

# The main\_opaque Shader

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## Wogrim's Epic Reference for the Shader Forge/main\_opaque Shader

No pretty pictures this time, I am keeping it condensed. You can use Material Editor to test most of this if you need a visual. A lot of this applies to the other shaders, but they are a bit different so be careful. If you're trying to make a mod, know that the list file and MonoBehavior do important things.

| Texture Name | What It Does   |
|--------------|--|
| AlphaMask    | The game fills this on bras and inner tops based on the layer above. Hides part of the clothing based on clothing state to prevent clipping. If you want to make bras or inner tops, you should make sure your UVs line up with existing ones for compatibility.   |
| AnotherRamp  | ramp texture for "specular shadow", normally applied to red areas of detail mask   |
| ColorMask    | Black means use the MainTex color<br>Red is Color 1 on the color picker<br>Green is Color 2 on the color picker, priority over red (Yellow is Color 2 also)<br>Blue is Color 3 on the color picker, priority over red and green (Cyan and Magenta and White are also Color 3)<br>Gradients between colors can be used  |
| DetailMask   | Red creates a highlight of the SpecularColor, based on SpecularPower and notusetexspecular. Blocks specular lighting.<br>Green does shadowing based on shadow density graphics setting and ShadowExtend, and blocks rim lighting.<br>Blue does fake outlining based on outline graphics settings and DetailBLineG, and blocks rim lighting.<br>Alpha + Red is a secondary highlight that takes priority over the red highlight, controlled by SpecularPowerNail. |
| LineMask     | Red is similar to red on the detail mask, but does not create a highlight and does not block specular lighting.<br>Green does fake outlining based on outline graphics settings and DetailBLineG, and does not block rim lighting.<br>Blue does shadowing based on shadow density graphics setting and ShadowExtend, and does not block rim lighting. Does not combine with green on the detail mask.<br>Alpha does not appear to do anything                    |
| MainTex      | Often pure white or has some details in gray, which is mixed by the game with color mask and patterns (where available)  |
| NormalMap    | This alters how the game calculates light hitting the surface. It is KK-style format, not the normal blue-ish kind. I will make a separate guide for these at some point.  |
| Texture2     | Liquid spatter pattern<br>Red is first time<br>Green is 2 or more times  |

| Texture3          | Liquid "normal map" to help make juice look 3D  |
|-------------------|---|
| liquidmask        | Marks which area is covered by liquid from different events<br>Green is front bottom<br>Yellow is back bottom, also shows on white<br>Red is front top<br>Blue is back top<br>Teal is face, also shows on white   |
| Color Name        | What It Does  |
| LiquidTiling      | Red is horizontal offset for liquid tiling; use numbers between 0 and 1.<br>Green is vertical offset for liquid tiling; use numbers between 0 and 1.<br>Blue scales the liquid texture horizontally (bigger number smaller splashes).<br>Alpha scales the liquid texture vertically (bigger number smaller splashes). |
| Shadow            | Color that the item is tinted toward for shadowing. Seems to have a stronger effect when the item color is less saturated.  |
| SpecularColor     | Color of detail mask highlights, and specular and rim lighting.<br>Alpha affects the brightness of specular highlights only.  |
| Float Name        |   |
| DetailBLineG      | Think of it as a slider between using blue on the detail mask and green on the line mask.<br>How much to apply outline color to blue areas of the detail mask. 0 for no effect.<br>How much to apply outline color to green areas of the line mask. 1 for no effect.  |
| DetailRLineR      | Think of it as a slider between using red on the detail mask and red on the line mask.<br>Affects how ramp texture creates a "specular shadow" on red areas of detail mask, 0 for no effect.<br>Same for red areas of the line mask, but with 1 for no effect.  |
| liquidbbot        | The game changes this when it is time to display liquid.  |
| liquidbtop        | The game changes this when it is time to display liquid.  |
| liquidface        | The game changes this when it is time to display liquid.  |
| liquidfbot        | The game changes this when it is time to display liquid.  |
| liquidftop        | The game changes this when it is time to display liquid.  |
| notusetexspecular | If set to 1, highlights from the detail mask (red channel) are turned off. Those areas still do not get regular specular highlights. Usually 0 or 1.  |
| rimpower          | Controls how much of an angle the surface has to be (relative to the camera) for rim lighting to be seen. Usually something between 0 and 1.  |
| rimV              | Multiplier for rim lighting. 0 for no effect, positive numbers for brighter, negative numbers darken the area instead.  |
| ShadowExtend      | Multiplier for how much the green on the detail mask will darken the color. 0 for no effect. Also darkens blue areas of the line mask.  |

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|---------------------|--|
| ShadowExtendAnother | Additional darkening of specular shadows. 0 for no effect.   |
| SpecularHeight      | Does some kind of scaling of the texture highlight (detail mask red channel) that will cause it to tile and move when viewed at different angles if set to anything other than 1. Use something very close to 1 like 0.98 or 1.02 if you want it to move a little. |
| SpecularPower       | Acts as roughness for specular highlights and also controls brightness of the highlight from the detail mask red channel.  |
| SpecularPowerNail   | Controls the brightness of the highlight from the detail mask alpha channel.   |