Blood Pack Documentation Guide

Materials

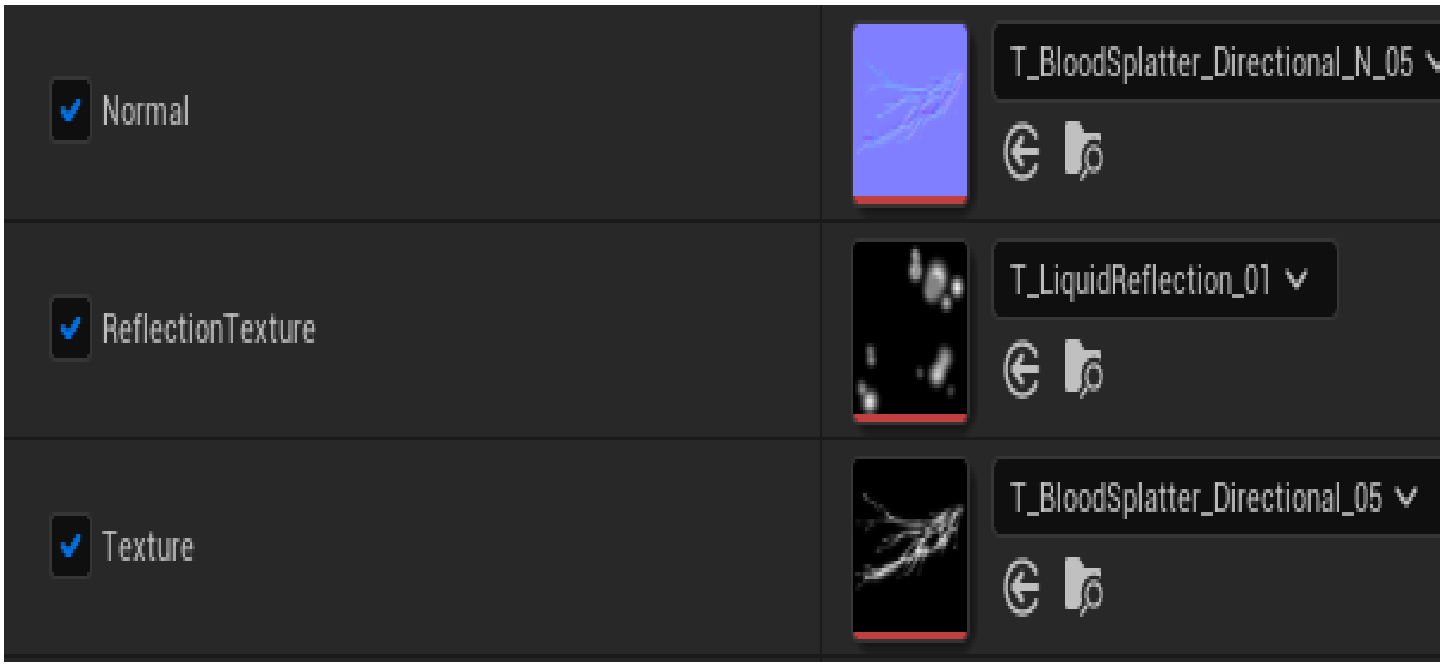
Master Materials

M_LiquidBase - Master material for particle-based effects

M_LiquidDecal_Dynamic - Defer
red decal but with dissolving animation functionality.

M_LiquidDecalBase - Basic deferred decal-based material

Texture Samplers

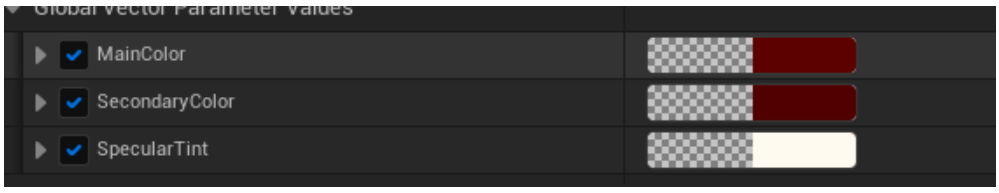


The material requires 3 main maps in order to mimic a liquid-like shine
Alpha Mask Map - This is the primary source of the color modifiers, dissolve, and opacity.
Normal Map and ReflectionTexture - By sampling these two textures you mimic a fake specular behavior.

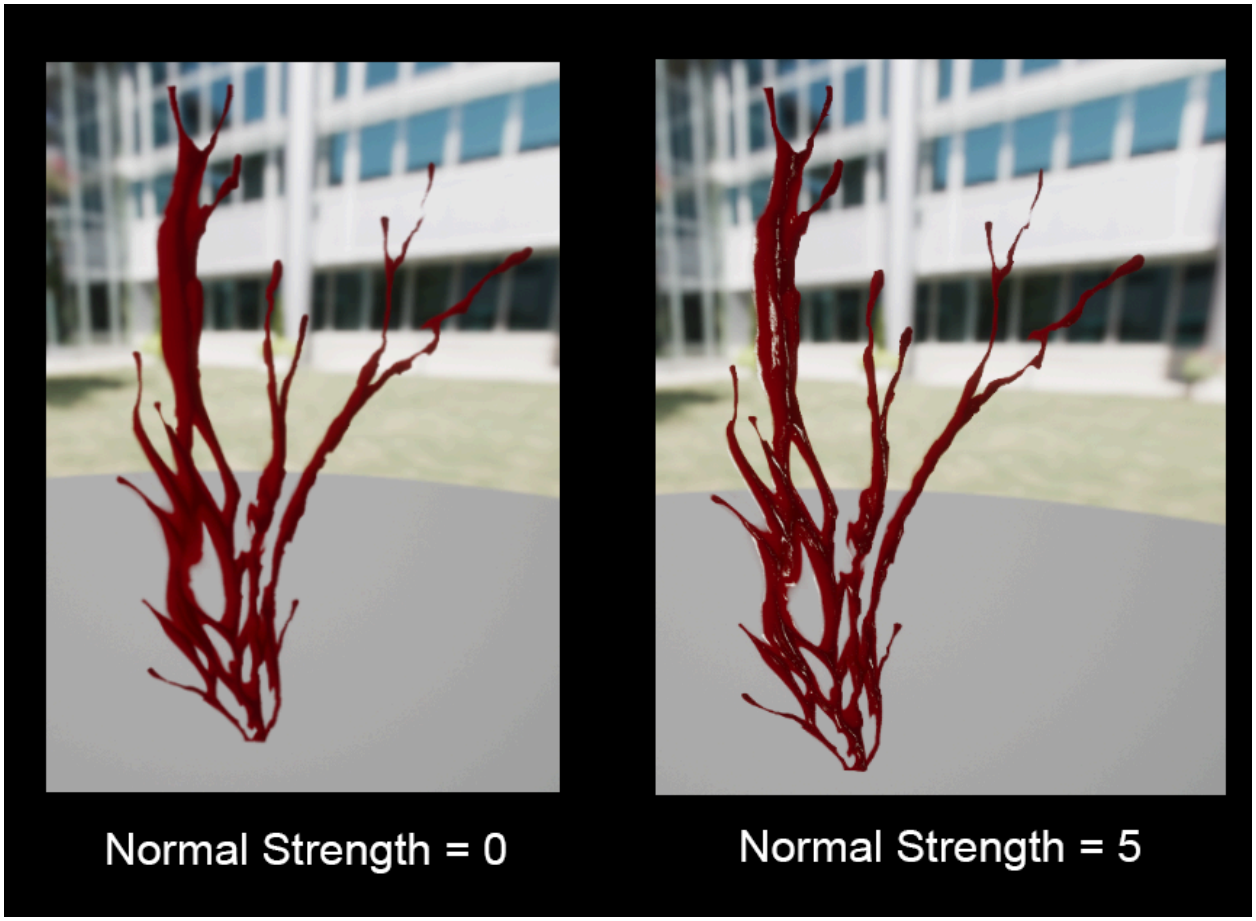
Modifiers

NormalStrength - Normal map intensity control
Power - Alpha Mask exponent control used for lerping two colors
Softness - Edge Softness
SpecularPower - Fake specular exponent control
SpecularValue - Fake specular intensity multiplier

Power: 0.7
Softness: 0.2Projection using material formula and not using a decal component
SpecularPower: 0.6
SpecularValue: 10

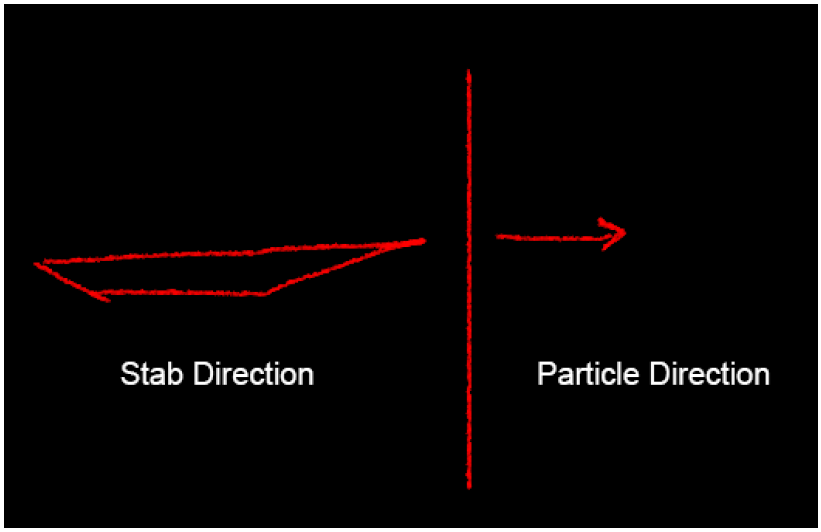


Colors


Normal Strength = 0
Normal Strength = 5

Niagara Effects

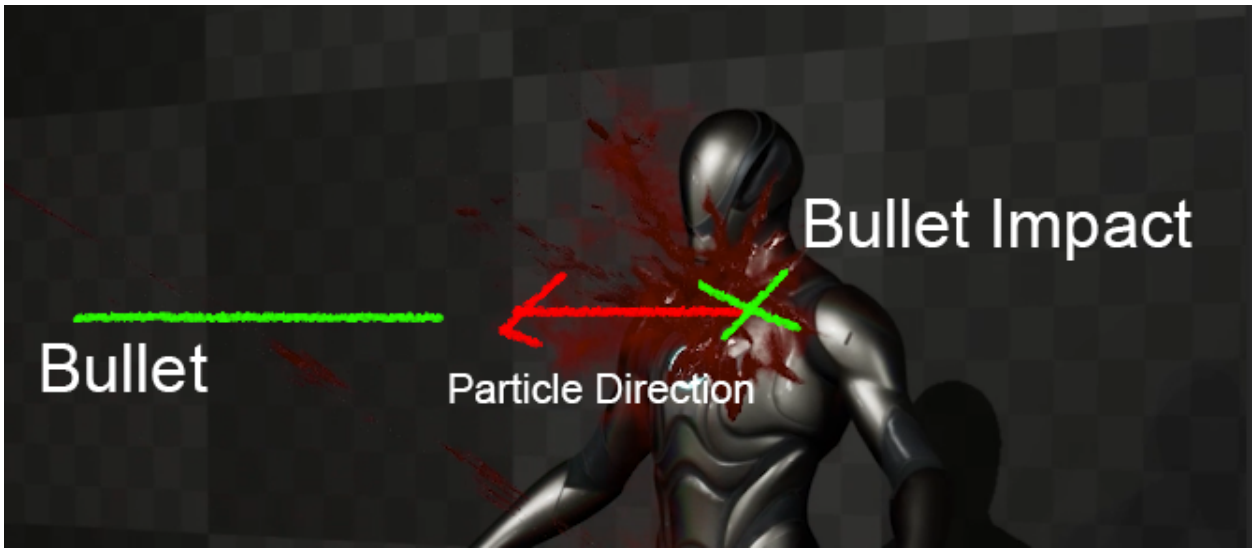
Stab



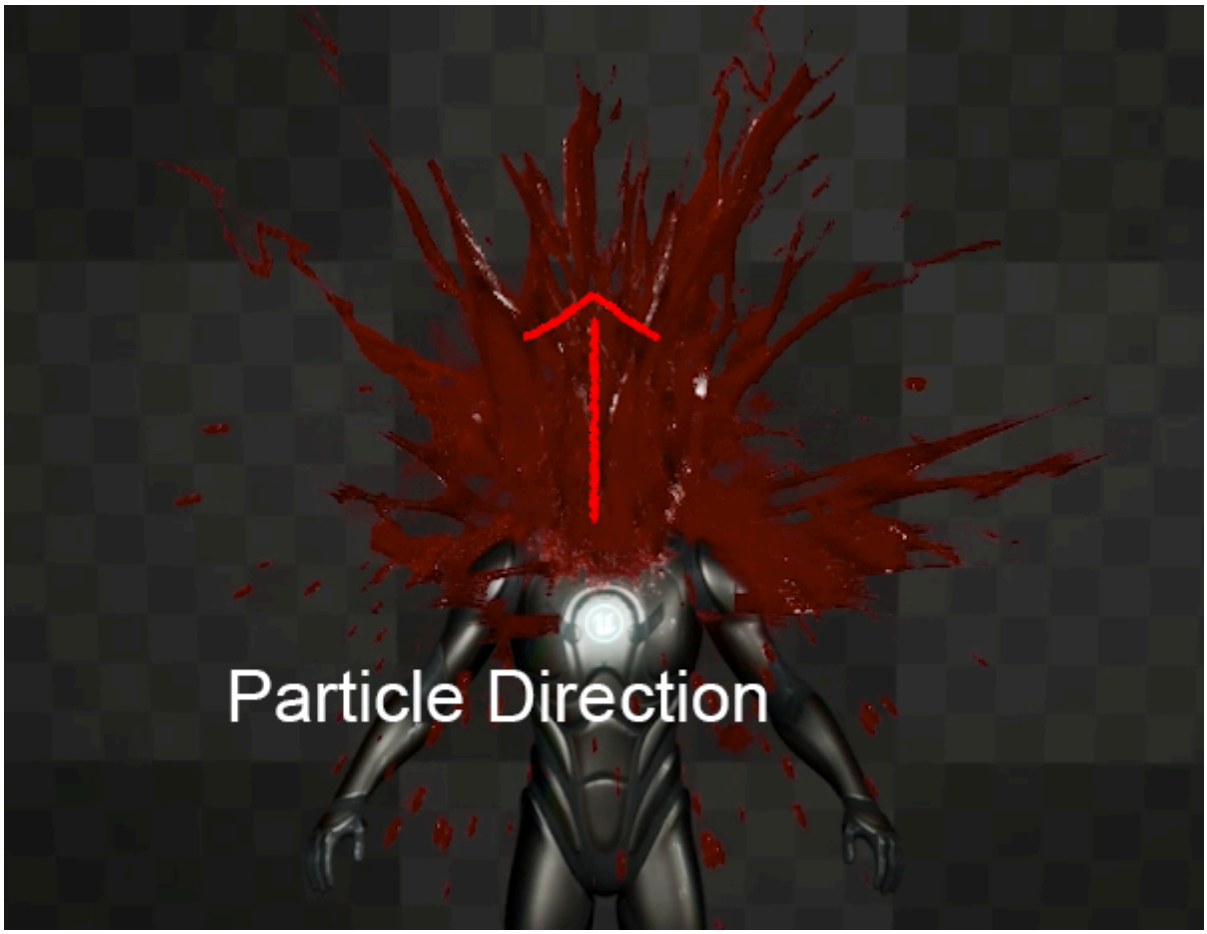
The Particle Effect should be towards the direction of the stab.

Slash

Bullet Hit



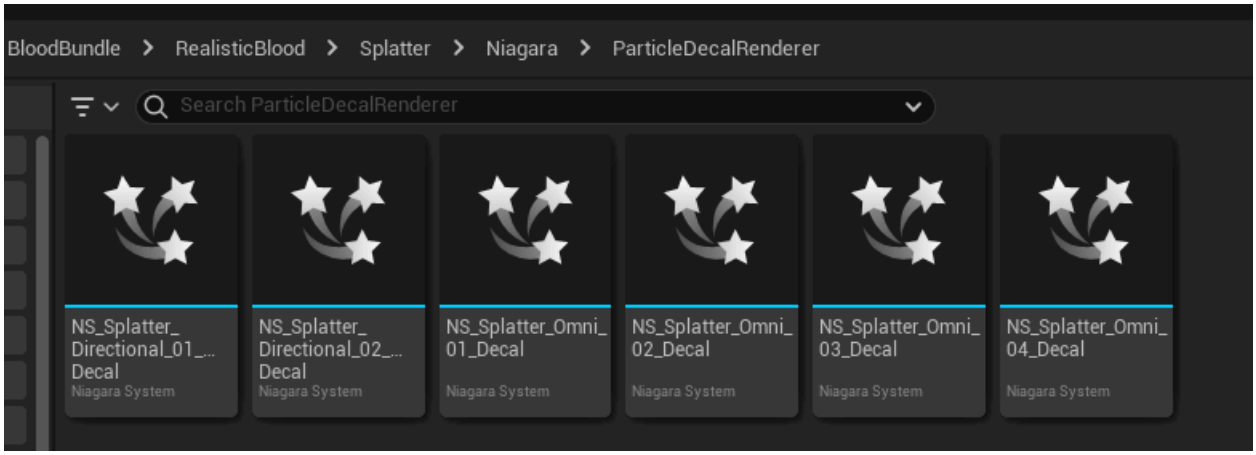
Splash/Burst

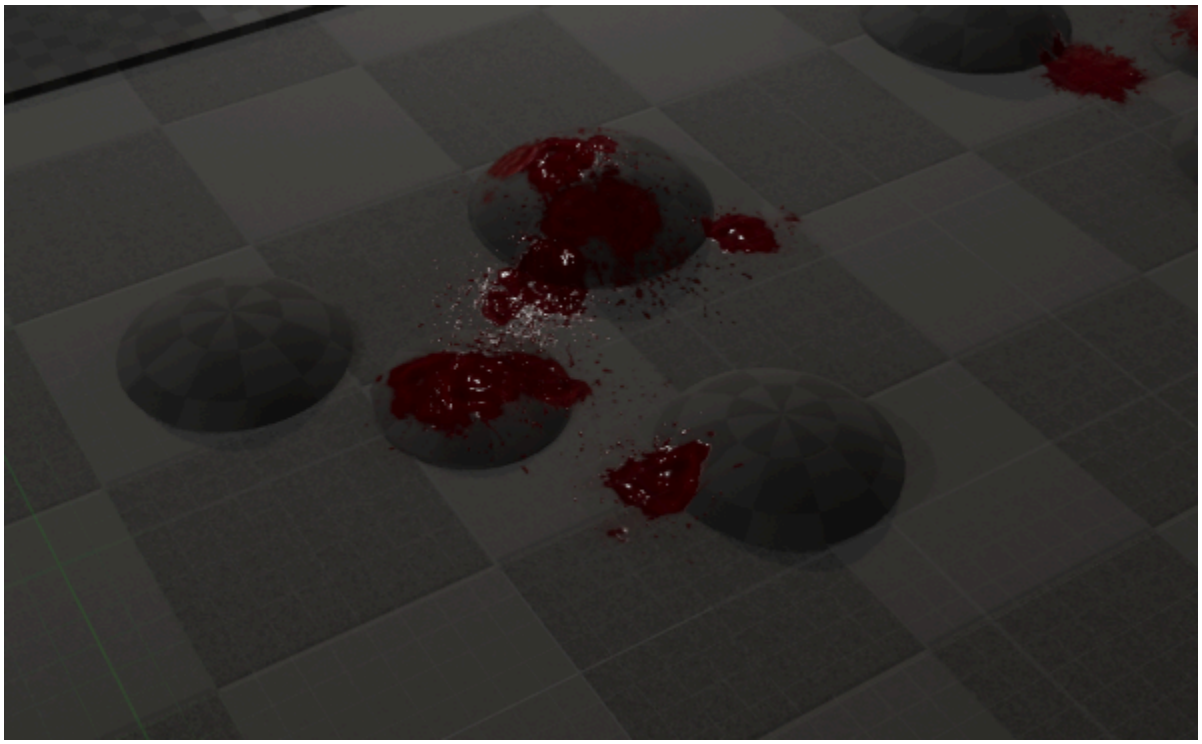


Splatters

Particle Decal Renderer (NEW)

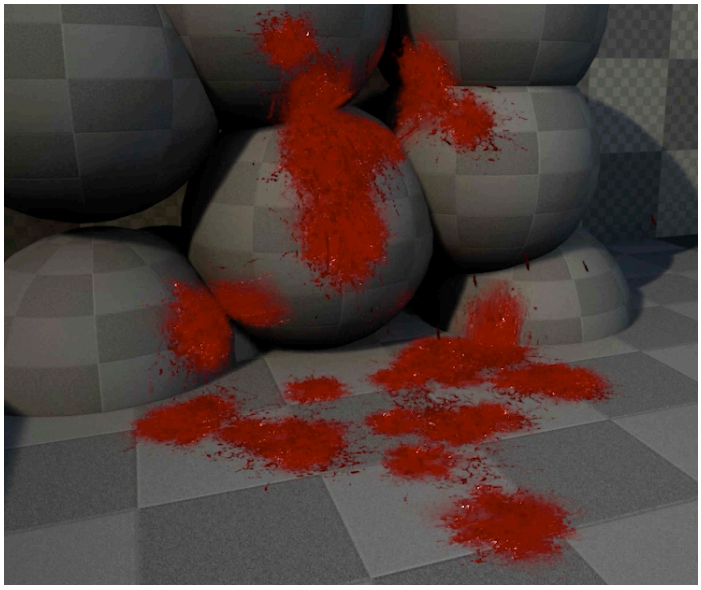
- Can disable projection to Meshes using *ReceiveDecals* boolean.
- Uses Deferred Decal rendering. Supports PBR.
- Reacts to lighting condition (LIT)





Shader Based Projection (Legacy)

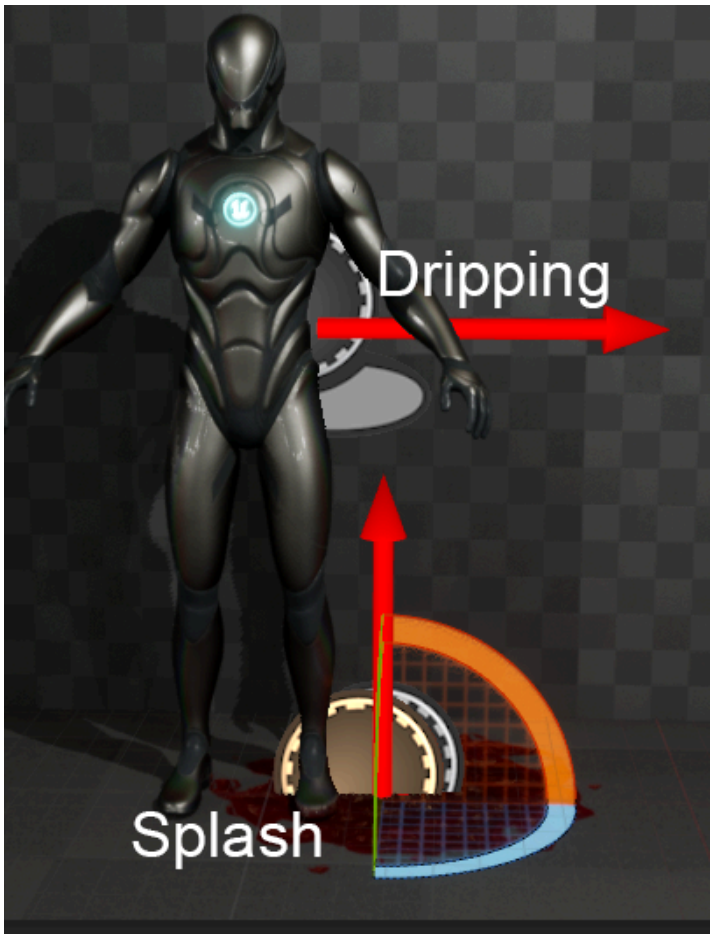
- *ReceiveDecals* boolean wont work.
- Uses Translucent Rendering (Non PBR).
- A cheaper alternative if you don’t mind lighting conditions
- UNLIT

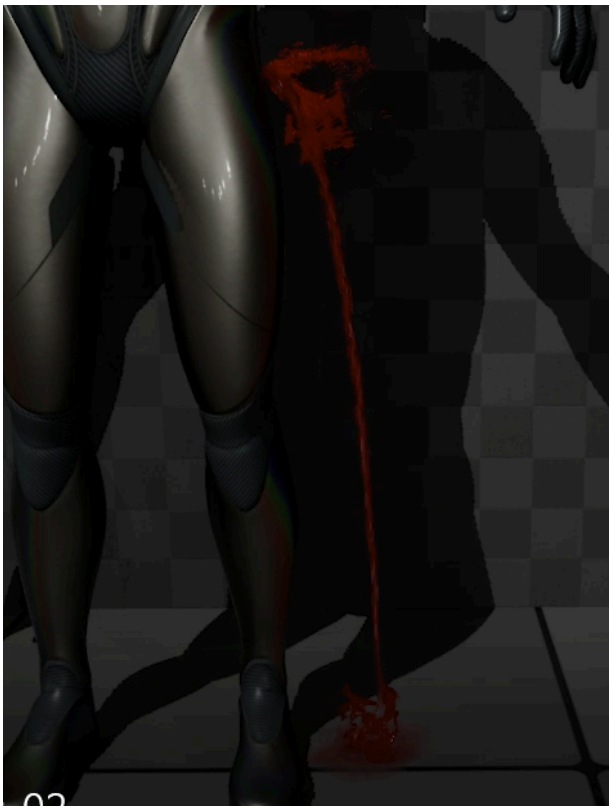


- Automatically rotate based on the normal of the collision.
- Exposed Param that you can modify to create desired splatter behavior.

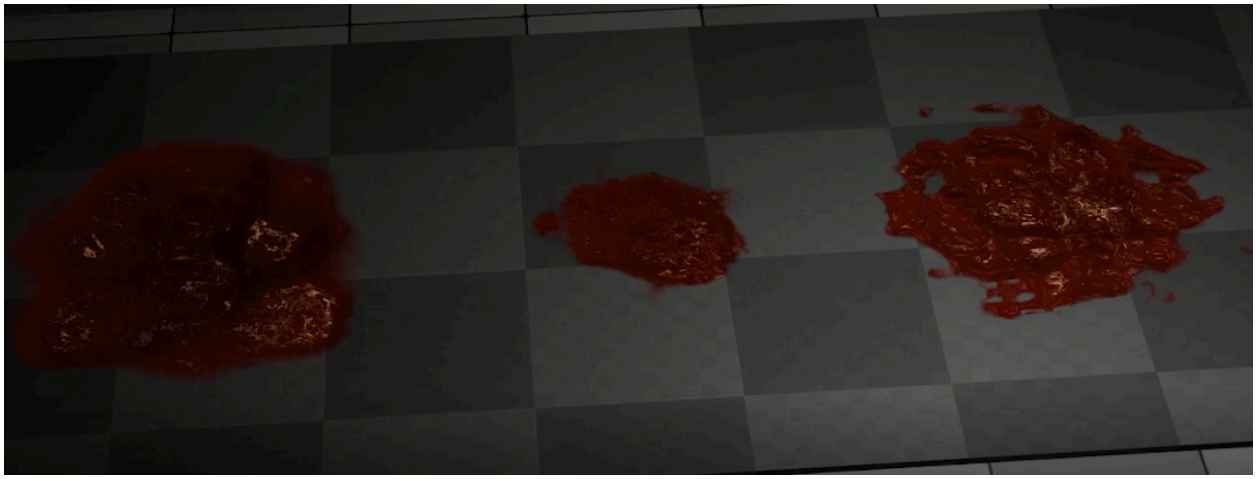
LifetimeMultiplier
ScaleMultiplier
SpawnCount
VelocityMultiplier

Artery/Dripping

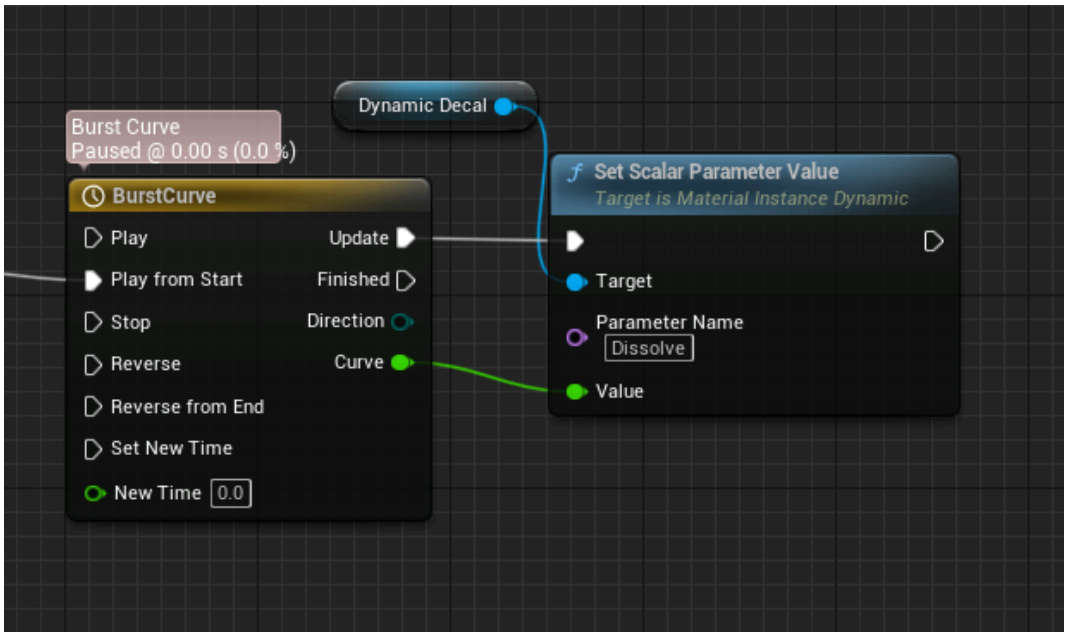




Shader Controls



Build up animation for the puddles via Dissolve Function

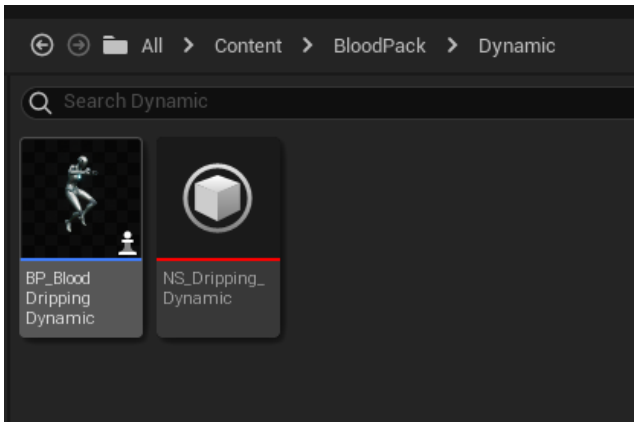


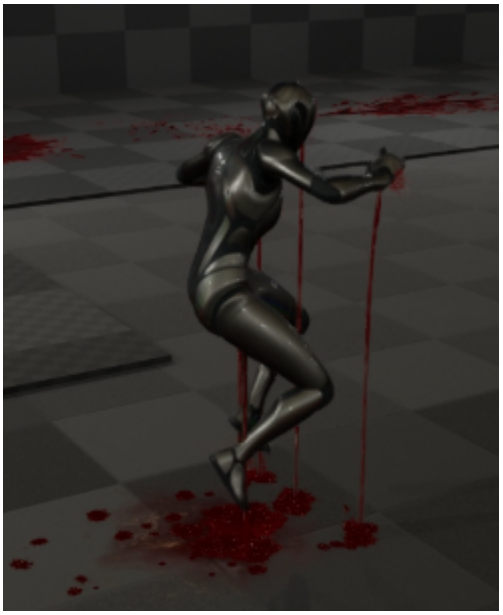
Blueprint Setup

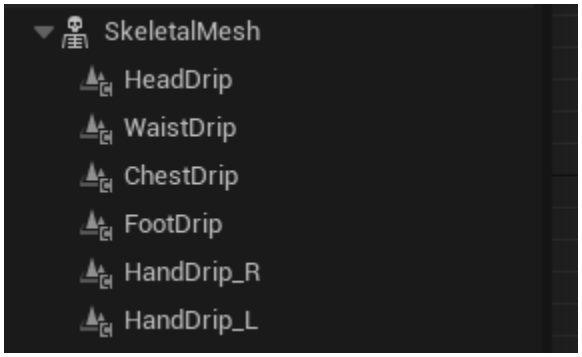
Dissolve Param (0-1)

Demos

Use Case - Blood Linger and Accumulation

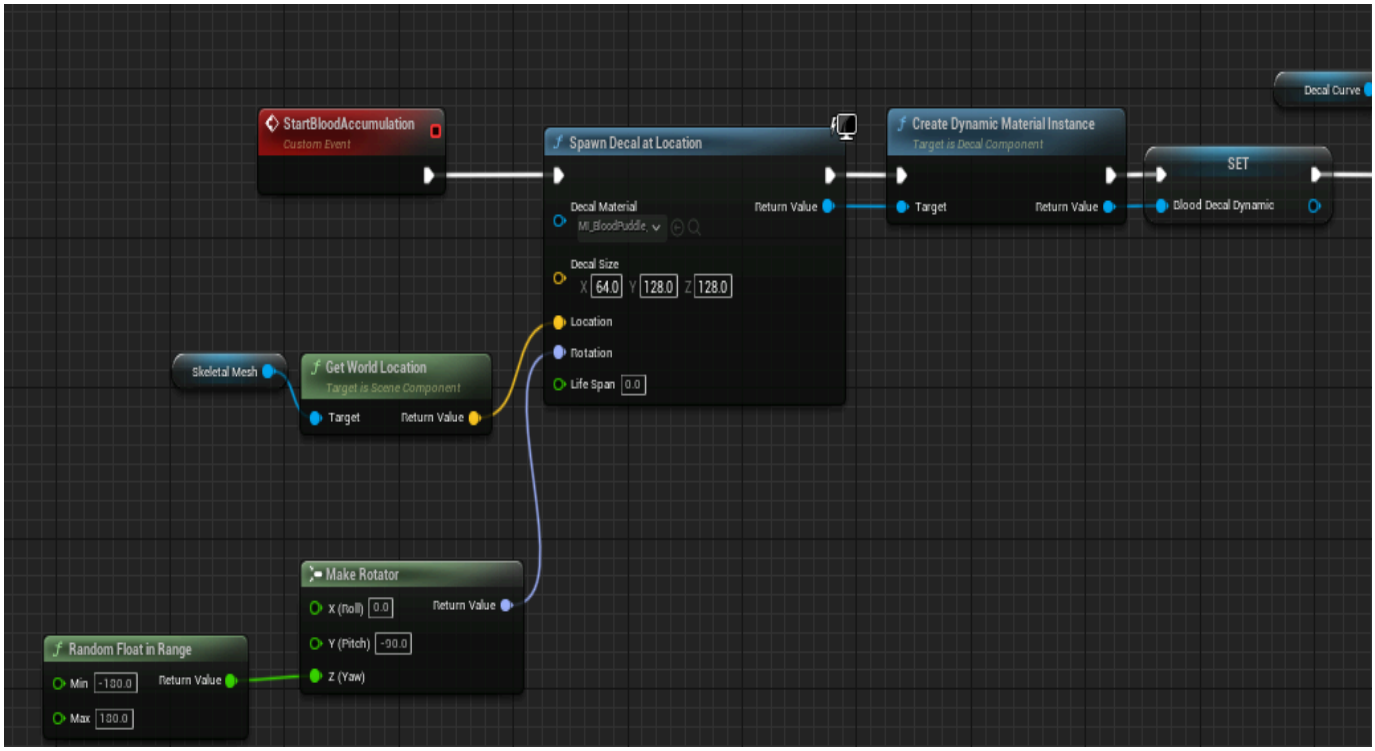


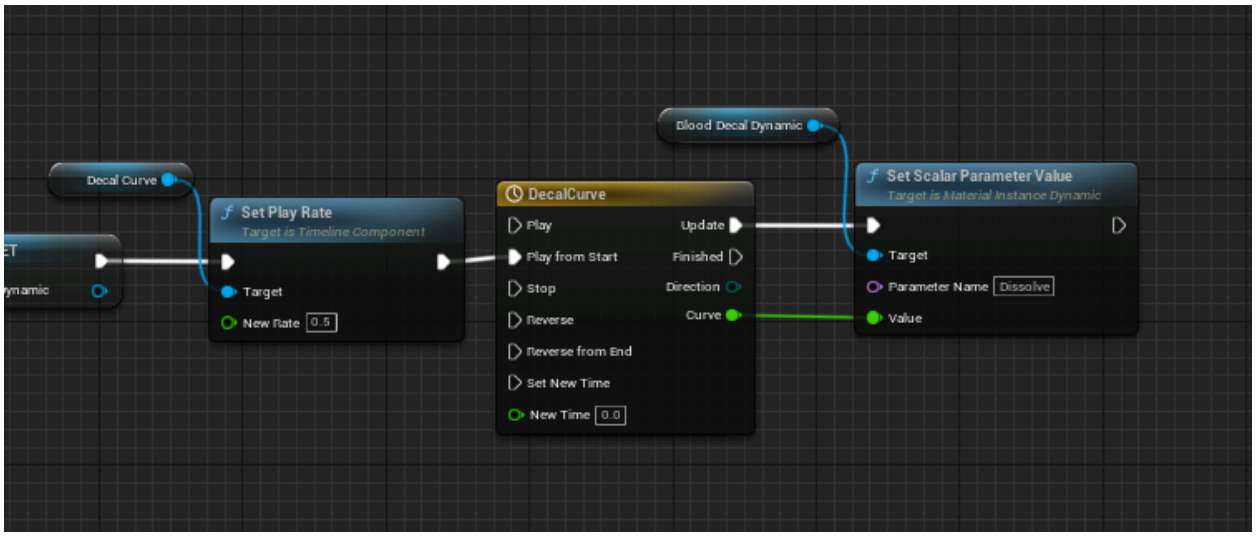




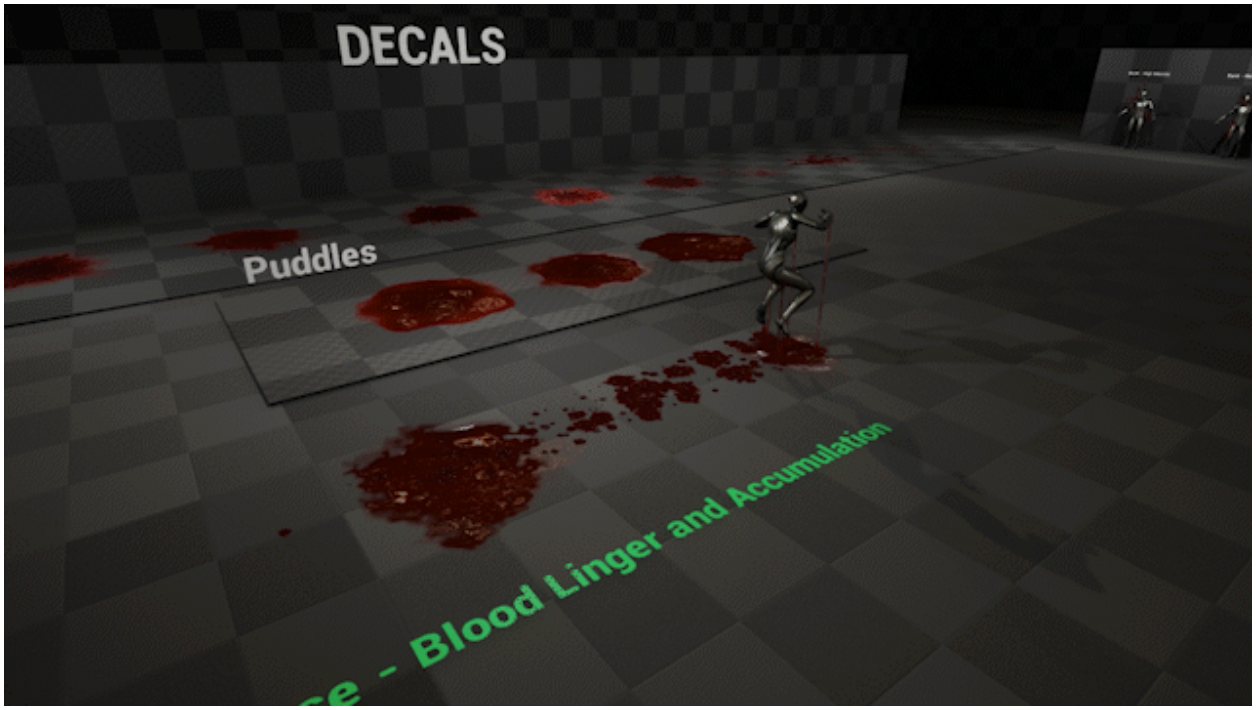
Attach *NS_Dripping_Dynamic* to desired bone/socket location.
The emitter has a collision event that spawns splashes and splatters.

Combine it with a decal component for an accumulation effect.



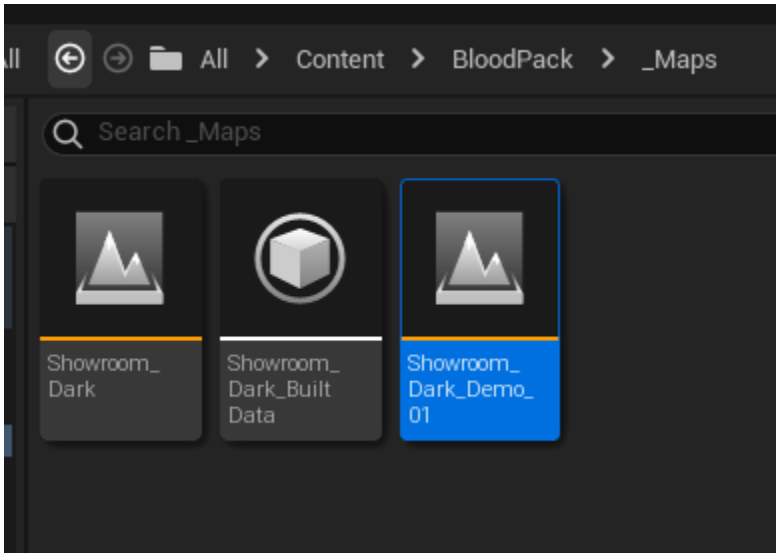


Use a curve to modify the timing in order to match blood-dripping behavior. Then use the value to drive the *Dissolve* parameter.

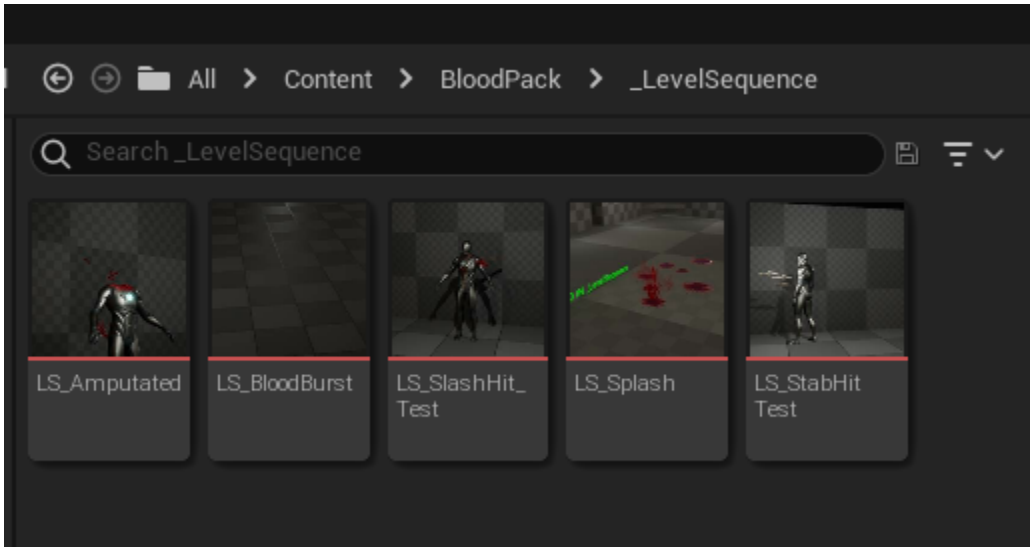


Preview

You can check more demos by going to this map. **Showroom_Dark_Demo_01**.

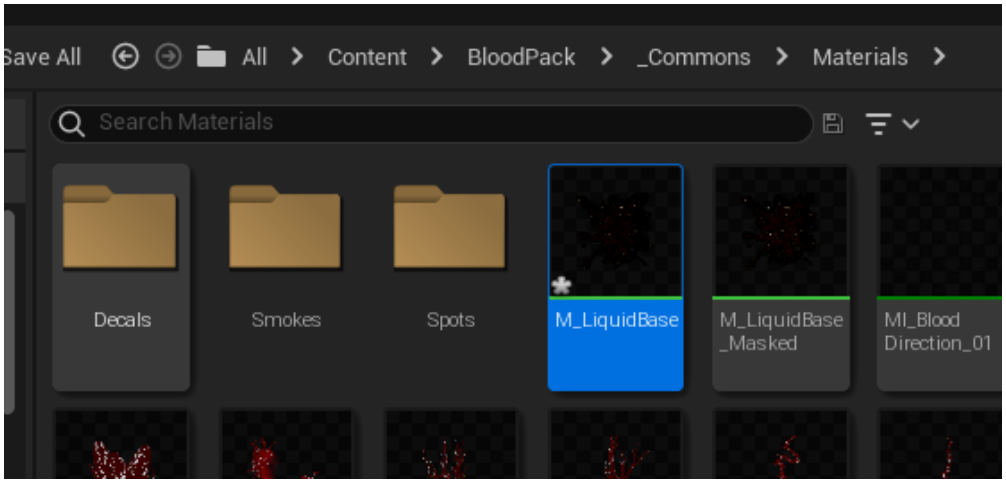


While on this map, just simply play the Level Sequence.

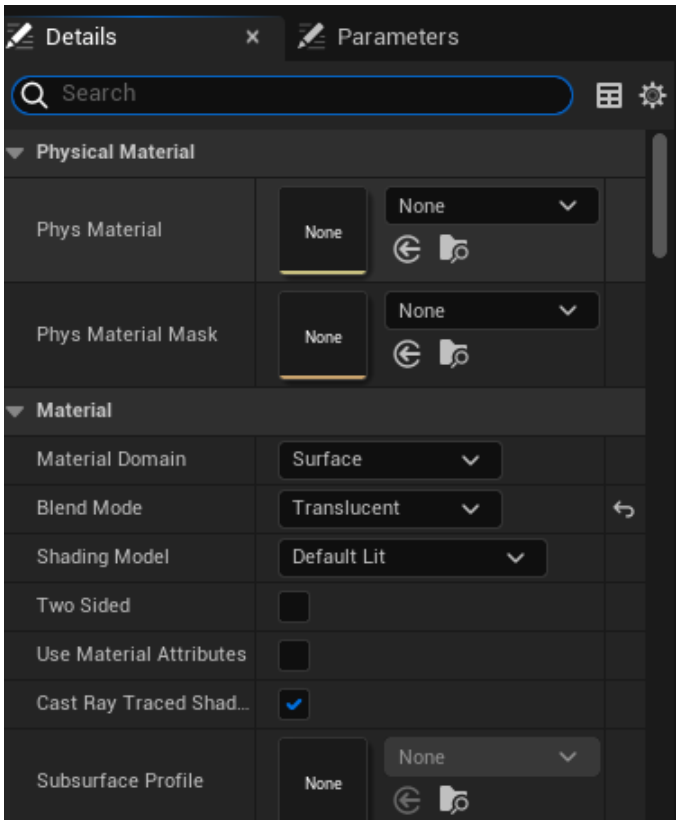


Affect by DOF and Light FIX

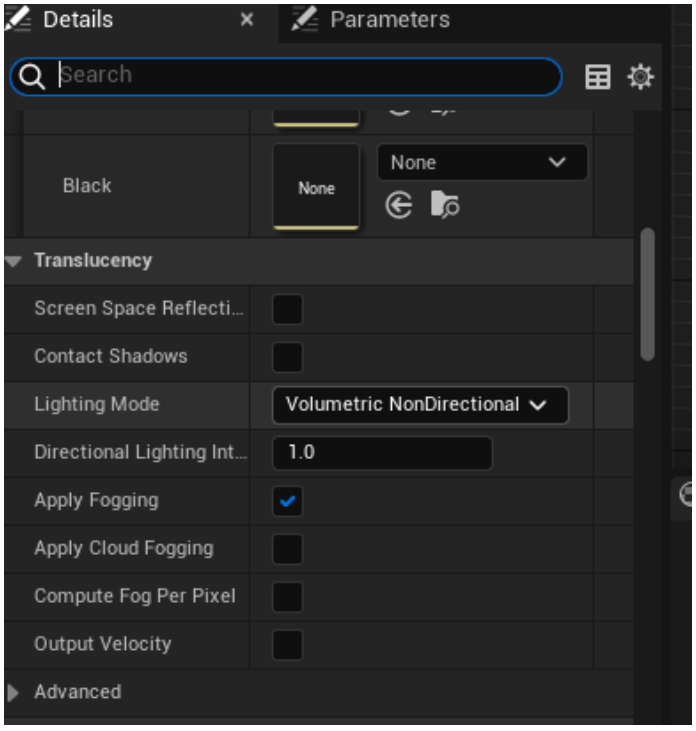
Changing the shading to LIT



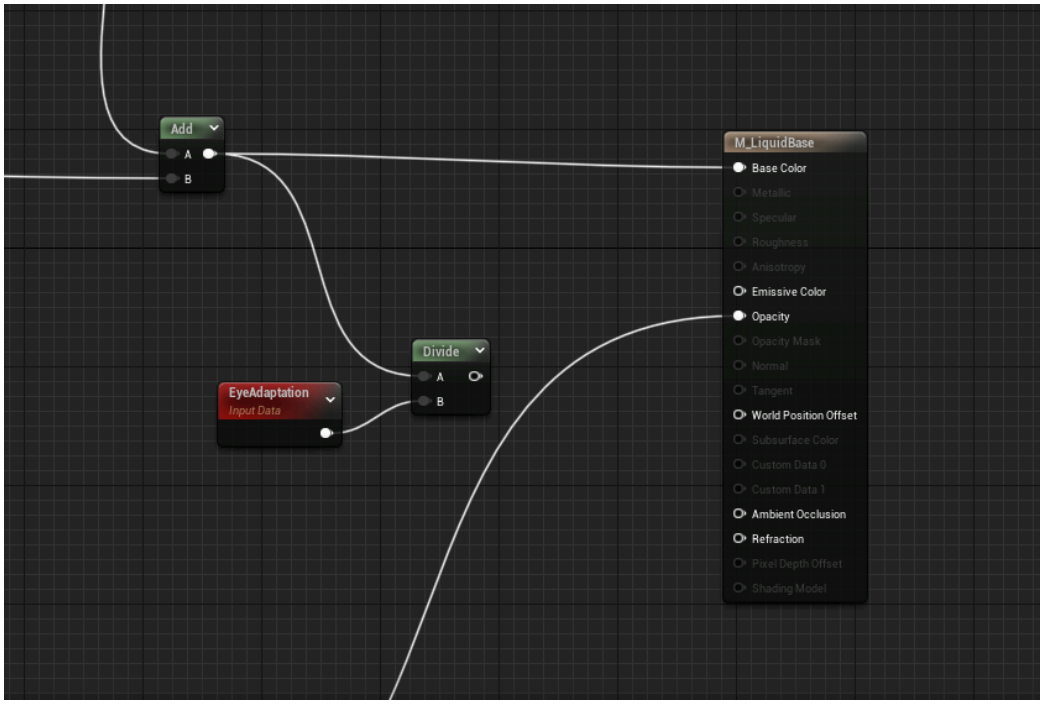
Go to LiquidBase



Change the **ShadingModel** to **Default Lit**



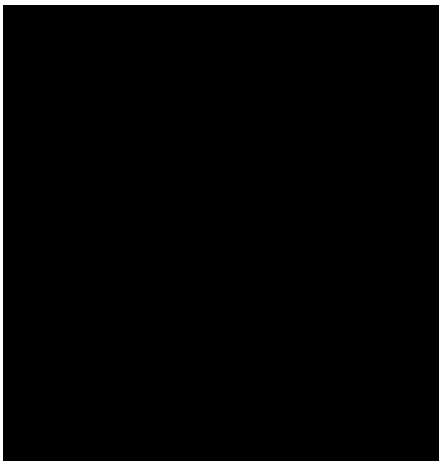
LightingMode to **VolumetricNonDirectional**



Plug the color into **BaseColor** rather than emissive. Do not include the EyeAdaptation function.

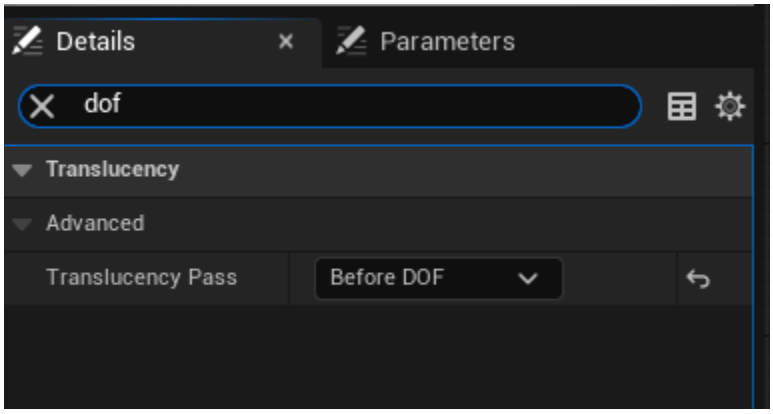
Light Intensity: 25 Lux

Light Intensity: 1 Lux



Light Intensity: 0 Lux

DOF

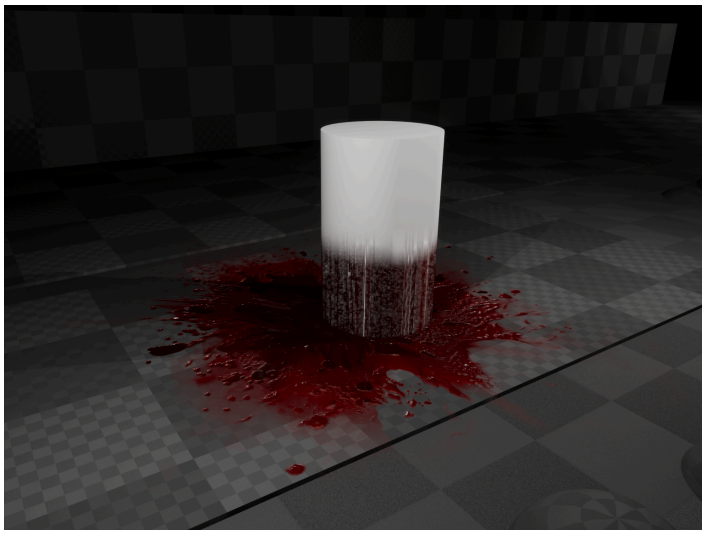


Still inside the LiquidBase (Master Material)

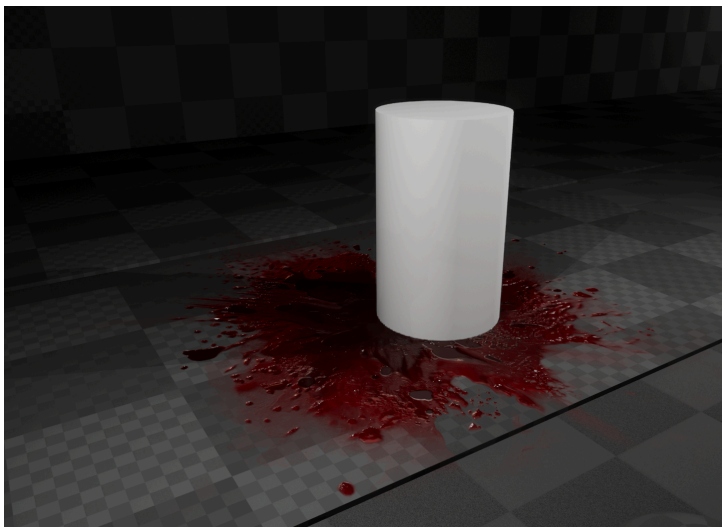
On the left side details panel. Find **TranslucencyPass** and Change to **BeforeDOF.**

Reducing Steep Angle Artifacts (UE 5.5 Deprecated)

Decal material instances derived from master materials such as `M_LiquidDecalBase` and `M_LiquidDecal_Puddle` have control to lessen the decal projections artifacts.

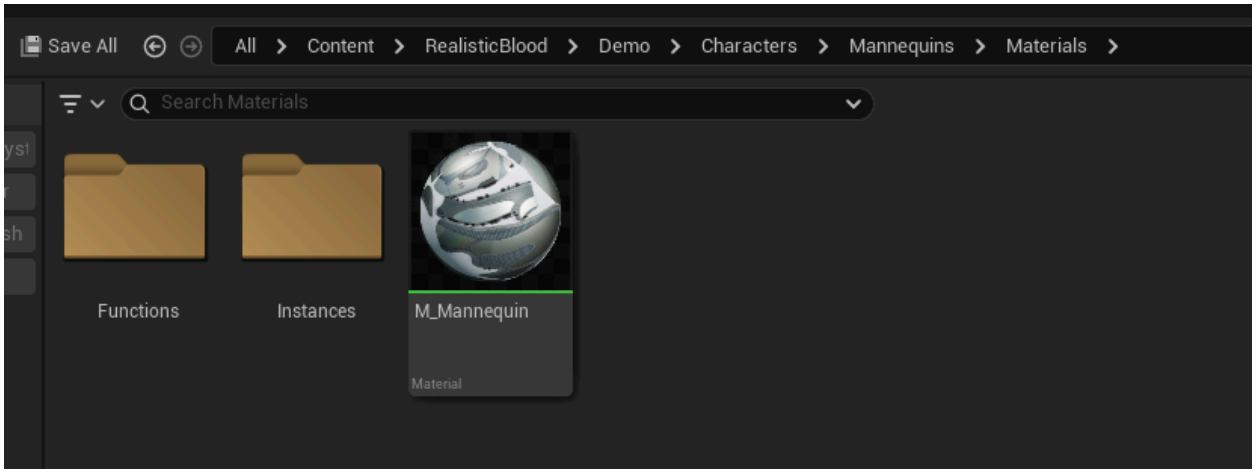


ArtifactFade_Opacity = 1.0

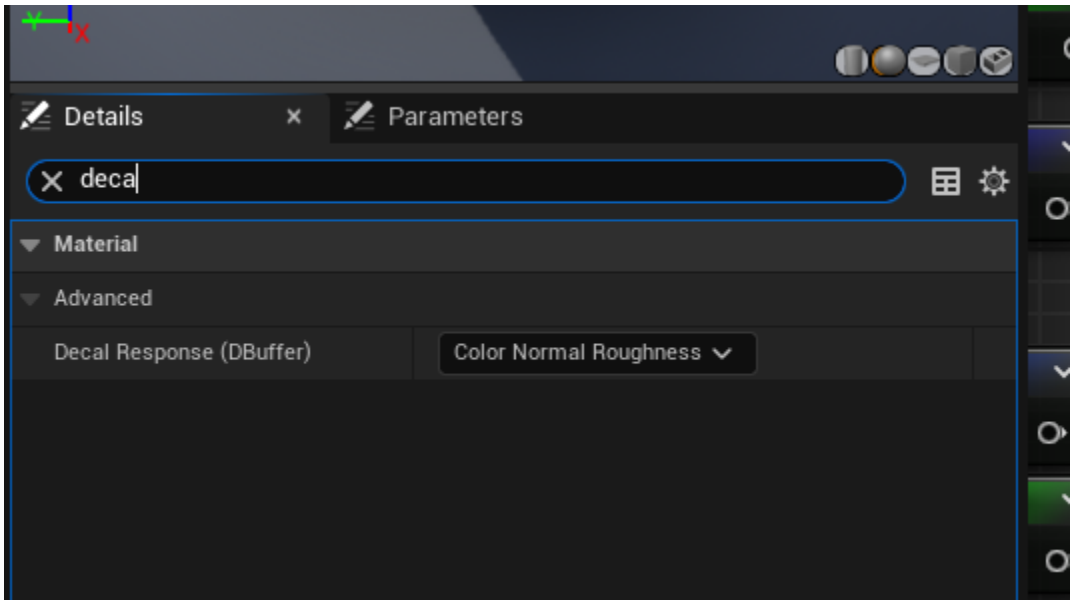


ArtifactFade_Opacity = 0.0

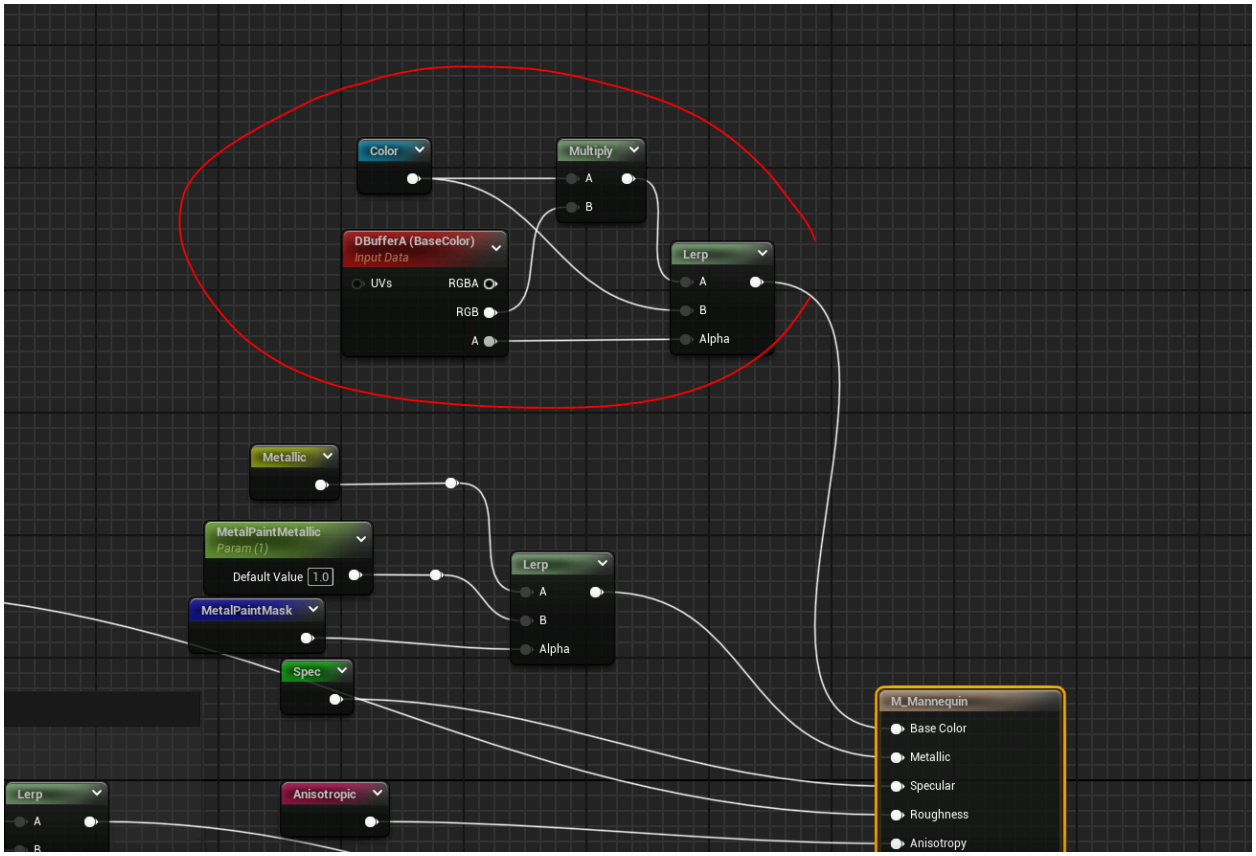
5.5 New DBuffer Implementation



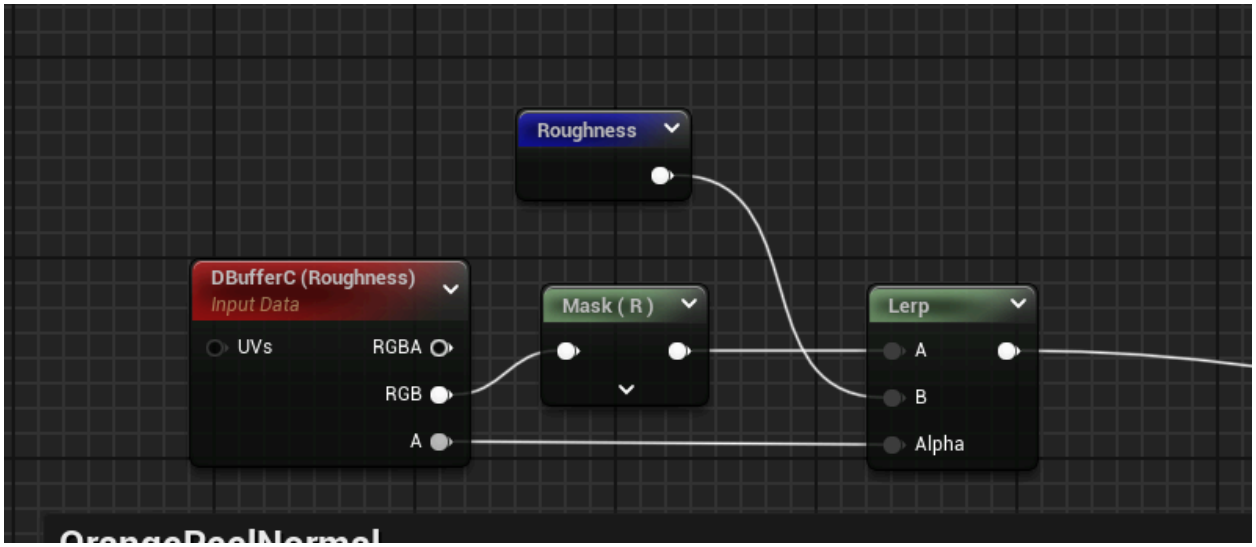
Go to Mannequin master material



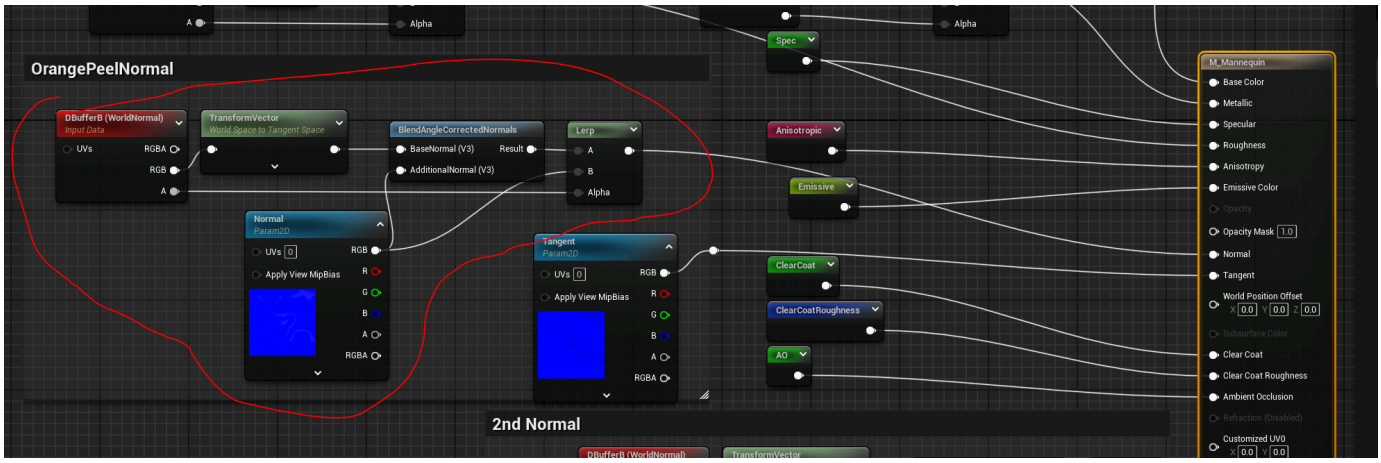
Check Decal Response (DBuffer) to make sure it is Color, Normal, Roughness.



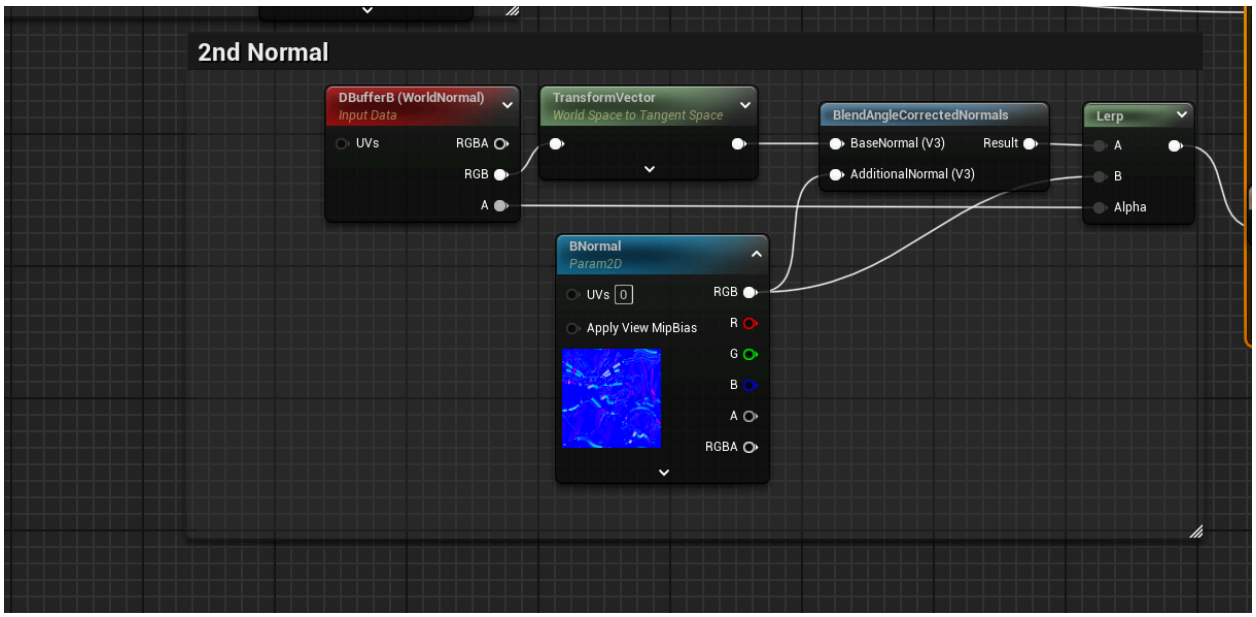
Feed DBuffer(BaseColor) with this formula



For Roughness



For Normal(1st)



For Normal(2nd)