

# PxrFlakes

? Unknown Attachment

*Car Paint with flakes and coating.*

Produces a bumped normal that simulates flake-like results in specular or reflective material effects. Connecting this to a the Bump Normal parameter of PxrSurface can create metallic fleck paint.

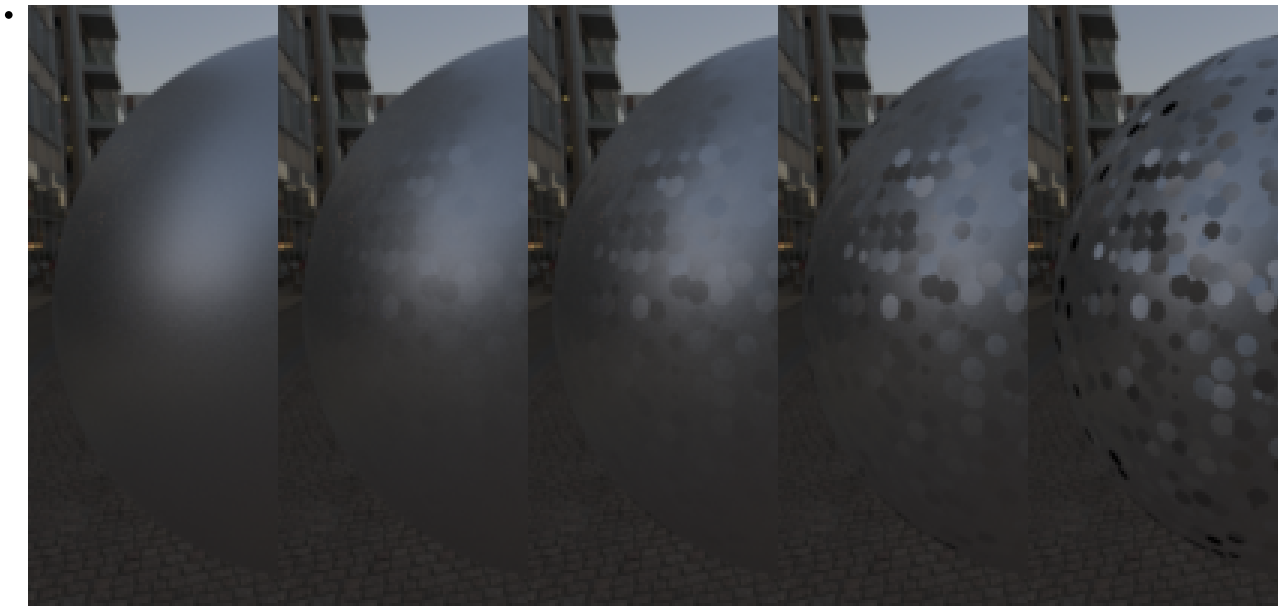
## Input Parameters

### Input Normal

Connect your bump pattern here if you wish to add flakes on top of it. Ignored if not connected.

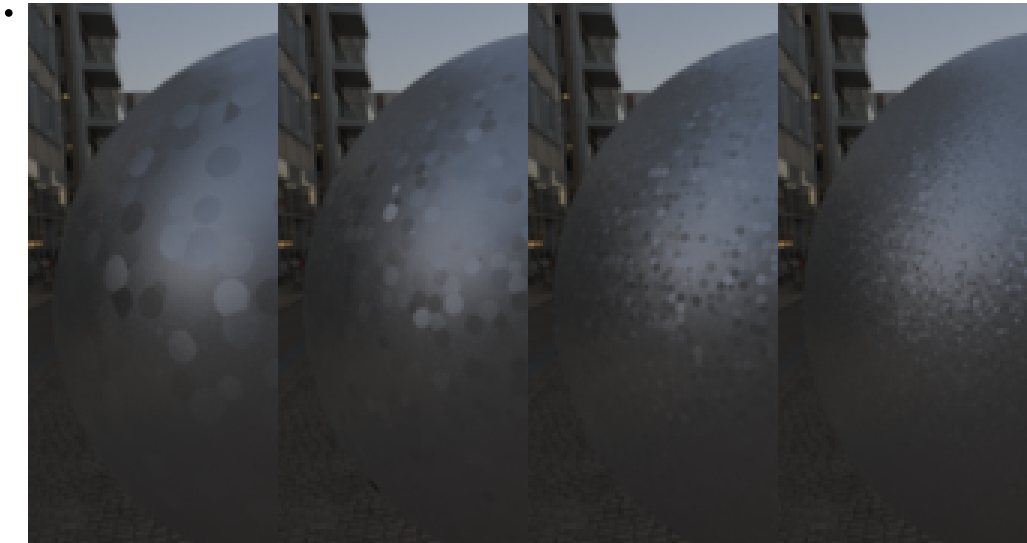
### Flake Randomness

This increases the distribution of flake normals, or their deviation from the base normal.



### Flake Frequency

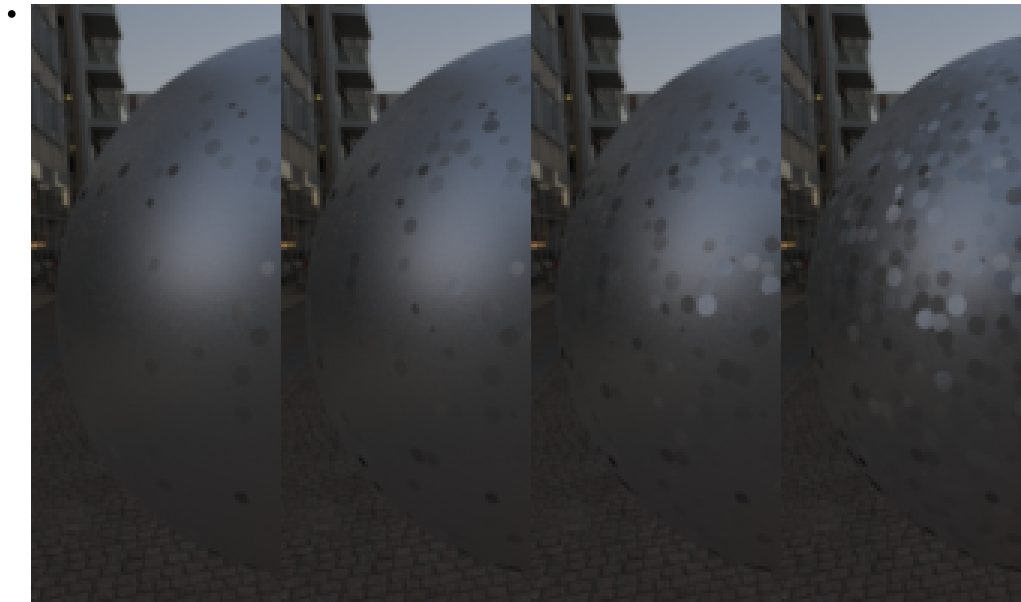
Changes the global size of the metal flake features.





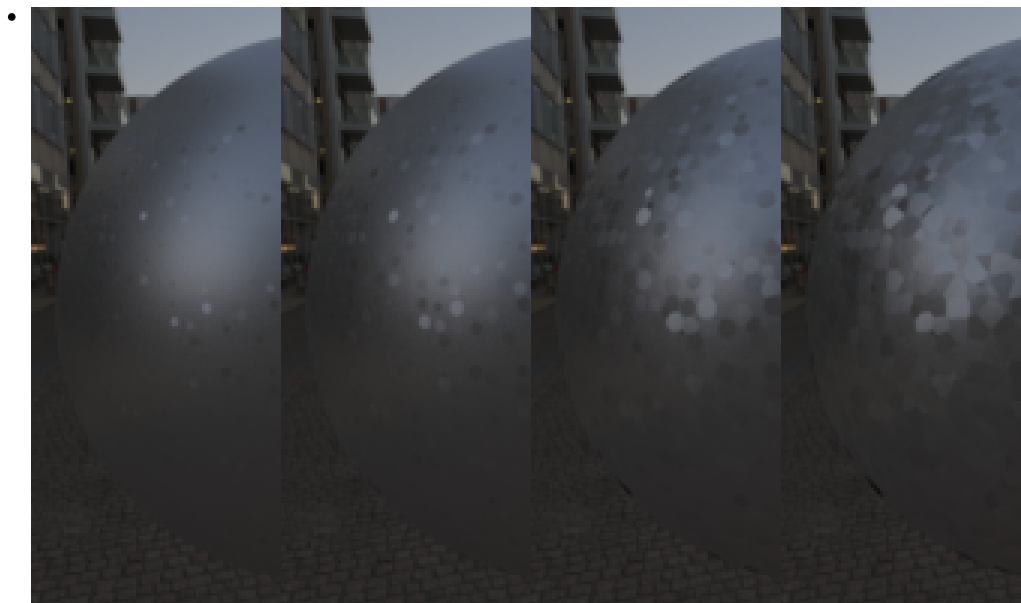
### Flake Density

Changes the number of metal flakes for a given area. Valid between 0 (no flakes) and 1 (all flakes).



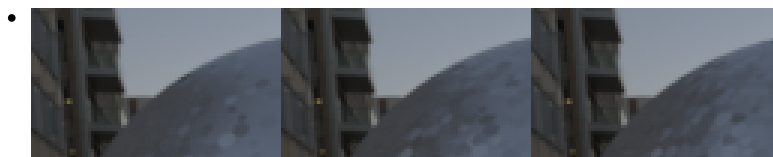
### Flake Size

Changes the size of metal flakes. Pushing the value above one will create something akin to galvanized metal.



### Octaves

Number of octaves of noise to calculate flakes. Most of the time, 1 is enough.





### Jitter

Jitters the flake's position. 0.0 gives a grid-like organisation and 1.0 looks very random.

### Validate Normals

Make sure flakes normals are always in the same hemisphere as the original normal.

### Match C++ patterns

Match RenderMan 23 C++ scenes but may slow down your render. Use only when necessary.

### Manifold

The manifold over which to apply the flakes.

The default (when there is no connected manifold) is  $\mathbb{P}$  in *object* space. This will work fine if your object is not deforming. If your object is deforming :

- Add a `__Pref` primvar to your geometry in its un-deformed state.
- Create a [PxrManifold3D](#) node and connect it to the [PxrFlakes](#) node.
- In the manifold's *Pref* field enter: `__Pref`
- In the manifold's *Coordinate System* field enter: `object`

### Output Parameters

#### resultN

The bumped normal.

#### resultA

The flakes' mask. This is a black and white mask that may allow you to tint flakes or change their roughness, for example.