

ICC Profile

ICC (International Colour Consortium) Profiles describe the colour attributes of a particular device or viewing requirement by defining a mapping between the source or target colour space and a profile connection space (PCS). This PCS is either L*a*b* or CIE XYZ colour space. Mappings may be done using tables, to which interpolation is applied, or through a series of parameters for transformations.

To see how this works in practice, suppose we have a particular RGB and CMYK colour space, and want to convert from this RGB to the CMYK. The first step is to obtain the two ICC profiles concerned. To perform the conversion, each RGB triplet R, G, B is first converted to the PCS using the RGB profile. If necessary the PCS is converted between L*a*b* and CIE XYZ, a well defined transformation. Then the PCS is converted to the four values of C, M, Y, K required.

A profile might define several mappings, according to rendering intent. These mappings allow a choice between closest possible colour matching, and remapping the entire colour range to allow for different gamuts.

The International Colour Consortium defines the format precisely but do not define algorithms or processing details. This means there is room for variation between different applications and systems that work with ICC profiles.

Every device that captures or displays colour will have its own profile. Some manufacturers provide profiles for their products, and there are several products that allow end users to generate their own colour profile, typically through the use of a colourimeter.

We do not use any ICC profiles in GZ. Please remove them from your artwork.