# CMYK color with rgb-icc() and cmyk()

Here is an example of drawing CMYK color by specifying rgb-icc(<R>,<G>,<B>,#CMYK,<C>,<M>,<Y>,<K>). Specify 0.0–1.0 or % value in CMYK value. cmyk(<C>,<M>,<Y>,<K>) is equivalent to rgb-icc(#CMYK,<C>,<M>,<Y>,<K>).

The following formulas are used for RGB calculation:

$$\begin{aligned}\text{Red} &= 1 - \text{minimum}(1, \text{Cyan} \times (1 - \text{Black}) + \text{Black})\\ \text{Green} &= 1 - \text{minimum}(1, \text{Magenta} \times (1 - \text{Black}) + \text{Black})\\ \text{Blue} &= 1 - \text{minimum}(1, \text{Yellow} \times (1 - \text{Black}) + \text{Black})\end{aligned}$$

| | | |
|---|---|---|
| rgb-icc(164,164,164,#CMYK,0.2, 0.2, 0.2, 0.2) | | rgb-icc(64%,64%,64%,#CMYK, 20%, 20%, 20%, 20%) |
| rgb-icc(123,123,123,#CMYK,0.2, 0.2, 0.2, 0.4) | | rgb-icc(48%,48%,48%,#CMYK, 20%, 20%, 20%, 40%) |
| rgb-icc(164,164,123,#CMYK,0.2, 0.2, 0.4, 0.2) | | rgb-icc(64%,64%,48%,#CMYK, 20%, 20%, 40%, 20%) |
| rgb-icc(164,123,164,#CMYK,0.2, 0.4, 0.2, 0.2) | | rgb-icc(64%,48%,64%,#CMYK, 20%, 40%, 20%, 20%) |
| rgb-icc(123,164,164,#CMYK,0.4, 0.2, 0.2, 0.2) | | rgb-icc(48%,64%,64%,#CMYK, 40%, 20%, 20%, 20%) |
| rgb-icc(123,123,92,#CMYK,0.2, 0.2, 0.4, 0.4) | | rgb-icc(48%,48%,36%,#CMYK, 20%, 20%, 40%, 40%) |
| rgb-icc(164,123,123,#CMYK,0.2, 0.4, 0.4, 0.2) | | rgb-icc(64%,48%,48%,#CMYK, 20%, 40%, 40%, 20%) |
| rgb-icc(123,123,164,#CMYK,0.4, 0.4, 0.2, 0.2) | | rgb-icc(48%,48%,64%,#CMYK, 40%, 40%, 20%, 20%) |