

# Converting Colors - WCAG Matrix

## Web Content Accessibility Guidelines (WCAG) 2.0 - Color Matrix.

|             | Hex(E0E0E0)                                             | Hex(C4C4C4)                                             | Hex(A9A9A9)                                             | Hex(8E8E8E)                                             | Hex(757575)                                             | Hex(5C5C5C)                                             | Hex(454545)                                             | Hex(2F2F2F)                                             | Hex(1A1A1A)                                             | Hex(000000)                                             |
|-------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| Hex(E0E0E0) |                                                         | Ratio: 1.32<br>Failed <sup>5</sup>                      | Ratio: 1.78<br>Failed <sup>5</sup>                      | Ratio: 2.48<br>Failed <sup>5</sup>                      | Ratio: 3.49<br>AA 18pt <sup>2</sup>                     | Ratio: 5.07<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 7.26<br>Passed <sup>6</sup>                      | Ratio: 10.14<br>Passed <sup>6</sup>                     | Ratio: 13.18<br>Passed <sup>6</sup>                     | Ratio: 15.91<br>Passed <sup>6</sup>                     |
| Hex(C4C4C4) | Ratio: 1.32<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.35<br>Failed <sup>5</sup>                      | Ratio: 1.88<br>Failed <sup>5</sup>                      | Ratio: 2.64<br>Failed <sup>5</sup>                      | Ratio: 3.83<br>AA 18pt <sup>2</sup>                     | Ratio: 5.50<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 7.68<br>Passed <sup>6</sup>                      | Ratio: 9.98<br>Passed <sup>6</sup>                      | Ratio: 12.04<br>Passed <sup>6</sup>                     |
| Hex(A9A9A9) | Ratio: 1.78<br>Failed <sup>5</sup>                      | Ratio: 1.35<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.39<br>Failed <sup>5</sup>                      | Ratio: 1.96<br>Failed <sup>5</sup>                      | Ratio: 2.85<br>Failed <sup>5</sup>                      | Ratio: 4.08<br>AA 18pt <sup>2</sup>                     | Ratio: 5.70<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 7.41<br>Passed <sup>6</sup>                      | Ratio: 8.94<br>Passed <sup>6</sup>                      |
| Hex(8E8E8E) | Ratio: 2.48<br>Failed <sup>5</sup>                      | Ratio: 1.88<br>Failed <sup>5</sup>                      | Ratio: 1.39<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.41<br>Failed <sup>5</sup>                      | Ratio: 2.04<br>Failed <sup>5</sup>                      | Ratio: 2.93<br>Failed <sup>5</sup>                      | Ratio: 4.09<br>AA 18pt <sup>2</sup>                     | Ratio: 5.31<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 6.41<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> |
| Hex(757575) | Ratio: 3.49<br>AA 18pt <sup>2</sup>                     | Ratio: 2.64<br>Failed <sup>5</sup>                      | Ratio: 1.96<br>Failed <sup>5</sup>                      | Ratio: 1.41<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.45<br>Failed <sup>5</sup>                      | Ratio: 2.08<br>Failed <sup>5</sup>                      | Ratio: 2.91<br>Failed <sup>5</sup>                      | Ratio: 3.78<br>AA 18pt <sup>2</sup>                     | Ratio: 4.56<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> |
| Hex(5C5C5C) | Ratio: 5.07<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 3.83<br>AA 18pt <sup>2</sup>                     | Ratio: 2.85<br>Failed <sup>5</sup>                      | Ratio: 2.04<br>Failed <sup>5</sup>                      | Ratio: 1.45<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.43<br>Failed <sup>5</sup>                      | Ratio: 2.00<br>Failed <sup>5</sup>                      | Ratio: 2.60<br>Failed <sup>5</sup>                      | Ratio: 3.14<br>AA 18pt <sup>2</sup>                     |
| Hex(454545) | Ratio: 7.26<br>Passed <sup>6</sup>                      | Ratio: 5.50<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 4.08<br>AA 18pt <sup>2</sup>                     | Ratio: 2.93<br>Failed <sup>5</sup>                      | Ratio: 2.08<br>Failed <sup>5</sup>                      | Ratio: 1.43<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.40<br>Failed <sup>5</sup>                      | Ratio: 1.82<br>Failed <sup>5</sup>                      | Ratio: 2.19<br>Failed <sup>5</sup>                      |
| Hex(2F2F2F) | Ratio: 10.14<br>Passed <sup>6</sup>                     | Ratio: 7.68<br>Passed <sup>6</sup>                      | Ratio: 5.70<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 4.09<br>AA 18pt <sup>2</sup>                     | Ratio: 2.91<br>Failed <sup>5</sup>                      | Ratio: 2.00<br>Failed <sup>5</sup>                      | Ratio: 1.40<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.30<br>Failed <sup>5</sup>                      | Ratio: 1.57<br>Failed <sup>5</sup>                      |
| Hex(1A1A1A) | Ratio: 13.18<br>Passed <sup>6</sup>                     | Ratio: 9.98<br>Passed <sup>6</sup>                      | Ratio: 7.41<br>Passed <sup>6</sup>                      | Ratio: 5.31<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 3.78<br>AA 18pt <sup>2</sup>                     | Ratio: 2.60<br>Failed <sup>5</sup>                      | Ratio: 1.82<br>Failed <sup>5</sup>                      | Ratio: 1.30<br>Failed <sup>5</sup>                      |                                                         | Ratio: 1.21<br>Failed <sup>5</sup>                      |
| Hex(000000) | Ratio: 15.91<br>Passed <sup>6</sup>                     | Ratio: 12.04<br>Passed <sup>6</sup>                     | Ratio: 8.94<br>Passed <sup>6</sup>                      | Ratio: 6.41<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 4.56<br>AA <sup>1</sup><br>AAA 18pt <sup>4</sup> | Ratio: 3.14<br>AA 18pt <sup>2</sup>                     | Ratio: 2.19<br>Failed <sup>5</sup>                      | Ratio: 1.57<br>Failed <sup>5</sup>                      | Ratio: 1.21<br>Failed <sup>5</sup>                      |                                                         |

Details can be found at <https://www.w3.org/TR/WCAG20/>.

<sup>1</sup> AA

AA level of the Web Content Accessibility Guidelines (WCAG) 2.0 for any text size.

<sup>2</sup> AA 18pt

AA level for large text above 18pt.

<sup>3</sup> AAA

AAA level of the Web Content Accessibility Guidelines (WCAG) 2.0 for any text size.

<sup>4</sup> AAA 18pt

AAA level for large text above 18pt.

<sup>5</sup> Failed

Fails to comply with the Web Content Accessibility Guidelines (WCAG) 2.0.

<sup>6</sup> Passed

Passes the AAA level of the Web Content Accessibility Guidelines (WCAG) 2.0 for all text sizes.

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