

CSS hsl() / hsla() color

CSS hsl/hsla color value.

```
^hsla?(\s*\d+(deg)?\s*,\s*\d+%\s*,\s*\d+%\s*(,\s*(0|1|0?\.\d+)\s*)?\)\s*$
```

Token-by-token breakdown

Token	Meaning
^	start of string (or line in multiline mode)
hsl	literal text "hsl"
a?	optional (zero or one): the literal "a"
\(	literal "("
\s*	zero or more: whitespace
\d+	one or more: digit (0–9)
(	start of a capturing group
deg	literal text "deg"
)?	end of group, optional (zero or one)
\s*	zero or more: whitespace
,	literal text ","
\s*	zero or more: whitespace
\d+	one or more: digit (0–9)
%	literal text "%"
\s*	zero or more: whitespace
,	literal text ","
\s*	zero or more: whitespace
\d+	one or more: digit (0–9)
%	literal text "%"
\s*	zero or more: whitespace
(	start of a capturing group
,	literal text ","
\s*	zero or more: whitespace
(	start of a capturing group
0	literal text "0"
	OR — try the alternative
1	literal text "1"

Token	Meaning
	OR — try the alternative
0?	optional (zero or one): the literal “0”
\.	literal “.”
\d+	one or more: digit (0–9)
)	end of group
\s*	zero or more: whitespace
)?	end of group, optional (zero or one)
\)	literal “)”
\$	end of string (or line in multiline mode)

Quick usage in 7 languages

JavaScript	<pre>const re = /^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$\$/; re.test(value);</pre>
Python	<pre>import re re.match(r"^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$", value)</pre>
Java	<pre>Pattern.compile("^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$\$").matcher(value).matches();</pre>
C# / .NET	<pre>Regex.IsMatch(value, @"^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$\$");</pre>
Go	<pre>regexp.MustCompile(`^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$`).MatchString(value)</pre>
Ruby	<pre>/^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$\$/.match?(value)</pre>
PHP	<pre>preg_match('~^hsla?\\(\\s*\\d+(deg)?\\s*,\\s*\\d+%\\s*,\\s*\\d+%\\s*(,\\s*(0 1 0?\\.\\d+)\\s*)?\\)\$~', \$value);</pre>

Common pitfalls

- **Anchored to the whole string.** This pattern uses ^ and \$, so it requires the entire input to match. To find it inside a longer text, drop the anchors and use the global (g) flag.
- **Escape it correctly per language.** In Java and JavaScript strings each backslash must be doubled (\\d); in Python, Go, and C# use raw/verbatim strings so the backslashes survive.
- **Validate beyond format.** Matching the format doesn't guarantee the value is real. Confirm the css hsl() / hsla() color against a source of truth (database, API, or checksum) where it matters.