

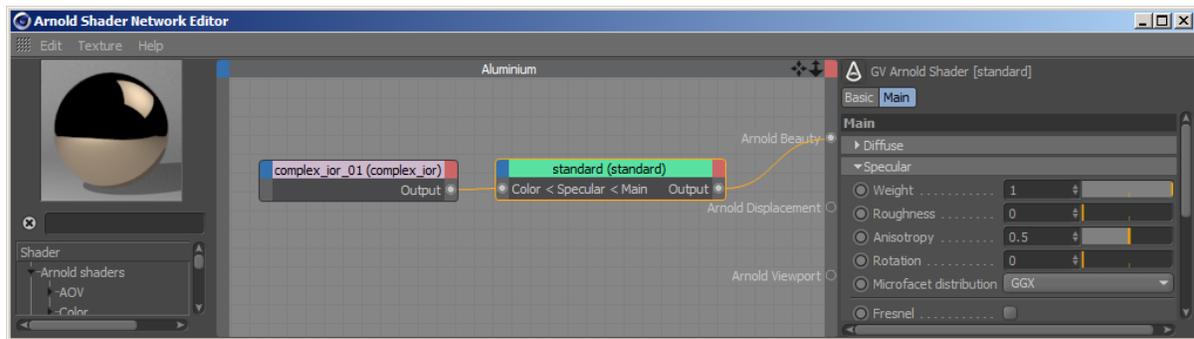
Complex IOR

 This shader is deprecated and should only be used with the *Standard* shader.

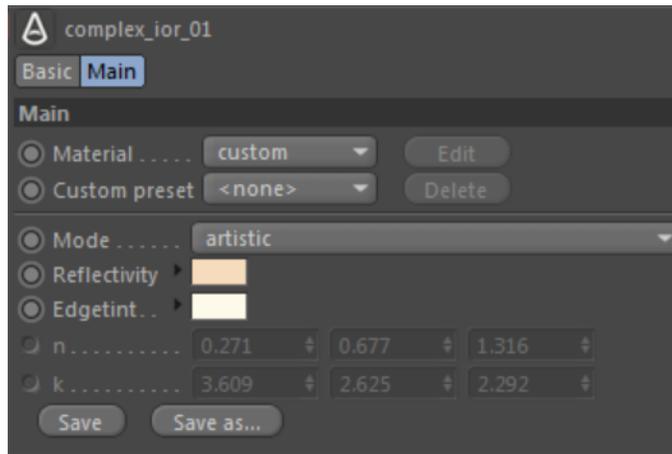


This shader can be used to render materials with complex index of refractions. The Standard shader can compute the Fresnel effect for dielectric materials like plastic and glass based on the refractive index of the material; however, metals have a more complicated Fresnel reflective curve that also depends on another parameter called extinction coefficient.

 You should not use the *Complex IOR* shader with the *Standard Surface* shader. The *Standard Surface* has the complex Fresnel built-in when the metalness is > 0 , using the base and specular color.



'Complex IOR' shader connected to 'Specular Color' of Standard shader (Specular Fresnel disabled).



Material

Presets of different materials. The **custom** mode allows you to define a custom setting. By clicking on the **Edit** button, the selected preset overrides the Reflectivity, Edgetint, and n, k fields, allowing you to refine the settings.



Aluminium



Copper



Mercury



Nickel

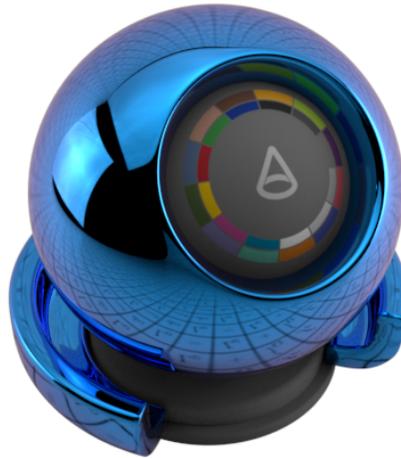
Custom preset

You are able to save and load your custom presets in the **custom** material mode. The **Custom preset** combo box lists all saved presets. Clicking on Save will override the current custom preset, clicking on Save as... allows you to save the preset with a new name.

Presets are not saved to the scene they stored on the local machine in the C4D user folder, which is `$HOME/Preferences/MAXON/CINEMA 4D R [version]/C4DtoA/presets/complex_ior` on OSX and `%HOME%\AppData\Roaming\MAXON\CINEMA 4D R [version]\C4DtoA\presets\complex_ior` on Windows.

Mode

Select between the artist friendly (**Reflectivity** and **Edgetint** colors) and physical (***n*** and ***k***) controls.



Reflectivity: blue. Edgetint: purple.

Reflectivity

The reflectance at normal incidence.

Edgetint

Controls the color bias as the viewing direction becomes parallel to the surface.

n

The refractive index value for the red/green/blue wavelengths (e.g. 0.65, 0.55 and 0.45 micrometers).

k

The extinction coefficient value for the red/green/blue wavelengths (e.g. 0.65, 0.55 and 0.45 micrometers).



The site <http://refractiveindex.info/> has measured **n** and **k** values for many materials like copper, gold, etc.