **Detail**

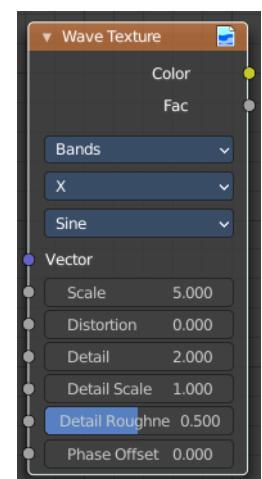
Amount of distortion noise detail.

### **Detail Scale**

Scale of distortion noise.

### **Detail Roughness**

Adds a roughness noise.



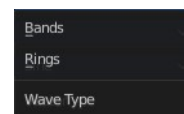
## ***Phase Offset***

Set an offset for the phase.

## **Properties**

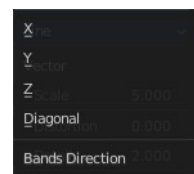
### ***Wave Type***

Bands or Rings shaped waves.



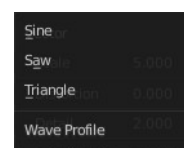
### ***Bands direction***

In which direction the bands should point.



### **Wave Profile**

Controls the shape and look of the wave type.



#### **Saw**

Uses a saw tooth profile.

#### **Sine**

Uses the standard sine profile.

#### **Triangle**

Uses a triangle shape.

## **Outputs**

### ***Color***

Texture color output.

### ***Factor***

Texture intensity output.

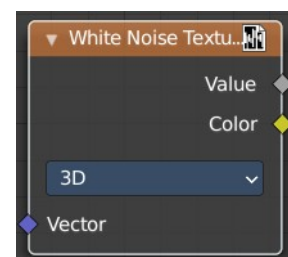
## **White Noise Texture**

Add a white noise texture.

## **Inputs**

### ***Vector***

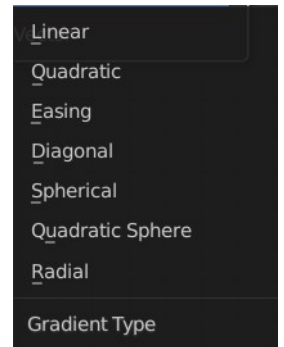
Vector input.



## Properties

### ***Gradient Type***

What gradient type to use.



## Output

### ***Vector***

Factor output.

### ***Color***

Color output.