

## **Drips And Drops For Genesis 3 Females**

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- Cutout Opacity**
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### **The Outfits :**

- you basically have three types of drips and drops : 5000 static drops, dripping drops, and large dripping drops joined by groups at their top
- Two types of outfits are provided for Dripping Drops :
  - Individual Dripping Drops (DD in the rest of the document)
  - Large Dripping Drops made of several Drops gathering at their top (LD in the rest of the document).

All outfits come with very useful morphs, available in Parameters/Morphs/Shapes.

DD and LD can be loaded at once using the wearable presets, but also part by part so that you can decide exactly what part of the outfit uses the mono option, and what part of the outfit uses the multi option.

### **Should I use Mono or Multi version ?**

Both DD and LD are provided in two versions : Mono And Multi.

For the Mono version, a single material is provided for each part of the outfit.

For the Multi version, each drip has its own material, modifiable in the surface tab.

#### *The advantages of the Multi version is :*

- You can decide each drip you show and hide, allowing for instance to have only one or two blood drips running on the face
- You can adjust the surface of one specific water drip on the body which would be too white or on the contrary not visible enough.

#### *The drawback of the multi version is :*

- Since there are a huge amount of drops, the loading times of the scenes and of the shaders can be increased A LOT, because of the 629 surfaces involved if all DD and LD are loaded in the Multi version!

Well it will take 629 times longer than loading just one shader, which can be very long.

In conclusion, begin with the mono version, test various shaders, and then if you see that a part of your outfit was requiring the multi version (one material per drop) because one drip shader has to be re-adjusted separately from the others, delete this part of the outfit in your scene, and then load the multi version of it.

### **General Water Consideration :**

Rendering water over a body is very particular because of the refractive nature of water. Depending on the camera positions, some drips will not be visible any more, and some will become very white. And when you observe skins covered with drips (well taking a shower or going to the swimming pool are good opportunities for that), you realise that this is what happens in the real world. Depending on the orientation of the drip a same drip can be totally white, or darker than the skin, or almost not visible.

But this is frustrating in renders, this is why tools have been included so that white drips become less white, and invisible drips can finally appear. And this is what the next parts explain.

## General scene and render advice :

### Pick up a shader...

As soon as possible, *choose approximately the light set and figure you want to use for rendering.* Water drops are very sensitive to scene lights.

Remember at this stage that better results are obtained in term of gloss highlights if there are some well defined light sources in your scene or in your environment maps. Just like in real world, too flat lights will not produce a lot of effects on the water surface.

Once the outfits are loaded remember *you can morph them to change their shape*, their thickness, or to add drops at tip.

*Then pick up a shader corresponding the best to your case of figure.* Of course you can test the other shaders, as well as the shaders provided for the other types of drips.

### ... And test...

*Don't push the render too far!*

There is a point for which a longer render will decrease the aesthetic aspect, especially because the clear drips tend to become too "plastic", and some drips which were just subtly noticeable tend to disappear. I would advise to stop the render and save as soon as you like the aspect of the render, no need to render more if you reached a result you like. Most of the time, the rest of the scene will have already rendered enough too. How can you do that? You just have to press "CANCEL" but NOT in the progress bar (NOT in the window where the number of iterations are written). You have to press "CANCEL" in the "render" window, the one where you see the image rendering progressively. Then you can save from this window the rendered image. Please also note that as soon as you save, you cannot "resume" the render any more.

### ... And adjust if necessary....

*The shaders included and proposed for each type of drips and drops have been developed to have the best "average" answer to a wide panel of lights conditions, camera frames and underlying figures, for the type of geometry used (Static Drop, DD, LD). But you can of course try and use a shader more especially dedicated to one type of outfit on another type of outfit. **For optimal result for your own scene, you can adjust the drops shaders using very simple few tools provided in each folder including the shaders. Here is what the following part describes.***

*Tip :* For faster selection of surfaces of the outfit, go to the "Scene Tab" and make the Genesis 2 figure not selectable, by clicking on the little arrow pointing up left, just on the right of the visibility (eye) icon for this figure. Your figure is not selectable any more until you click again on this "Selectable" arrow (remember to come back to the "selectable" state if you want to drag and drop outfits on this figure).

Selection of drips surfaces will be much easier if figure is set to "not selectable".

## Adjusting the shaders to your scene :

*During the first seconds of the render, the drips will appear black. But rapidly the refraction will be added in order to come to a transparent refractive drip.*

Remember that for DD and LD outfit parts, you can change all the drops of one single outfit all together, or opt for the outfits with a different material area for each drop in order to adjust a single drop which would not render "the way you want" if you used the "Multi" Option.

The tools provided will allow you to increase and decrease iteratively the Top Coat, Refraction, Glossy Layered Weights, and the Cutout opacity. Iteratively means that the scripts will read the current value of the parameter, and will increase and decrease this parameter with a given proportion.

## 1. Decrease or Increase Refraction weight

Tools are provided in Large Drops shaders and Dripping Drops in order to modify refraction weight.

*Decreasing Refraction will make the drops more visible, especially the ones which were dark or almost not visible.* For these drops, the color will rely a lot on the "base color" of the material. Several options are provided initially but dark base colors (black or brown) in general provide the best renders when Refraction Weight is decreased.

In general, this weight should be kept in the 0.85 to 1 range, except for the the shader with opacity variations "G3DD Large Drops 09 Base Shader With Opacity Variation" and "G3DD Dripping Drops 02 Base Shader With Opacity Variation" loadable for the shaders folder for DD and LD.

What is happening when decreasing refraction is that the transparency due to refraction decreases too and that the other parameters of the material such as base color, top coat, and glossy layer, become more and more visible. [CLICK HERE](#) to see illustrations of the influence of the refraction weight.

Other related parameters you can modify are refraction index first, and the for chromatic dispersion (the way the refraction index changes with light color) Abbe number (Abbe, 0 meaning no dispersion).

## 2. Decrease or Increase Cutout Opacity

Tools are provided in Large Drops shaders, Dripping Drops shaders, and 5000 Drops shaders in order to modify Cutout Opacity.

The effect of these tools is much easier to understand. *Cutout opacity will simply make the whole surface meaning the refraction, plus the base, plus the glossiness and the top coat when existing, and make the whole less visible, in a linear way.* In brief, this is the total opacity which will be applied to the final sum of all the physical layers calculated for the material.

You can use it to make a whole drip less visible, the glossy parts, refractive, and base parts being all more or less visible with the same proportion defined by Cutout Opacity. [CLICK HERE](#) to see illustrations of the influence of the Cutout Opacity.

In detail :

- A "0" Cutout Opacity means that the material is totally transparent, i.e. invisible,

- A "1" Cutout Opacity does not mean the material will be opaque but means that all the effects on the material - base, gloss, refraction - are fully rendered and, with their current proportions, the final "real" opacity depending both on refraction and Cutout Opacity.
- At a 0.5 Cutout Opacity, the sum of the effects previously mentioned is half visible compared to what it should be. The elements of surfaces initially being 100% opaque become 50% transparent, not because of refraction but because of opacity.

At the difference of refraction for which transparency is induced by a physical phenomenon, and is "somehow" disconnected from base, top coat and glossy parameters, Cutout Opacity does not rely on a real physical parameter and applies simultaneously and globally a constant transparency to all these parameters.

### 3. Decrease or Increase Glossy Layered Weight

Tools are provided in Large Drops shaders and Dripping Drops shaders in order to modify Top Coat Weight.

The glossy layer aim is to locally add some highlights on the Drops. *Increasing the glossy layered weight will allow you to add more and more "specular" type light reflections, or highlights, to the drops.*

The size of the highlight is defined, for a given light set, by the roughness of the glossy layer weight.

For Metallicity/roughness based shaders, the lower the roughness, the smaller the highlight. For Specular/Glossiness based shaders, the higher the glossiness parameter, the smaller the highlight.

The result also depends of the share glossy inputs parameter.

**MORE DETAILS HERE** to see illustrations of the influence of the various Glossy Layered effects.

### 4. Decrease or Increase Top Coat Weight

Tools are provided in Large Drops shaders, Dripping Drops shaders, and 5000 Drops shaders in order to modify Top Coat Weight. The 5000 drops shader rely mainly on top coat effects.

There is no physical reason to have a top coat in our case, *the choice of adding a top coat come from practical and aesthetics reasons, because it helps to increase the light effects on the drops.*

*Top coat will provide the impression of a "varnish" layer above the surfaces, or "plastic wrap" around them.* The characteristics of this effect will depend on all top coat parameters but the most important in this case of figure are the roughness, and the layering mode for a given weight.

Keep small or null roughness values, and the 2 most interesting layering modes are Fresnel and Reflectivity.

Roughness will indicate if the Top Coat is perfectly polished, like a mirror would be, or rough like powder would be, in brief, the smaller it is, the more you will obtain "highlights" areas.

Fresnel will use the Fresnel angle depending on the top coat layer index of refraction to compute where light is reflected and where light is transmitted in the drop, and will result in much more non uniform, and more visible result than reflectivity does, reflectivity resulting in a much more uniform reflection (except for the highlights due to roughness). I have not provided tools for these parameters but they can be found in the surface tab if you feel like playing with them.

Finally you can change top coat color for more effects.

[\*\*CLICK HERE\*\*](#) to see illustrations of the influence of the various Top Coat effects.

### **Fast Questions / Answers :**

#### **What if I don't see some of the drops?**

- Try to decrease the refraction strength, the transparency linked to the refraction influence will decrease too.
- Try to increase cutout opacity until you reach the max.

#### **What if some drops are too white?**

- Try to decrease the glossy layer weight (click here for more details) and the top coat weight (click here for more details).

#### **What if some drops are in the water?**

- Use the Hide Drop shader for the drops involved, or you might have strange results, depending on how the water has been set up.

For any additional information, please contact me directly on DAZ forums, via MP, or use the forum thread dedicated to that product.



The **Refraction Weight** parameter will allow you to make the base color of the drips more or less visible. This is a way to render drips which should not be visible regarding the rules or refraction only.

The color of the drips becoming visible is driven by "base color" parameter of the surface. The Top Coat Layer and Glossy Layer become more visible too. Refraction index and Abbe number have also an influence on the result.



0



0.5



0.75



0.9

Refraction Weight

0.96



0.98



0.99



1

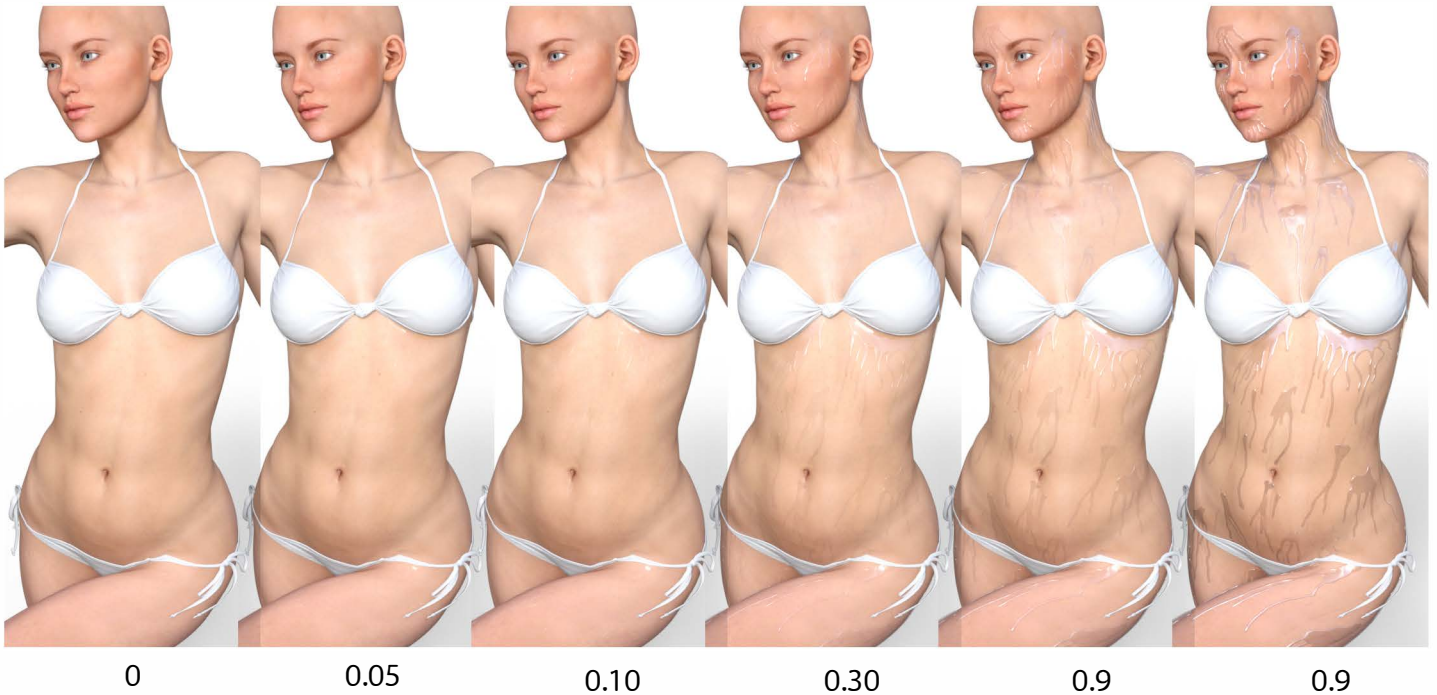


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The **Cutout Opacity** parameter will allow you to make globally the drips more or less visible, without changing the ratio of base, glossy, top coat and refraction contribution. Result will depend on the initial shader used.

If at a cutout opacity of 1, you feel the drips are still not visible enough, then you can decrease refraction weight to make base color and top coat and glossy layers more visible, and then adjust base color, top coat and glossy layered weights.

The images provide the effect of increasing and decreasing Cutout Opacity on 2 different shaders.



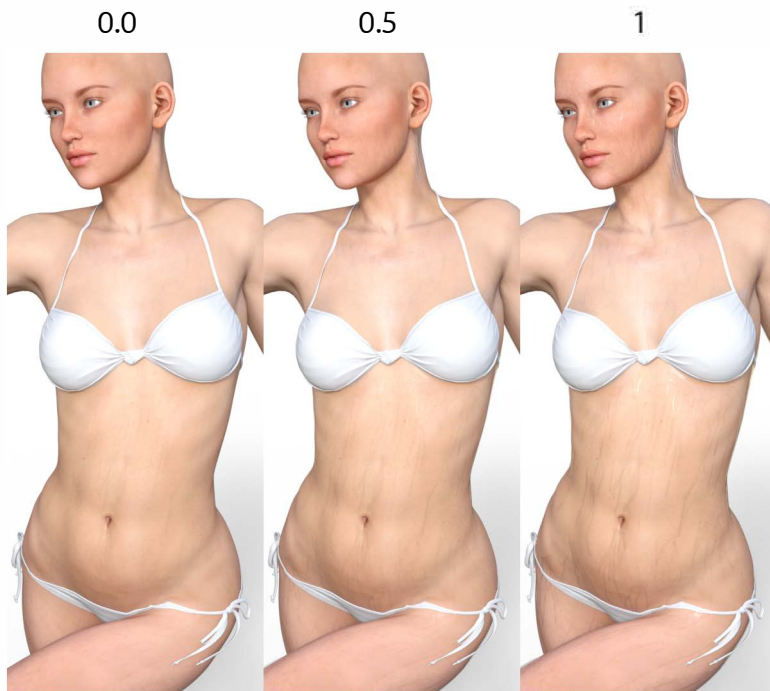
Cutout Opacity





The **Glossy Layer Weight** will allow you to increase and decrease the glossy highlights on the drops. Share Glossy Input ON will tend to cover all the drop with the glossy color. Share Glossy Input OFF will not have this effect. Glossy roughness, or glossiness, depending on the shader you start from, will determine the size of the highlights. Increase roughness or decrease Glossiness in order to increase the size.

Glossy Layered Weight :



Share Glossy Input  
(Glossy Color Pink, Glossy Specular White):  
ON      OFF



Roughness 0

Roughness 0.25

Roughness 0.5

Roughness 1



Glossy Roughness Influence ( Glossy Color Green, Share Glossy Inputs Off)

The Top Coat Layer is essentially here to provide more effects on the drops, and has in our case, no real physical meaning. The side effect of increasing **Top Coat Weight** is to increase the visibility of the drops, but not same way as when you decrease refraction or you increase Cutout Opacity.

The images provide the effect of increasing and decreasing Top Coat Layer Weight, as well as the influence of Top Coat Layering Mode and Top Coat Roughness.

Top Coat Weight :

0.1



0.3



0.5



0.7



1



Fresnel



Reflectivity



Roughness 0



Roughness 0.27



Roughness 1



Top Coat Layering Mode  
(Top Coat Color Pink For Demonstration)

Top Coat Roughness Influence  
(Top Coat Color Pink For Demonstration)