

Oso Master Shader 1

OMS1 is a modified version of Iray Uber Shader PBR Metallicity.

The biggest change is an Overlay layer which has its own Metallicity, Translucency, Refraction, Top Coat, Luminosity, and more.

Remember that in the surface pane the search field lets you filter for specific terms. If you are trying to adjust the Overlay layer, 'over' might be helpful. If you are trying to adjust or compare translucency values, 'translucency' can narrow things down.

The mix of base layer and overlay layer is generated randomly. There is also an Overlay Magnitude Map, which adds a masking effect on the random variation; if the mix is set to pure Overlay (such as by applying PATTERN/Pure Overlay), the Overlay magnitude map becomes a simple mask between base and overlay layer.

The random element ignores UV mapping, and flows smoothly along an object regardless of mapping. Even objects lacking a UV map can have OMS1 applied, though individual image maps are still subject to normal UV set up.

The layer variation is controlled by Overlay and Base Threshold, Overlay Levels, Overlay Billow, Overlay Tiling, and Overlay Rotation.

THRESHOLD controls the range of the random layering. When the two thresholds are far apart, the range between them is gentle and diffuse, like clouds. When the thresholds are close together, the shift becomes more and more abrupt. You can reverse the random pattern by swapping threshold numbers.

OVERLAY LEVELS controls how complex/finely detailed the variation is. At low values, there are blobby, simple patterns. Most presets are set to Overlay Levels 12.

OVERLAY BILLOW creates a sense of pattern or structure. Overlay Billow: off is generally more diffuse and cloud-like. Experiment with turning it off and on to see which effect looks best.

OVERLAY TILING sets X Y and Z tiling values for the pattern. Like regular tiling, higher values makes features smaller along that axis. By changing one axis relative to the others you can 'pull' or 'squash' the pattern along that axis.

OVERLAY ROTATION will rotation the noise pattern by X Y and Z. This can be useful if you have multiple instances of an object or simply want a different part of the pattern visible.

There are three sets of thresholds:

GENERAL THRESHOLD controls most layer parameters, such as metallicity, base color, and translucency.

DISPLACE THRESHOLD controls random displacement. It has separate settings due to the number of cases where displacement works better offset from the general layer pattern.

Displacement has the same levels, billow, tiling, and rotation as the other

parameters, it's only the range of displacement that is affected.

LUM THRESHOLD controls luminosity noise distribution. Again, it is often useful to have luminosity patterns offset from general layer; if the luminosity is 'pulled' in from the range of general noise, you can create cool effects (see !FULL PRESET/Cooling Iron)

Note that the luminosity of the base layer is simply called Luminosity. Like Displacement, Luminosity uses the same settings for levels, billow, tiling, and rotation; it is only the thresholds that are different.

LUMINANCE DARK CORE creates a special distribution where the luminosity distribution has an edge with a 0 luminosity center. This can be useful for effects like lava fields, where the edges of the lava flow are brighter where the crust has separated, showing the bright lava underneath.

OVERLAY MAGNITUDE MAP is an additional control for layering. Changing the value will reduce the amount that the Overlay layer will show. Adding an image map, white values allow normal display of Overlay layer, black values suppress overlay. So if you apply the PATTERN/Pure Overlay preset, and then add an overlay magnitude map, the map will control where the overlay layer appears directly. Similarly, if you wish to only view the base layer, set Overlay magnitude map to 0.

DISPLACEMENT is different than standard Iray Uber, tied to a random variation rather than a map.

If you want something like a direct displacement map, you can use the Overlay magnitude map. This will limit some of your other options, since the overlay layer will then follow the map.

You can easily reverse a displacement pattern with the BASE INVERT DISPLACEMENT value.

Note that most of the noise displacement requires rather high polygons in objects. You will likely need High Resolution/SubD Level 3 or more.

BUMP combines basic bump maps with noise based bump for the base and overlay layer.

BASE BUMP is the usual mapped bump effect.

BUMP STRENGTH sets the basic noise value. Note that unlike other characteristics, this layer tends to bleed into the Overlay layer. Random Bump is combined with any Base bump.

OVERLAY BUMP STRENGTH sets noise bump for the overlay layer. Unlike regular Bump strength, this effect sticks just to overlay layer. If you want bump to be strictly limited to one layer, organize the surface so that that layer is Overlay.

Presets

!FULL PRESETS

Sets all surface settings.

BASE

Alters the base layer

EMISSION

Changes emission settings. By default it sets Luminosity to 2; if you are looking for luminosity only on Overlay, you may want to change Luminosity to 0 and then set Overlay Luminosity.

Note that only Luminosity varies by layer, all other characteristics are shared.

OVERLAY

Alters the overlay layer. Mix and match base and overlay!

PATTERN

Sets an overall pattern of threshold values and displacement.

TILING

Quickly set up different Overlay Tiling values.

VOLUME

Sets transmission and SSS values. These do not vary by noise.

NOTES ON SKIN PRESETS

Light and Dark skin base convert a surface to a somewhat standardized OMS1 skin. It keeps base diffuse and bump, but most other elements are altered.

Feel free to add maps back in, if you wish, but you may have to then play with settings.

If you add a Specular map to Glossy and Top Coat weights, you may want to then increase the values to .5 or more.

The general approach to these skins is for Glossy to manage a very dry base skin, with Top Coat being used to provide the shine of oil or water on the surface.

Adjust top coat accordingly. Lips and fingernails may need higher than default settings.

MAP ROTATION

There are settings for BASE ROTATION and OVERLAY ROTATE.

These rotate the mapping for base and overlay layer, respectively.