

2.5 Testing PDF Color Contrast

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Why Color Contrast is Important

Standards for minimum color contrast featured in the accessibility guidelines prevent content from being too hard to view for users with low vision. If the displayed color of text and other elements of your content do not sufficiently differ from the color of their background, then this content becomes impossible to see for these users.

Successfully Meeting the Use of Color Criteria

For content to meet the WCAG 'Use of Color' criteria, all text must meet or exceed a regular text or large text contrast criteria.

The Large Text Contrast Standard Specifies:

- A 3:1 text to background contrast minimum (for all text that is at least 18-point regular font or 14-point bold font).

The Regular Text Contrast Standard Specifies:

- A 4.5:1 text to background contrast minimum (for all text not considered 'large text').

To meet this criterion, it is ideal to use black or blue text over a white background. Avoiding grey or tan backgrounds combined with less contrasting colors (like red or yellow) for text will also prevent a failure of the contrast standards.

Determining Color Values for PDF Elements

To test color contrast, color values will need to be found for both the foreground and background elements in a PDF.

Foreground Color Values

Foreground elements usually involve the text displayed over a background. This could also relate to the elements of a diagram requiring color recognition to understand the content. To determine the specific color values of text within an open PDF document:

1. Find and open the **Edit PDF** tool. Place the text editing cursor within a word of the text being tested for color contrast.
2. In the 'Format' section of the righthand **Edit PDF** menu, open the 'color selection' box. Select 'Other Color'.
3. A 'Color' window will appear. Note the red, green and blue color values in the bottom right corner of the window.

These 'RGB' color values will be used when comparing the color values of the text to the background.

Background Color Values

The background color is what surrounds or lies behind all relevant content within a PDF document. While some third-party Acrobat plugins allow users to easily determine the background color, there are other ways to accomplish this without additional software installations. To find the background color values surrounding the foreground text:

1. With the **Edit PDF** tool open, find and select the 'More' dropdown menu located in the top **Edit PDF** toolbar.

2. Select 'Background' and then 'Update'. This is meant to check if an existing custom background is in place within the page or entire PDF document. An error message may appear that states 'Adobe Acrobat cannot find a background in this file'. If no custom background is in place, then the background color values should be a standard '255' for red, green and blue values.
3. If selecting 'Update' opens an 'Update Background' window, the background color values can be viewed and accessed within a color selection box found in the 'Source' options. Open the color selection box, select 'Other Color' and take note of the red, green and blue color values for the background.

As a note, this color value method will not work if the background is based, not on a solid color, but an image that cannot be removed without altering the context or meaning of the information displayed within the document. This may be particularly true for scanned images where an imperfect background cannot be removed. In these scenarios, a color picker supplied as an Acrobat plugin can determine the background color.

Assessing PDF Color Contrast

Once the color values of the foreground and background elements have been determined, they can be compared for color contrast. Determining the color contrast ratio is not an available feature of Acrobat and must be determined elsewhere through a web-based tool or desktop application.

Color Contrast Inputs

It is important to note that a color contrast comparison tool may ask for HTML or 'Hex' color codes. There are many free and easily accessible web-based tools that can convert RGB color values to HTML values to obtain the proper inputs for a color contrast tool.

Conclusion

In this module, we've discussed the basic color value testing procedures within Acrobat and left off at the color contrast tools outside of Acrobat. In the next module, we will begin arranging and editing document tags and reading order within Acrobat.