

3.4.1.3.2.1 Editors - Image Video - UV Image Editor - Texturing - Procedural Textures - Introduction

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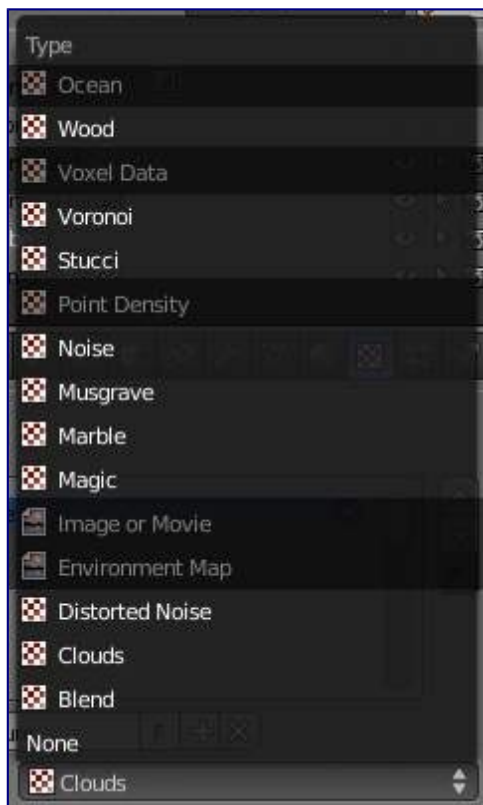
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Procedural Textures

- Procedural Textures
- Ocean
- Blend
- Clouds
- Distorted Noise
- Magic
- Marble
- Musgrave
- Noise
- Stucci
- Voronoi
- Wood

Procedural Textures



The Texture Type list in the Texture panel of the Texture Buttons. (Non procedural textures darkened out.)

Procedural textures are textures that are defined mathematically. They are generally relatively simple to use, because they don't need to be mapped in a special way - which doesn't mean that procedural textures can't become very complex.

These types of textures are 'real' 3D. By that we mean that they fit together perfectly at the edges and continue to look like what they are meant to look like even when they are cut; as if a block of wood had really been cut in two. Procedural textures are not filtered or anti-aliased. This is hardly ever a problem: the user can easily keep the specified frequencies within acceptable limits.

These are the available types:

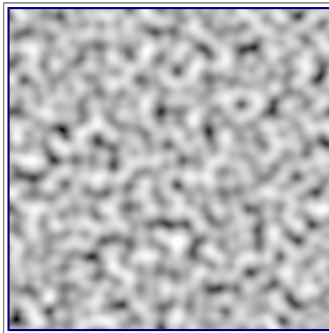
- *Blend*
- *Clouds*
- *Distorted Noise*
- *Magic*
- *Marble*
- *Musgrave*
- *Noise*
- *Stucci*
- *Voronoi*
- *Wood*

Common options

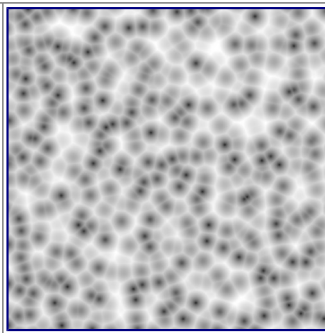
Noise Basis

Each noise-based Blender texture (with the exception of Voronoi and simple noise) has a *Noise Basis* setting that allows the user to select which algorithm is used to generate the texture. This list includes the original Blender noise algorithm. The *Noise Basis* settings makes the procedural textures extremely flexible (especially *Musgrave*).

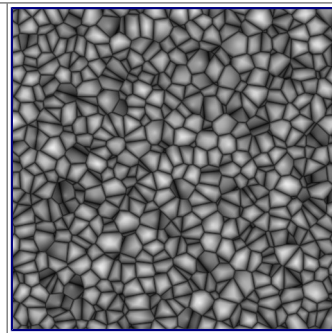
The *Noise Basis* governs the structural appearance of the texture :



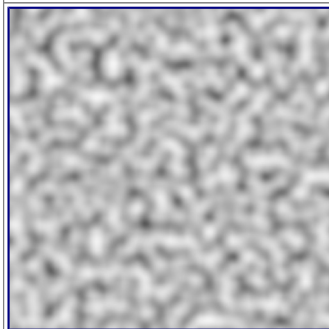
Blender Original



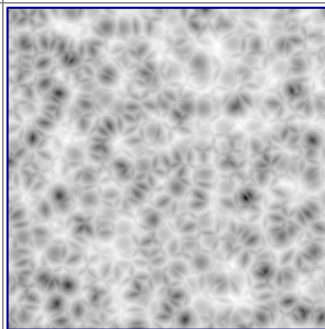
Voronoi F1



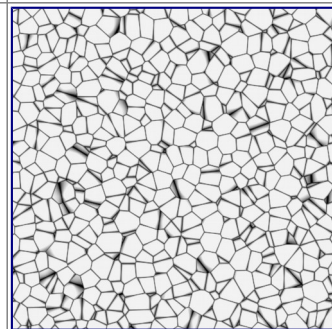
Voronoi F2-F1



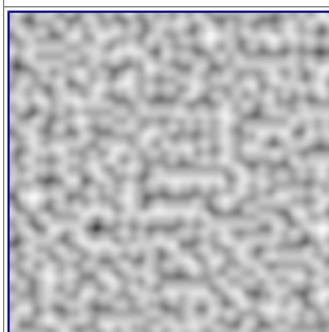
Original Perlin



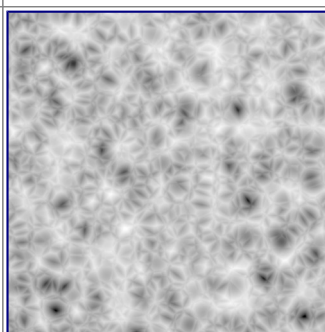
Voronoi F2



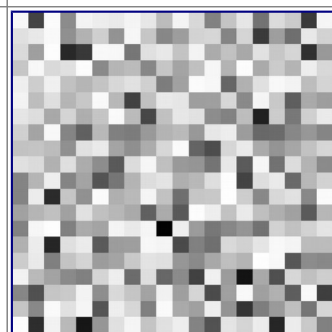
Voronoi Crackle



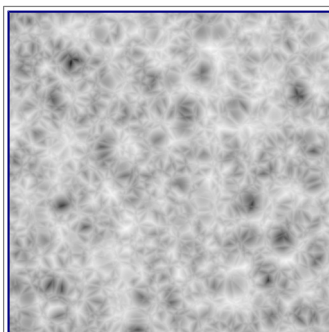
Improved Perlin



Voronoi F3



Cell Noise



Voronoi F4

There are two more possible settings for *Noise Basis*, which are relatively similar to *Blender Original*: Improved Perlin and Original Perlin

Nabla

Almost all procedural textures in Blender use derivatives for calculating normals for texture mapping (with as exception *Blend* and *Magic*). This is important for Normal and Displacement Maps. The strength of the effect is controlled with the *Nabla* Number Button.

Hints

Use the size buttons in the *Mapping* panel to set the size that the procedural textures are mapped to.

Procedural textures can either produce colored textures, intensity only textures, textures with alpha values and normal textures. If intensity only ones are used the result is a black and white texture, which can be greatly enhanced by the use of ramps. If on the other hand you use ramps and need an intensity value, you have to switch on *No RGB* in the *Mapping* panel.