PxrFractal

Like all texture style nodes, this node takes a manifold that applies either a 2D placement using UVs or 3D projection to apply a fractal texture. The default behavior if no manifold is attached is to apply over P in 3D.

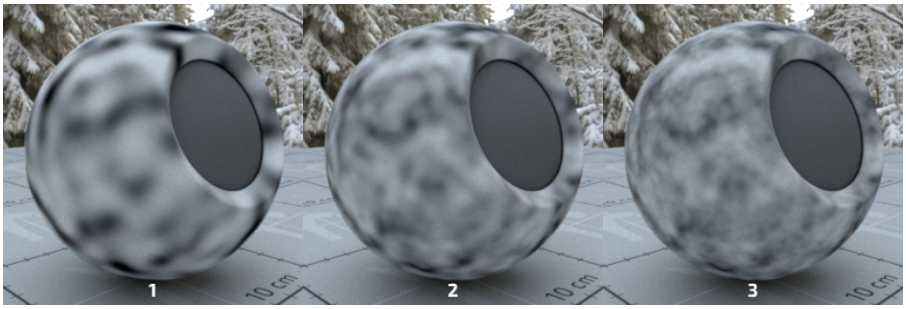
Input Parameters

Surface Position

The noise can be computed based on the **Current Position** or the **Undisplaced Position** (the position of the surface prior to displacement).

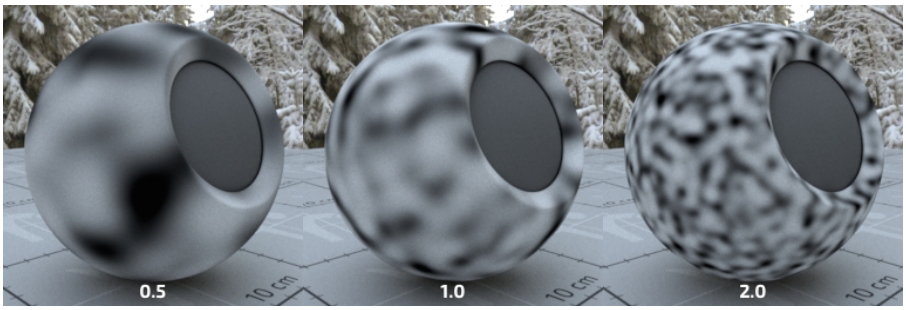
If you want your displacement and shading patterns to match, use the **Undisplaced Position**.

Layers



The number of noise layers used. More layers add successively more noise, creating a more detailed pattern.

Frequency



Sets the lowest (starting) frequency of the noise layers.

Lacunarity

The scale used to determine the frequency of each successive layer of noise. Smaller numbers will cause the layers to be more closely spaced in frequency. Larger values will space them further apart.

Dimension

The frequency exponent. This value is used to scale the magnitude of each successive layer of noise using the formula1/f^(3-2*Dimension); where f is the frequency of the noise being used for a given layer. It's called dimension since this value relates to the fractal dimension. Bigger values are rougher, smaller values are smoother.

Erosion

The frequency exponent range. Negative values will smooth out the low valued areas, and positive values will smooth the high valued ones. The frequency exponent specified by the dimension is itself offset as a function of the noise magnitude. This value adjusts that offset. This determines the so-called crossover scale of the fractal. 0 gives a uniform appearance.

Variation

This value controls which particular variation of the appearance you get - without altering the qualities of the appearance determined by the other controls. So, for example, you can use this to animate the appearance by connecting this to Time, or create several unique instances of the appearance by setting this to different values.

Manifold

The manifold over which to apply the noise. Defaults to P.

Adjust Output

Color Scale

A multiplier for the color values in a texture, can be used to adjust brightness or manipulate individual color channels

Color Offset

Apply an offset to the result, shifting the colors of the result

Alpha Scale

A multiplier for the alpha channel, useful when the alpha is used to drive a parameter

Alpha Offset

An offset for the alpha channel, useful when the alpha is used to drive a parameter

Output Parameters

resultF
The result of fractal texture as a float.

resultRGB

The fractal texture as a color.