

Specular

reflection

(metal)

Specular

transmission\*

Emission

/additive/

Specular reflection (coating)

Diffuse

reflection

Specular reflection

Specular retro-reflection (sheen)\*

Diffuse

transmission\*

Subsurface

scattering\*

```
standard_surface
1 - opacity
                      opacity
                                +
transparency
                        coat
                                       lerp(coat, white, coat_color * (1 - reflectance(coat_brdf))
                   coat_brdf
                                                            metalness
          emission * emission color
                                                  1 - metalness
                                                                  metal_brdf
                          emission
                 specular * specular_color
                                                         - specular * specular_color * reflectance(spec_brdf)
                                  spec_brdf
                                                                   transmission * transmission color
                                                 - transmission
                                                                      spec btdf
          sheen * sheen_color
                                                 - sheen * reflectance(sheen_brdf)
                sheen_brdf
                                                     +
                                                                   (1 - subsurface) * base * base_color
                subsurface * subsurface_color,
                                       +
                                                                       diffuse_brdf
                   thin_walled
                                                  1 - thin_walled
                                                    subsurface
                 diffuse_btdf
```