

About common density limit

Common Density Limit is used to prevent traps where they are not needed. Traps are not needed if a gap will not be visible due to the darkness or density at that place. It is controlled from the **Trap** section of refine process templates.

Common density is a neutral density calculated from the common parts of each single separation. In the table below, C60 M25 Y30 K10 and C40 M31 Y40 K14 have the common parts of C40 M25 Y30 K10. Spot colors are also considered, if present. Therefore, the common density is a value for the darkness for the worst possible misregistration. If this common density is above the **Common Density Limit** setting, no traps are required.

Separation	Color1	Color2	Relative Ink Dot Percentage	Step Limit (25%) Satisfied?
Cyan	60%	40%	$(60-40)/40 = 0.5$ or 50%	Yes, 50% > 25%
Magenta	25%	31%	$(31-25)/25 = 0.24$ or 24%	No, 24% < 25%
Yellow	30%	40%	$(40-30)/30 = 0.33$ or 33%	Yes, 33% > 25%
Key	10%	14%		Ignored, doesn't meet 5% minimum difference

For the example above (common parts of C40 M25 Y30 K10), the common density is calculated as follows (CD = common density, ND = neutral density):

CD	= ND[Cyan]	+ ND[Magenta]	+ND[Yellow]	+ND[Key]
	= 0.19	+0.13	+0.05	+0.07
	= 0.44			
0.44	< 0.5			

The common density of the two example colors is lower than the default limit of 0.5, so a trap would be created.