BLACKFIRE
STUDIO

WINTER SHADER

Overview

This package gives you the material to build any winter or very cold environment. It is composed by a snow material.

These environments are most of the time inhabited by polar bears or penguins but this is up to you…

As shown in the example scene, you can also create other type of materials (sand, etc…).

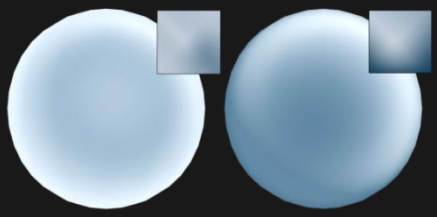
Snow

Description

This shader covers the surface of your object with a nice snow material. You can of course use it for snow but also for snowy ice due to the translucency effect.

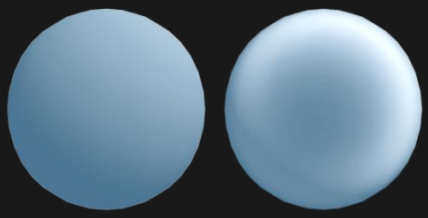
Properties - Base

- **Shade (RGB):** This texture controls the shade of the snow. This is the key for a good looking snow. With this texture you can control your material color according to the light and view. You need to clamp the texture.



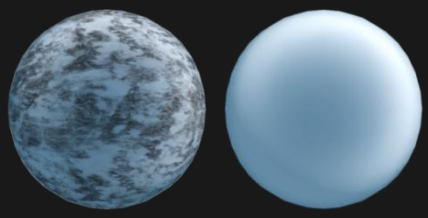
Two different shading textures

- **Shade intensity:** This controls the power of the shading texture.



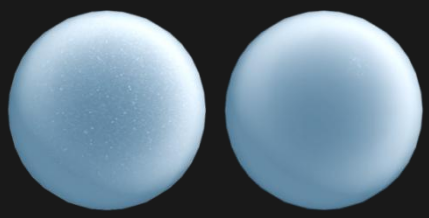
Minimum and maximum shade intensity

- **Diffuse (RGB):** This controls the diffuse of the material. This is useful when you want to add details (*dirt, irregularities, etc…*) to the snow.



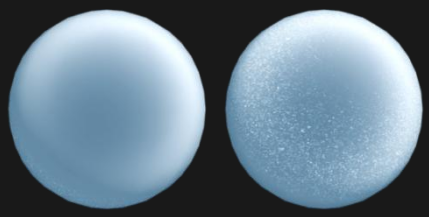
With and without diffuse texture

- **Specular (RGB):** This controls the specular aspect of the snow. This can be useful to make the glittering effect.
- **Specular intensity:** This controls the power of the specular.
- **Shininess:** This controls the shininess of the snow.



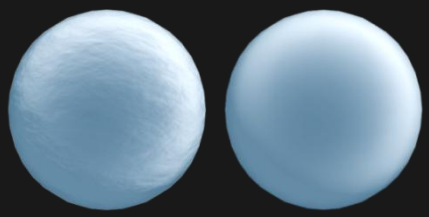
Minimum and maximum shininess

- **Anisotropic Mask:** This controls the spread of the anisotropic specular.
- **Anisotropic intensity:** This controls the power of the anisotropic mask.



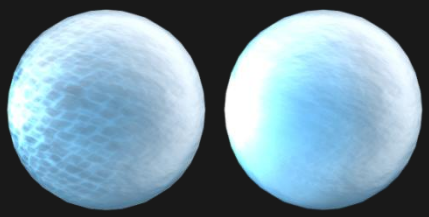
Maximum and minimum anisotropic mask

- **Normal (RGB):** This controls the bump of the material.



With and without a normal texture

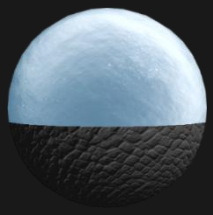
- **Depth (R):** This controls the depth of you snow. You can simulate irregularities in the subsurface lighting of your snow.
- **Translucency:** This controls the translucency power of your snow.



Medium and maximum translucency with a depth texture

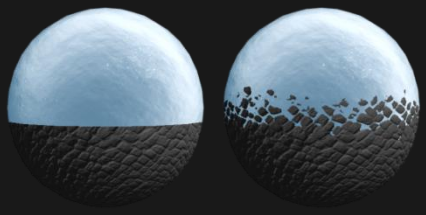
Properties - Advanced blending

- **Depth (R) Spread (G)**: Depth controls the depth of you snow. You can make simulate irregularities in the subsurface lighting of your snow. Spread is linked with the blending of the snow. Most the time depth and spread are the same.
- **Coverage:** This controls the snow accumulation on the object.



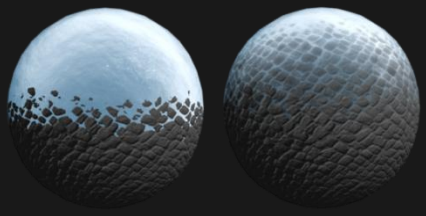
Medium coverage with a sub material

- **Subnormal Map (RGB):** This controls the normal of the snow near borders. For better results, you need to use the same normal as the sub material.
- **Spread:** This controls the spread of the snow based on the green channel.



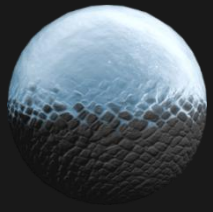
Minimum and maximum spread with a spread texture

- **Smooth:** This controls the smoothness of the blending.



Minimum and maximum smooth

- **Transition:** This controls the transition between the snow normal and the sub material normal.
- **Transition Smoothness:** This controls the smoothness of the transition between the two normal.



Medium transition and medium transition smoothness

- **Direction:** This controls the accumulation direction of the snow.

Properties - Texture blending

- **Diffuse (RGB) Coverage (A):** This controls the diffuse of the material. This is useful when you want to add details (*dirt, irregularities, etc…*) to the snow. This also controls the coverage of the snow. If you only want to control the coverage, use the alpha channel and set the RGB channels to white.

Properties - Height blending

- **Diffuse (RGB) Height (A):** This controls the diffuse of the material. This is useful when you want to add details (*dirt, irregularities, etc…*) to the snow. This also controls the coverage of the snow based on the height. If you only want to control the coverage based on height, use the alpha channel and set the RGB channels to white.
- **Height:** This controls the coverage of the snow based on height texture. A low value means that your snow is only on the top of your object.

Properties - Reflection

- **Cubemap (RGB):** This controls the reflected environment.
- **Reflection Intensity:** This controls the intensity of the reflection.
- **Reflection Falloff:** This controls the Fresnel effect applied on the reflection.

Properties - Advanced specular

- **Noise (RGB):** This is used to generate the glittering effect. This needs to be a normal map with a point filter mode. The size of the points in the noise texture will affect the size of the glittering particles.
- **Glitter (RGB) Interpolator (A):** This is used to control the color of the specular. A low interpolator value means that you have no controls over the specular color, it will use the normal map colors. Inversely, a high value will use the *Glitter (RGB)* color.
- **Glitter Speed:** This allows you to control the speed of the glittering effect based on the camera or object movements.
- **Glitter Density:** This controls the density of the glittering particles.
- **Glitter Static Density:** This controls the density of the static particles. Those particles don’t glitter according to the movements of the camera or the object.
- **Glitter Power:** This controls the opacity of the glitter effect.

Ice

Coming soon…

Frost

Description

This shader is a camera effect. It covers the surface of your camera with a nice frost material.

Properties - Base

- **Color (RGB) Screen (A):** This colors your diffuse texture. By using the alpha channel, you can blend between a Screen blending effect or a simple alpha blending effect.
- **Diffuse (RGBA):** This controls the look of your frost effect. The alpha channel is used to add transparency to your diffuse.
- **Normal (RGB):** This controls the refraction of your frost effect.
- **Coverage (R):** This controls the frost accumulation. You can control the spread of the frost with this texture.
- **Transparency:** This controls the power of the diffuse alpha channel.
- **Refraction:** This controls the intensity of the refraction.
- **Coverage:** This controls the coverage of the frost effect.
- **Smooth:** This controls the smoothness of the coverage effect.

For any issue or question you can drop a line at
contact@blackfire-studio.com