**HTML HSL and HSLA Colors**

* HSL stands for hue, saturation, and lightness.
* HSLA color values are an extension of HSL with an Alpha channel (opacity).

**HSL Color Values**

In HTML, a color can be specified using hue, saturation, and lightness (HSL) in the form:

**hsl(*hue*, *saturation*, *lightness*)**

* Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.
* Saturation is a percentage value. 0% means a shade of gray, and 100% is the full color.
* Lightness is also a percentage value. 0% is black, and 100% is white.

Experiment by mixing the HSL values below:

**hsl(0, 100%, 50%) --- Pure red color**

**hsl(120, 100%, 50%) --- Pure Green color**

**hsl(240, 100%, 50%) --- Pure Blue color**

**hsl(147, 50%, 47%) --- Dull Green**

**hsl(39, 100%, 50%) -- Dull magenta**

**hsl(300, 76%, 72%) --- Dull Pink**

**hsl(248, 53%, 58%) --- Dull blue**

**Saturation**

* Saturation can be described as the intensity of a color.
* 100% is pure color, no shades of gray.
* 50% is 50% gray, but you can still see the color.
* 0% is completely gray; you can no longer see the color.

Example

**hsl(0, 100%, 50%)**

**hsl(0, 80%, 50%)**

**hsl(0, 60%, 50%)**

**hsl(0, 40%, 50%)**

**hsl(0, 20%, 50%)**

**hsl(0, 0%, 50%)**

**Lightness**

* The lightness of a color can be described as how much light you want to give the color, where 0% means no light (black), 50% means 50% light (neither dark nor light), and 100% means full lightness (white).

Example

**hsl(0, 100%, 0%)**

**hsl(0, 100%, 25%)**

**hsl(0, 100%, 50%)**

**hsl(0, 100%, 75%)**

**hsl(0, 100%, 90%)**

**hsl(0, 100%, 100%)**

**Shades of Gray**

* Shades of gray are often defined by setting the hue and saturation to 0, and adjusting the lightness from 0% to 100% to get darker/lighter shades:

Example

**hsl(0, 0%, 20%)**

**hsl(0, 0%, 30%)**

**hsl(0, 0%, 40%)**

**hsl(0, 0%, 60%)**

**hsl(0, 0%, 70%)**

**hsl(0, 0%, 90%)**

**HSLA Color Values**

* HSLA color values are an extension of HSL color values, with an Alpha channel - which specifies the opacity for a color.
* An HSLA color value is specified with:

**hsla(*hue,* *saturation*, *lightness, alpha*)**

* The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all):

Experiment by mixing the HSLA values below:

<h1 style="background-color:hsla(9, 100%, 64%, 0);">hsla(9, 100%, 64%, 0)</h1>

<h1 style="background-color:hsla(9, 100%, 64%, 0.2);">hsla(9, 100%, 64%, 0.2)</h1>

<h1 style="background-color:hsla(9, 100%, 64%, 0.4);">hsla(9, 100%, 64%, 0.4)</h1>

<h1 style="background-color:hsla(9, 100%, 64%, 0.6);">hsla(9, 100%, 64%, 0.6)</h1>

<h1 style="background-color:hsla(9, 100%, 64%, 0.8);">hsla(9, 100%, 64%, 0.8)</h1>

<h1 style="background-color:hsla(9, 100%, 64%, 1);">hsla(9, 100%, 64%, 1)</h1>

Output:

**hsla(9, 100%, 64%, 0) --- White**

**hsla(9, 100%, 64%, 0.2) --- Light shade**

**hsla(9, 100%, 64%, 0.4)**

**hsla(9, 100%, 64%, 0.6)**

**hsla(9, 100%, 64%, 0.8)**

**hsla(9, 100%, 64%, 1)**