Adobe® Customer Support

Painting on Black CMYK Image Creates Halo Around Stroke in Photoshop 3.0 or Later

Issue

In Adobe Photoshop 3.0 or later, a halo (e.g., ring of lighter color) appears around the brush stroke after painting on a black (e.g., 100% K) background in a CMYK image using the Airbrush or Paint brush tool.

Symptoms

The foreground color of the brush stroke does not transition smoothly into the black background color.

When painting in RGB color mode, foreground color of the brush stroke fades smoothly into the background color.

Solutions

Paint in LAB or RGB color mode with the Airbrush or Paint brush tool:

1. Choose LAB or RGB Color from the Mode menu.
2. Paint with the Airbrush or Paint brush tool.
3. Choose Mode > CMYK Color to return to CMYK color mode.

OR: Darken the display of the image by increasing the dot gain (e.g., 30% or 40%):

1. Choose File > Preferences > Printing Inks Setup.
2. Increase the Dot Gain percentage, then click OK.

NOTE: Photoshop uses a 20% dot gain by default.

Additional Information

In Photoshop 3.0 and later, painting with the Paint brush and Airbrush tools creates an anti-aliased brush stroke.

When you paint in Photoshop's CMYK mode using the Airbrush or Paint brush tool on a color composed of Black and less than 100% of Cyan, Magenta, or Yellow, Photoshop creates an anti-aliased transition of a lighter color (e.g., a halo) between the brush stroke and background. When a brush stroke is anti-aliased in CMYK color mode, the transition between the background and foreground color is composed of tints of the CMY colors in the background color and decreasing percentages of Black (K) in the foreground color. For example, when anti-aliasing a 100% Black brush stroke painted over a background color of 100% Cyan and 100% Magenta, the transition color created by anti-aliasing contains 33% Cyan, 33% Magenta, and 67% Black. The light color transition between the edge pixels of the brush stroke and the background color creates the appearance of a halo around the anti-aliased brush stroke.

The larger the percentages of CMY in the black background color, the less distinct the halo around the brush stroke appears. The fewer the percentages of CMY in the black background color, the lighter and more distinct the halo around the brush stroke appears.

Dark colors in RGB color mode are composed of decreasing amounts or Red, Green, and Blue. Black is composed of 0 Red, 0 Green, and 0 Blue. When you paint with the Airbrush and Paint brush tools in RGB color mode, the anti-aliased edge pixels of the brush stroke are composed of RGB, seamlessly blending the brush stroke into the background.

Increasing the dot gain percentage in the Printing Inks Setup dialog box lessens the halo around the brush stroke by darkening the overall appearance of the image.