The book cover features a central grey rectangular panel. This panel is framed by a border composed of numerous thin, vertical and horizontal stripes in a variety of colors including purple, blue, green, red, orange, and yellow. The title is printed in white on the grey panel. The words "DESIGNER'S" and "GUIDE TO" are in a smaller, all-caps, serif font. The word "color" is significantly larger, in a lowercase, bold, sans-serif font, and is the most prominent element of the title.

DESIGNER'S GUIDE TO
color

DESIGNER'S GUIDE TO **color**

Introductory Essay by James Stockton

Chronicle Books

San Francisco

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Introduction

This compact book is meant to serve primarily as a professional tool for anyone associated with design or the design process. Because of the inclusion of screen values of the four process colors, this book will make perhaps its greatest contribution to those who realize their design through some printed process—graphic designers, certainly; also environmental designers, advertising and package designers and probably some members of architectural firms who become involved in printed media. In a much broader sense, the book has real value to anyone who needs to confirm color ideas or to find color combinations, suggestions and examples presented in a straightforward, pure and neutral way.

Besides the interior designers and fashion designers who also will find this a useful guide to have in an office arsenal are those whose color use is in theater design and costuming. People who design or promote recreational activities will consult the color combinations to heighten enjoyment, excitement and ready identification of team uniforms, jockeys' silks, balloons used for sport, the enormous and highly original arrays of spinnakers and flags used in sailing and yachting and the flags and equipment used for winter sports.

Students and teachers of painting and design will find the presentations of color in this book a place to begin or conclude discussions of color combinations and of their effects on each other, as well as their ultimate effect on the viewer.

How To Use This Book

The book is organized this way: up to page 121, two-color combinations are presented. Each page has one color as the theme or base color, with a variety of contrasting colors placed against it. The page's theme color is repeated as a tab at the edge of the page to facilitate finding it (and all the theme colors are displayed in the array of numbered arcs beginning this book.)

Brilliant three-color combinations are presented on pages 122–123, and some strong colors are combined with white stripes on page 125. Then the three-color combinations continue from page 126 to page 135 with rich additions of grayed colors and, finally, the inclusion of powerful, deep-valued, strong-hued stripes. Use of the color masks built into the book jacket allows any combination to be viewed independently.

Note that the colors presented in this book, which are produced by combining tint values—that is, screen values—of the four basic printing process colors, are accompanied by the numbers designating these values. Throughout the world, most printed color reproduction is the result of optical separation of such art as a painting or illustration (reflective copy) or a photo transparency (projected copy) into four pure and basic ink colors—yellow, cyan, magenta and black—which are then printed precisely on top of each other to yield the full-color effect of the original object. To achieve strong areas of flat color similar to the color samples in this book, percentages of the same four basic process colors can be printed in almost endless combinations. The abbreviated designations for the four colors that are given with the percentages are for the most part uniform internationally—Y stands for yellow, M for magenta, C for cyan and BL or K for black.

In the pages of this book, below each contrast color (and above each new theme color) is a small notation on what combination of tints of the four basic colors was used to achieve that color.

It is very important to remember that while the method for reproducing the four process colors is basically the same for lithography and letterpress printing worldwide, the chemical composition and properties of inks varies somewhat from country to country and even from printer to printer. The inks used to achieve the colors in this book are Japanese: the resulting four colors by themselves appear different from their American counterparts, as do Dutch inks, Italian inks and others. Magenta is probably the ink color with greatest variance. It is easy to compensate for these discrepancies, but a designer with inks other than those used in manufacturing this book who strives to match exactly one of the colors represented here should take the discrepancies into account. Variances in ink density or how much ink is allowed to lay on the printed surface also drastically affects the quality of the color being reproduced. All this reinforces the need for any designer to be at press-side for a final check when a job is being printed.

Another factor that substantially affects the quality and appearance of printed color is the paper or surface of the paper on which the ink is printed. Graphic designers who work with a lot of printed color struggle with these variables routinely; they are surmountable if they are remembered at the planning stage. Among other things, design is planning.

Some Attributes of Color Perception

Clear though an array of colors may appear on a page to some, a great number of factors affect perception of them, including physiological capacity and the questionable powers of emotional associations and stylistic preferences.

Color produced by elements that project light—such as colored lights, television, slides and movies—differs greatly in quality, composition and effect from color that is reflected from the page, as in this book.

Elemental in any discussion of color are the distinctions and contributions of the terms hue, value and intensity. Quite simply, *hue* describes the position of a color on a classic color wheel and is used to name the color—*yellow, violet or green*, for example. *Value* describes the lightness or darkness of the color—its position on a scale from white to black. *Intensity* refers to the brightness, saturation and impact of the color.

Ophthalmologists maintain that the ability of the eye to distinguish colors diminishes on a regular curve with old age. Some say that they can gauge the age of a person by testing perceptions of hue, value and intensity. (One who anticipates a color project for elderly people might effectively use this book as a device to determine preferences on these three counts.)

In the study of color, much attention is devoted to the effect of colors on the colors next to them. Depending on the relative positions of colors on the color wheel, many when placed next to each other somewhat cancel each other and seem grayed, or they produce the effect of creating an additional color unlike the originating two. These effects are most easily distinguishable if the juxtaposed colors are in relatively small panels or if the colors are viewed from a distance. Some of the conditions producing grayed or additional colors are discernible in the samples in this book (208, 343, 396, 1036 and 1038, to name a few). Grays usually are the product of actually mixing colors that are across the color wheel from each other. And, as in this book, many grays or grayed colors are achieved by adding black to a combination of the other three process colors (see sample 1089). Other grays are created by using fairly equal percentages of yellow, cyan and magenta but no black, with varying results. Look at the quality of the grays in samples 1079 and 1084, then compare the reddish gray on page 85. Throughout the book there are many opportunities as well to see the effects colors have on grays placed next to them; see for instance the same gray be-

side different colors in samples 1079 and 1098 and in 1083 and 1084.

Evoking the optical effect sometimes known as negative afterimage is a good trick, but it's one with real value in confirming colors. The phenomenon can be simply demonstrated by placing a sample of one of the primary colors against a light, neutral gray background. After one stares at the color for a minute or so, if it is quickly pulled away a clear image in the shape of the original color will appear exactly in the place of the color, but it will appear in the complementary hue found directly across the color wheel. For instance, if red is chosen as the demonstrator its negative afterimage will be green.

Another example of the effect of color is its influence on apparent size. Generally, brighter color bars seem larger than darker color bars of the same size; but there are many exceptions to this. Value and position are additional factors that play important roles in perception of size. In use, some of these factors are surprising and unpredictable; see for example the apparent difference in size of the gray panels in samples 734 and 739. In nature, the use of color in camouflage provides dramatic evidence for the effect (or absence of effect) of color on the perceptions of other animals.

The many psychological aspects of color often seem more emotional and personal than scientific, and determining agreement in reactions to colors is sometimes difficult. However, most people do agree that some color combinations imply heat and some cold, and that some connote pleasure and others pain. Painters, and particularly the Impressionists, have relied on these ideas to produce dimension, form and mood. Red can be, among other things, either a welcome or a warning, conveying either warmth or danger. The "voice" of a color depends largely on the colors that are placed next to it—the essence of this book.

Roche Laboratory has developed an elaborate "spectrum of human emotions" color wheel. It is beautifully presented in *Living by Design: Words and Pictures*, by Pentagram (published by Lund Humphries, London, and the Whitney Library of Design, New York, 1978). Unchallenged, it assigns "reserved" to blue, "active" to red, and so on. Regardless of the absolute accuracy of these designations, that moods can be evoked and manipulated by our historical and cultural associations with color is certain. Some combinations immediately evoke the 1950s, the military, the Federal period, and a feeling of the baroque. Generally, color can produce an appropriate setting, tone or mood for the

subject at hand. This sort of color use is nowhere more powerful than in the theater, opera and ballet. On stage, color is seldom static; and constantly layered and shifting combinations of color that are carefully modulated and controlled can benefit an entire production. As in the print media, the trained and deliberate placement on stage of small areas of color contributes to the emotional impact of the larger piece.

Taste and style—elusive, priceless and seemingly innate—are frequently revealed or defined by color. Some color combinations historically connote and confirm these qualities; some reveal and betray the perpetrator. A great deal of one's sensitivity to such issues is conditioned and acquired, but some color applications are so brilliant, original and powerful that people who exhibit color awareness and skills seem to be driven by special talents. Trendiness in the use of color, on the other hand, is contrived, deliberate and designed to shine brightly for a short time. Color trends are very perceptible, and they attach themselves indelibly to eras, products and fashions. As you go through the book, some color combinations will seem strongly nostalgic and others will seem just fine for the current scene.

Other Resources

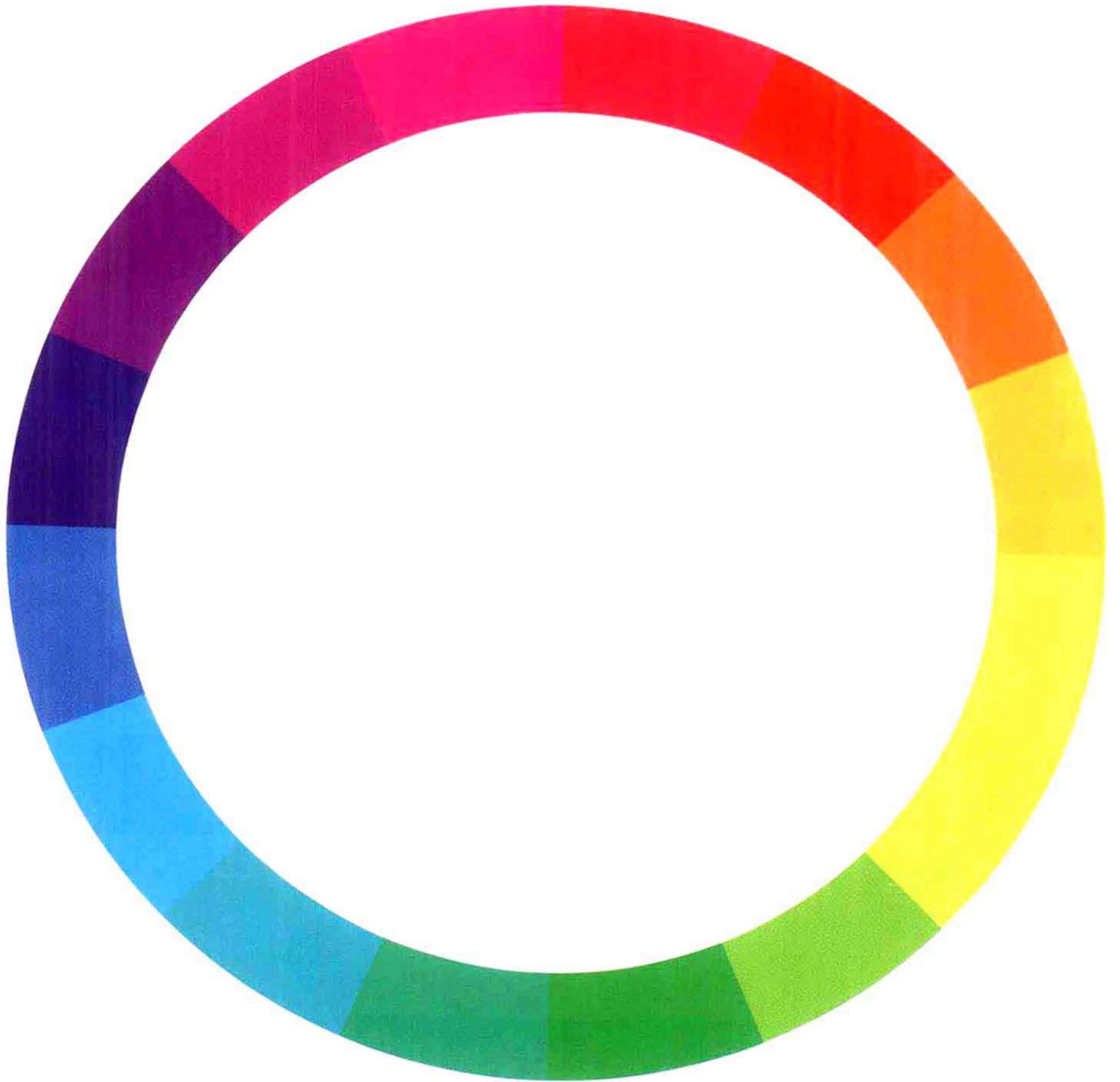
An investigation of the subject of color will probably send you off to the library and bookstores and, perhaps best of all, to review some favorite resource materials from your own bookshelves. Many helpful books are available. Three I have found particularly useful are:

- Johannes Itten's *The Art of Color* (New York: Van Nostrand Reinhold, 1973). This is "correct," thorough, technical and theoretical, yet its richness of approach makes it also a joy to read. Itten's book is an elegant treatment of a technical subject.

- *Color*, edited by Donald Pavey (Los Angeles: The Knapp Press, 1980). This is a fine recent book.

- Harald Kueppers' *The Basic Law of Color Theory* (Woodbury, N.Y.: Barron's, 1982). While this is very technical, it is also of great interest.

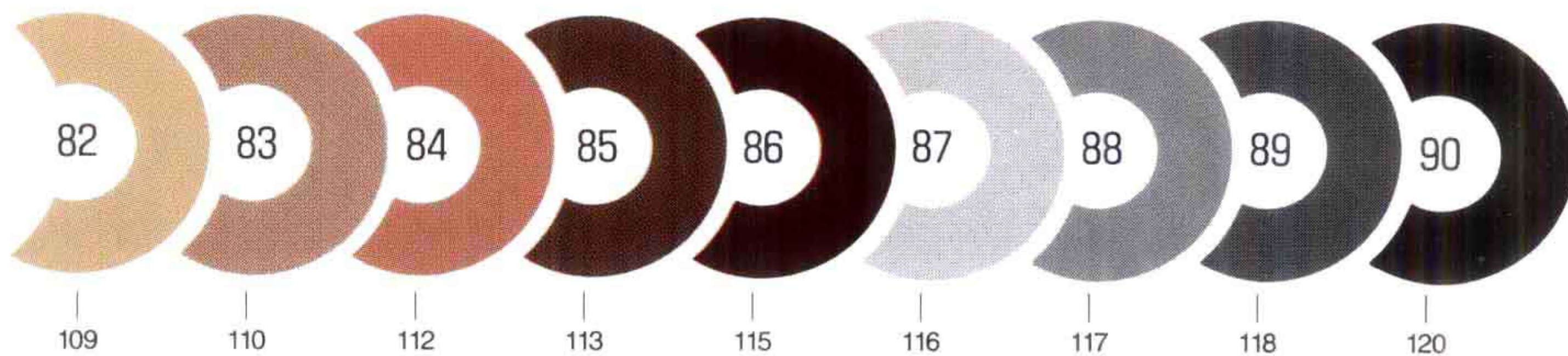
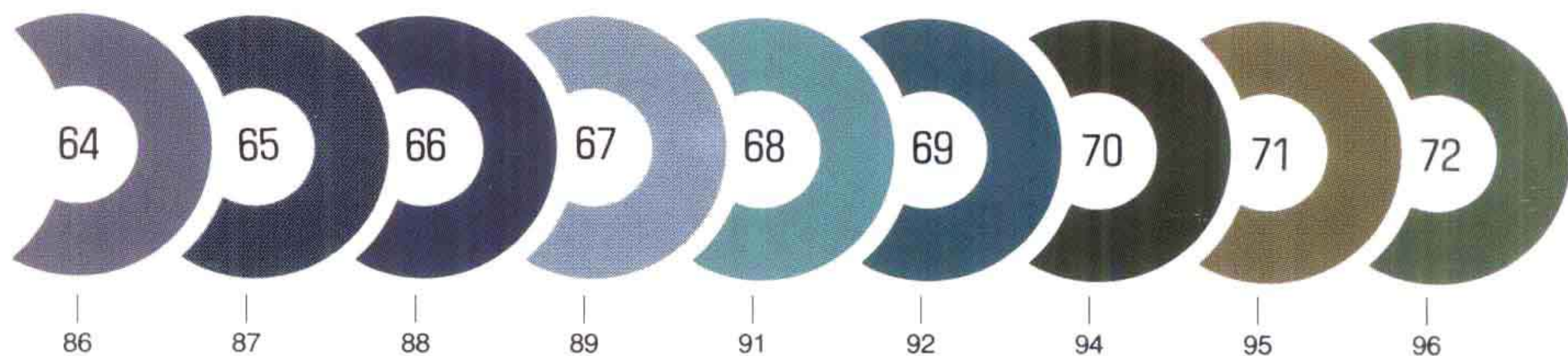
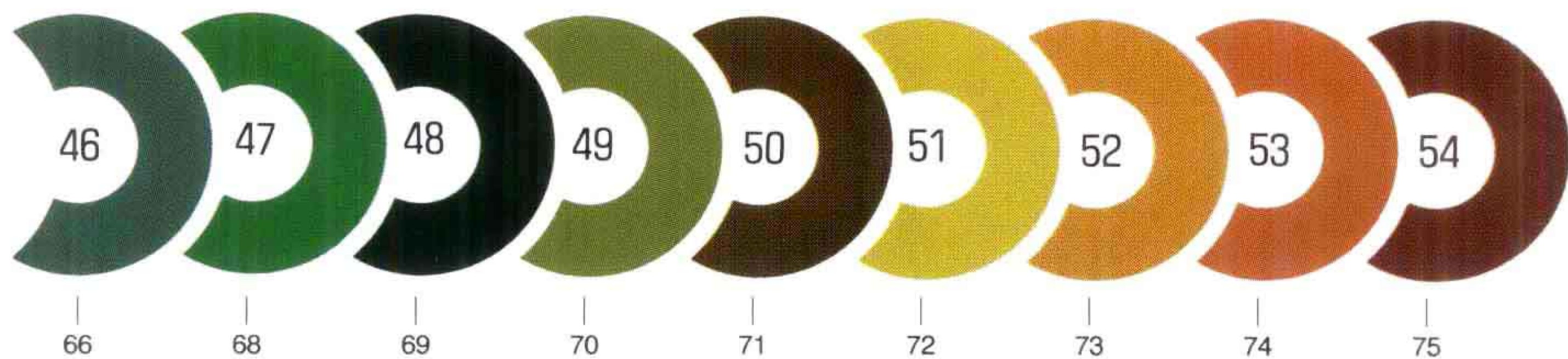
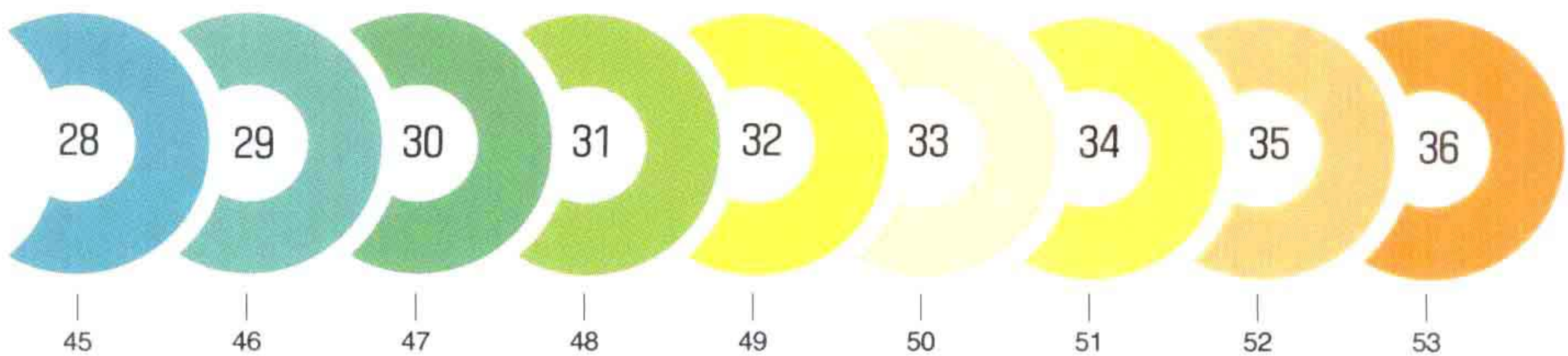
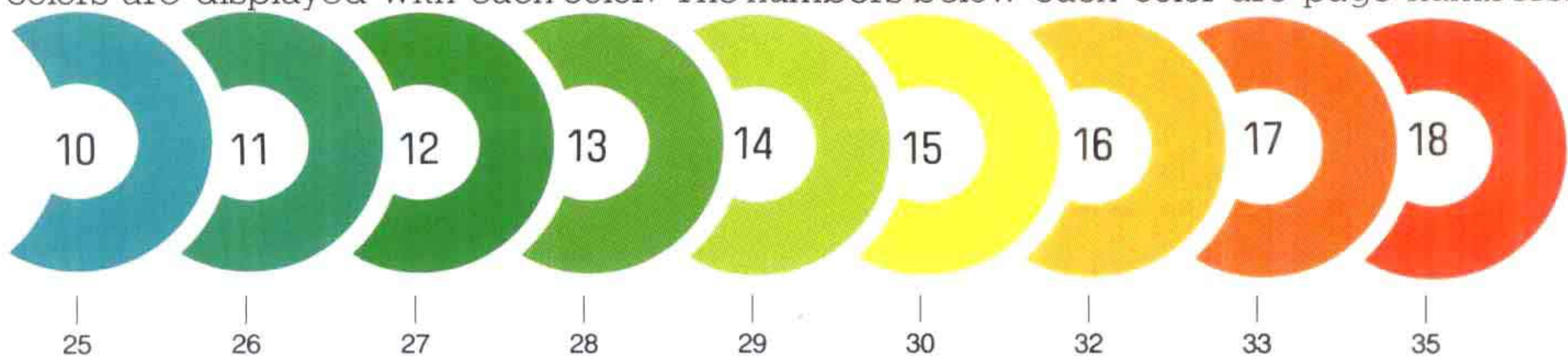
As for this book, use it as a reference tool, a guide, a resource and a problem solver. It will reinforce your color knowledge and clarify your color needs. It may even give you some ideas.



Presented here are the ninety basic colors shown in this book. Ten to twenty alternate



colors are displayed with each color. The numbers below each color are page numbers.



1

Y100 M100



C100 BL30

6



M90 C100

2



Y100 M40

7



Y100 C100

3



Y60 C100

8



Y40 M40 C40

4



Y80 M20 C80 BL50

9



Y100 M70

5

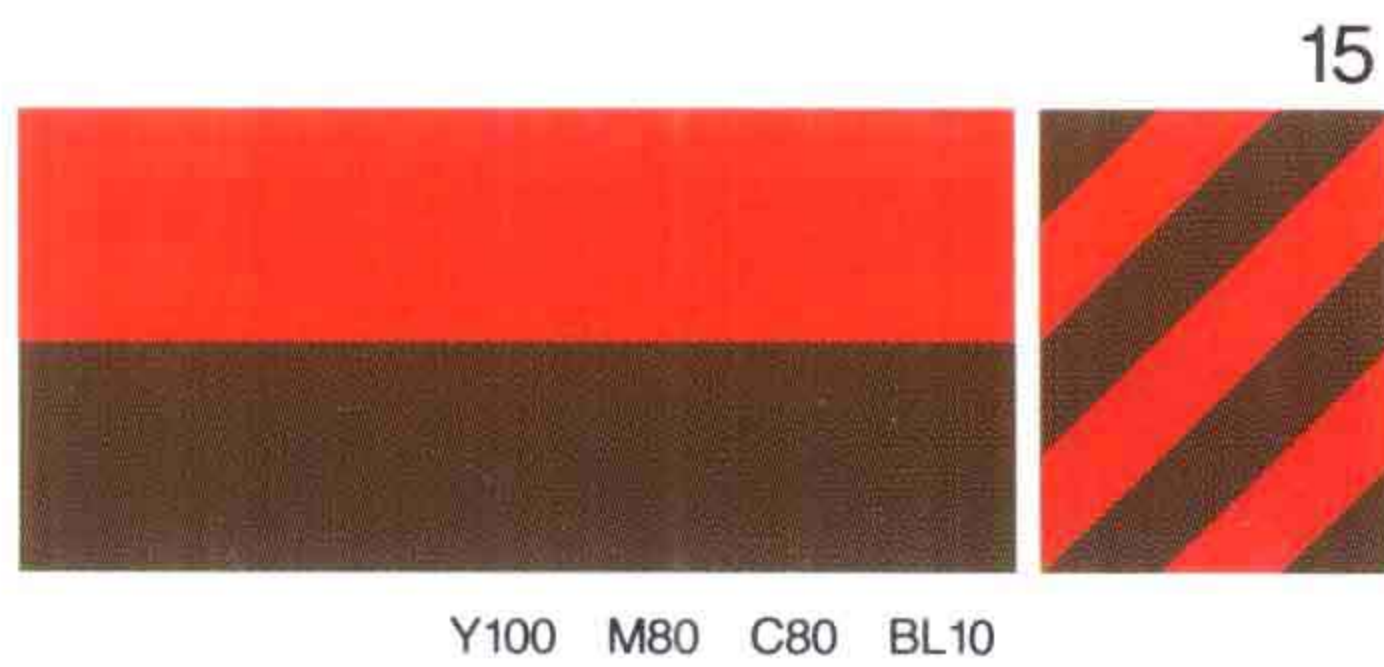
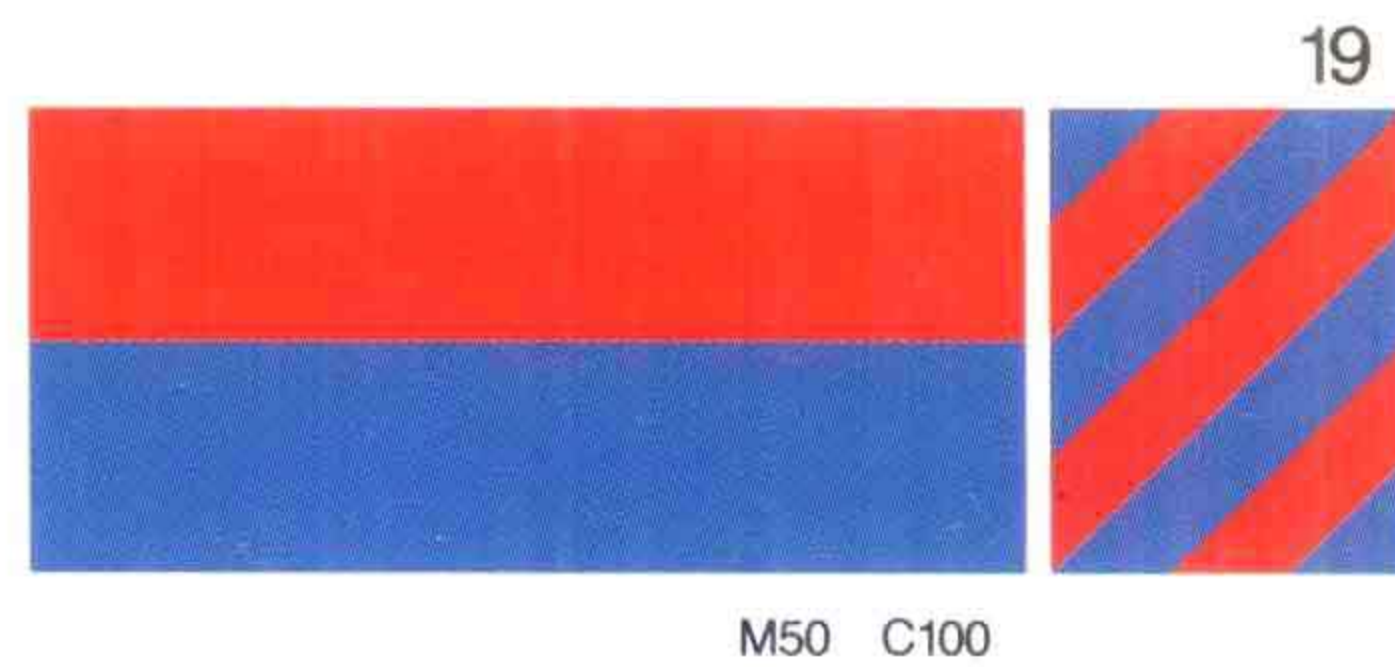
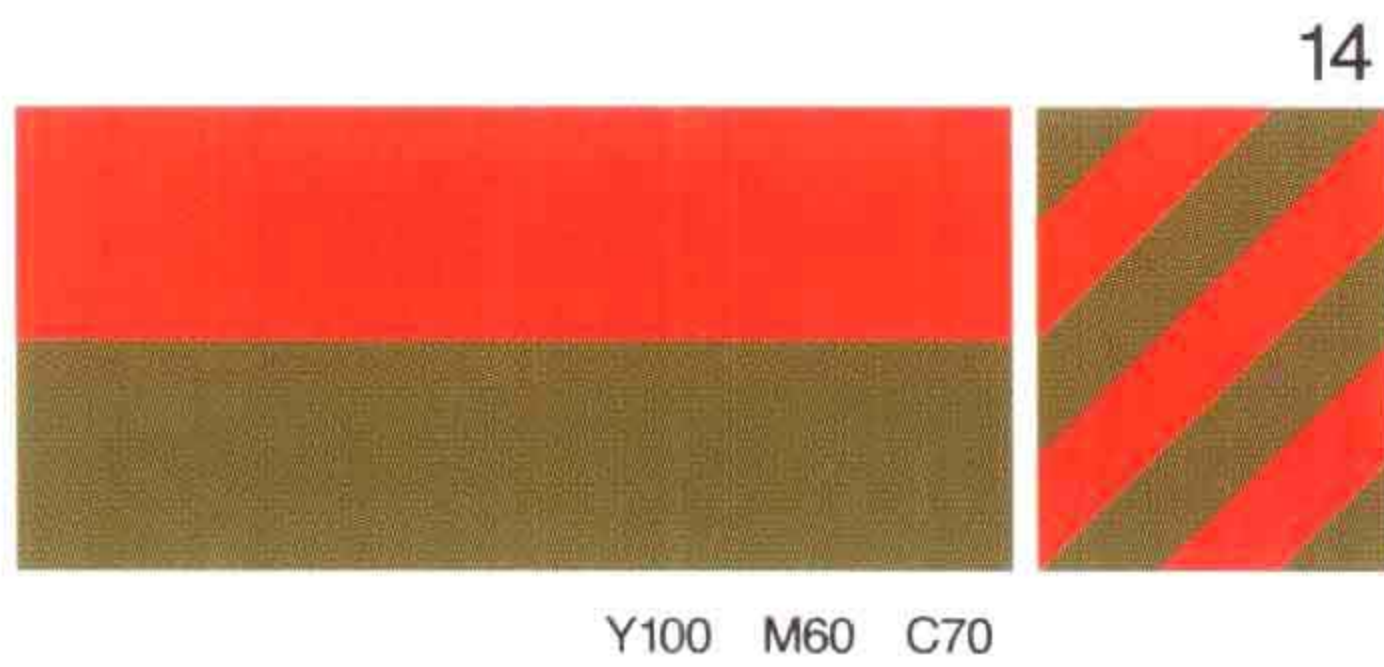
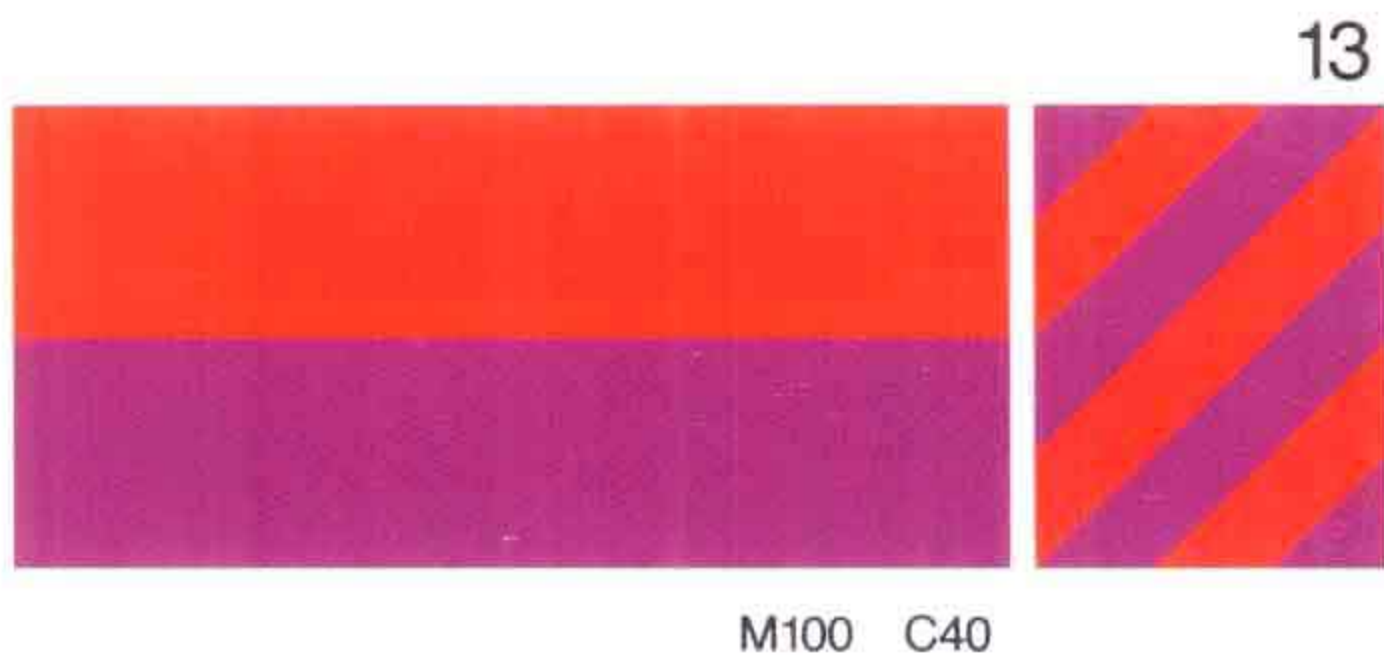
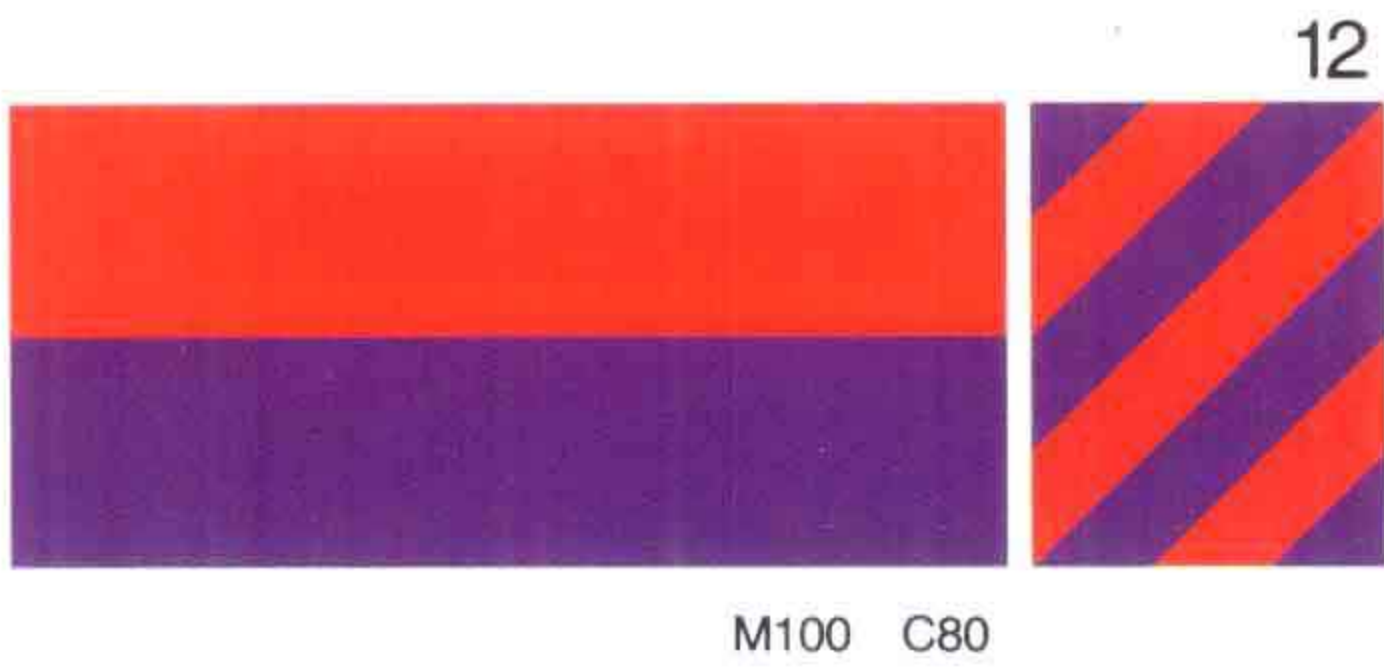
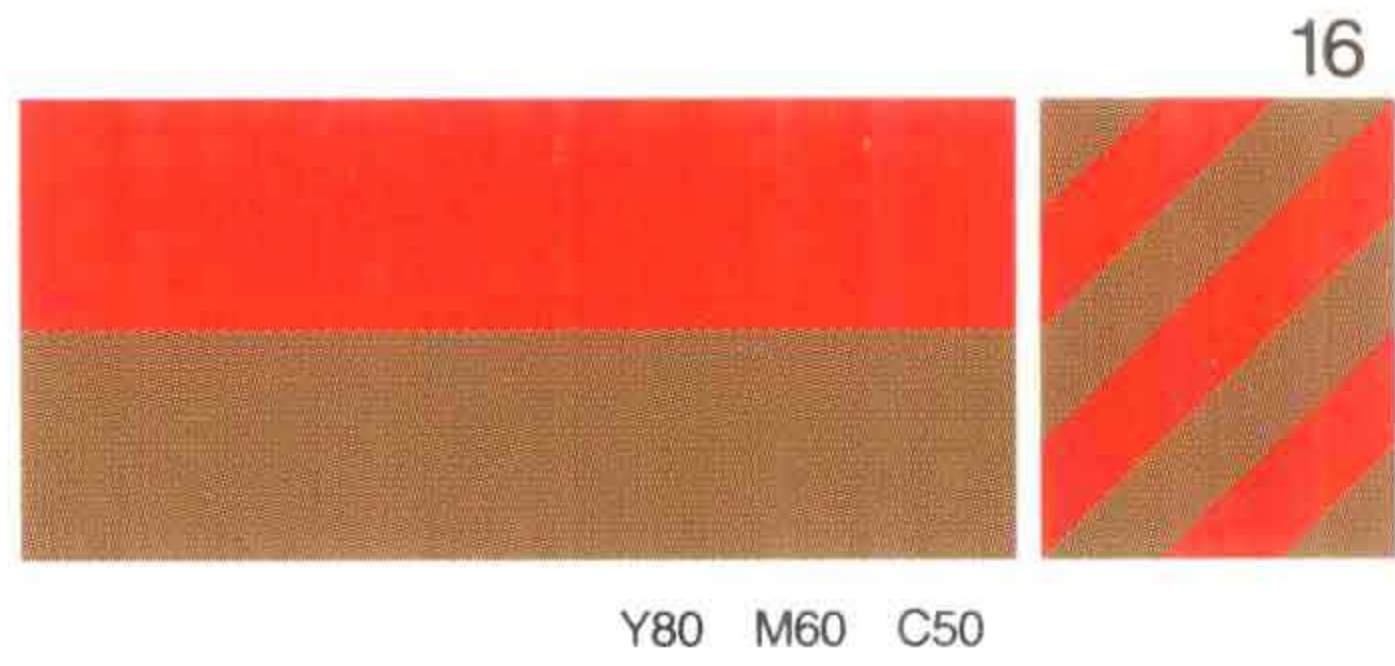
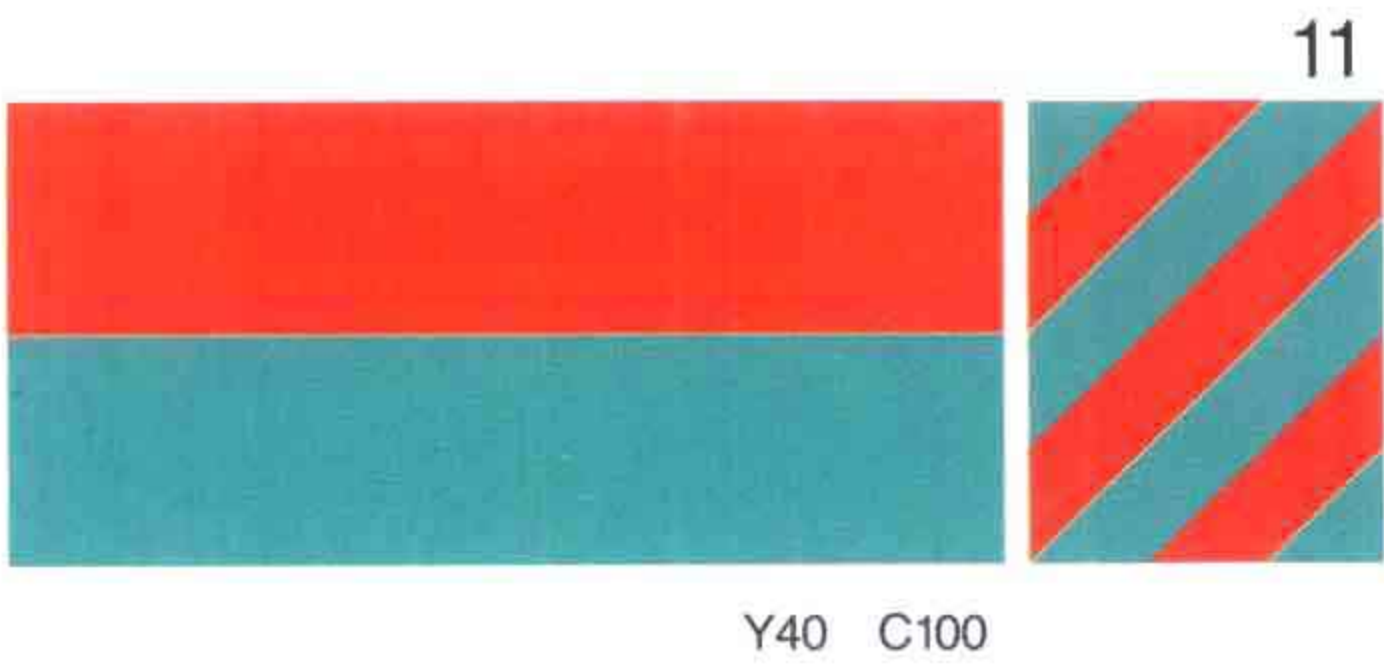


Y80 M90 C50 BL20

10



Y70 M70 C100



21

Y50 M100



Y60 C100

26



Y60 M20 C10

22



Y30 M20 C20

27



Y50 M50 C70

23



M100 C40

28



M70 C100

24



Y20 M30 C80

29



Y100 M60

25

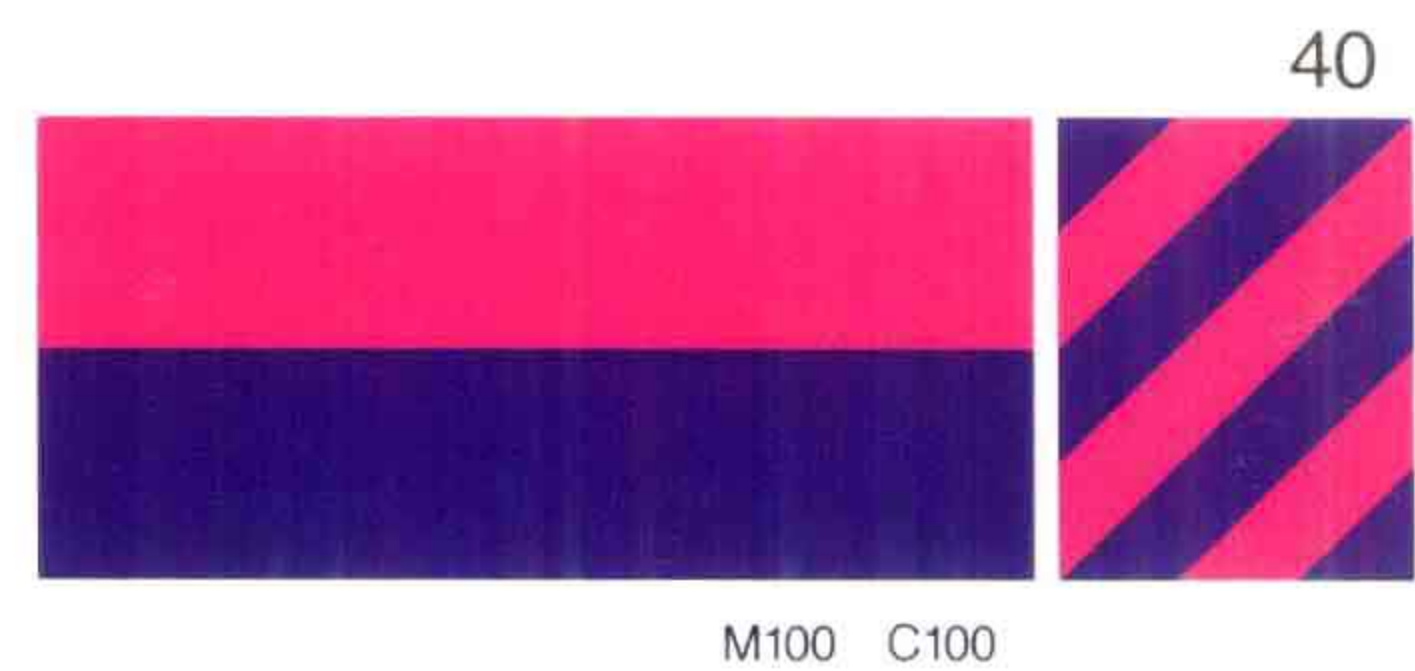
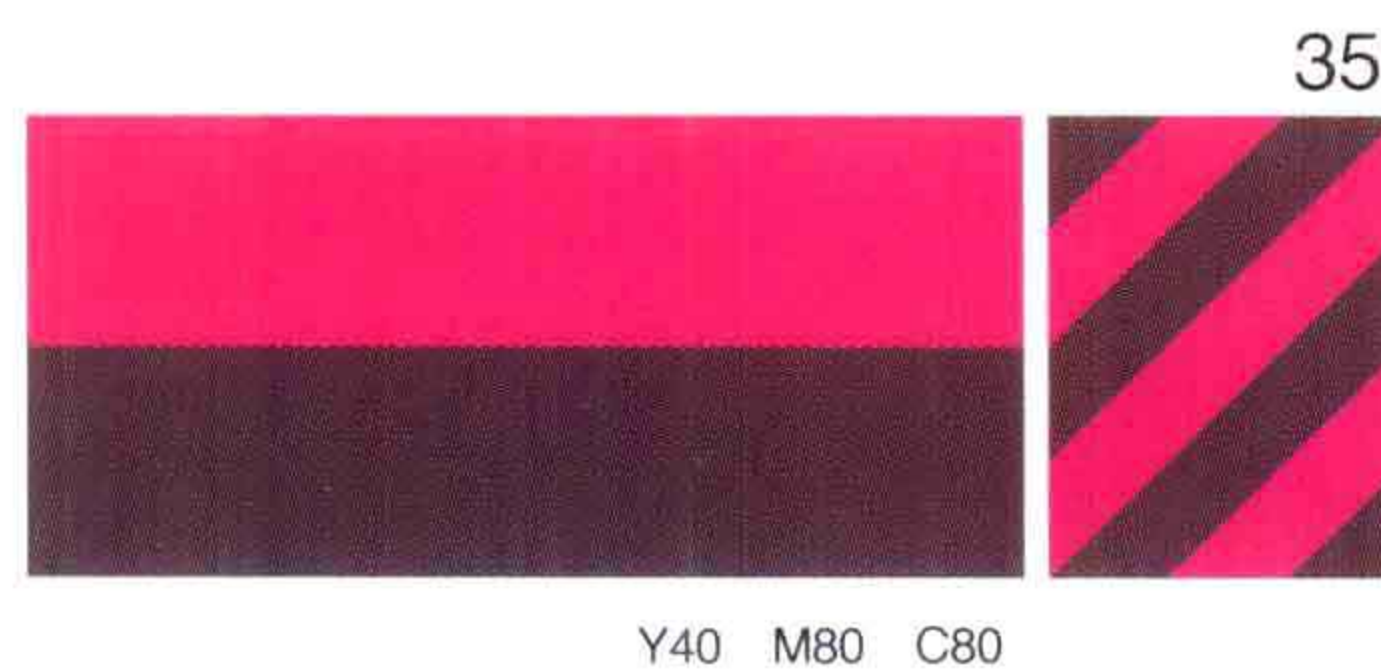
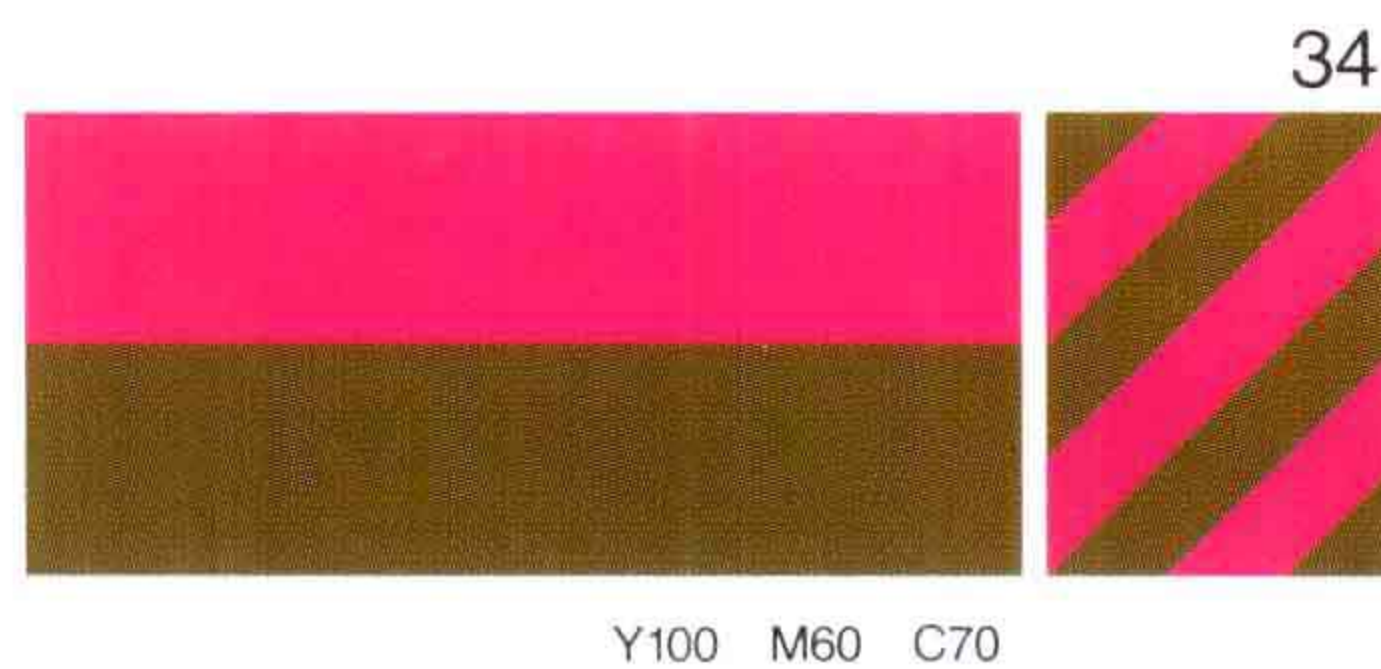
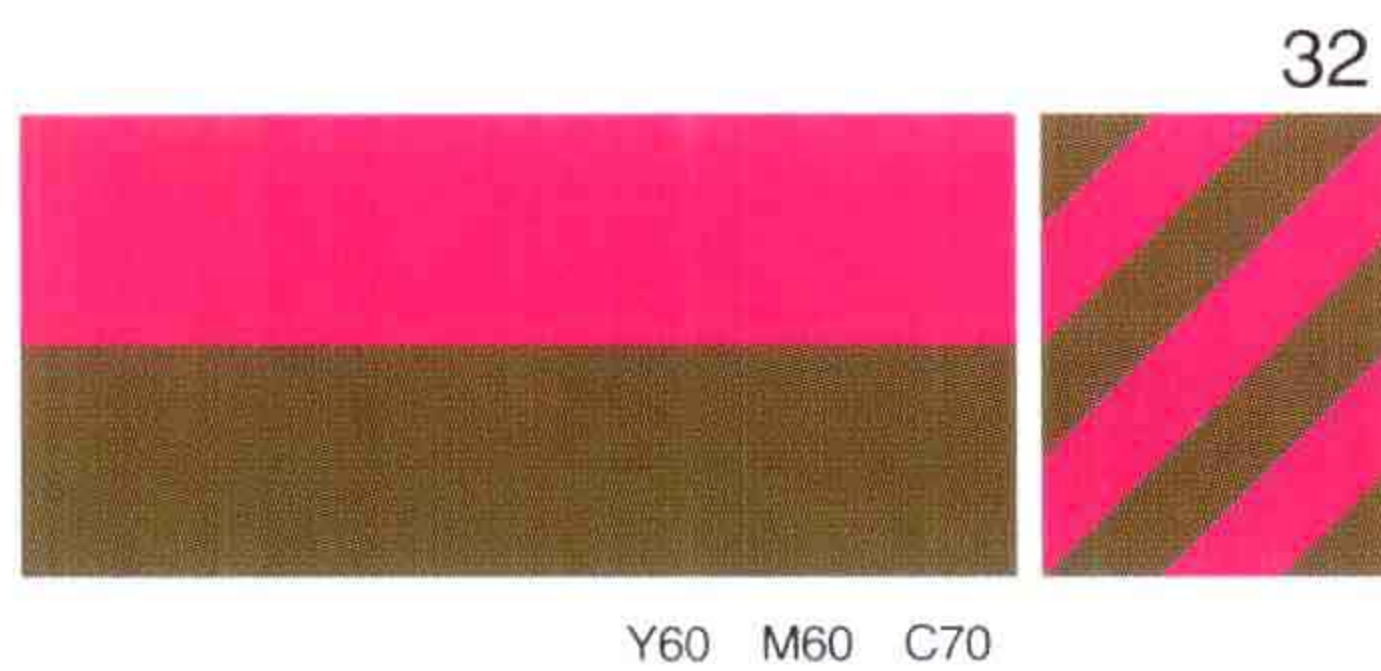
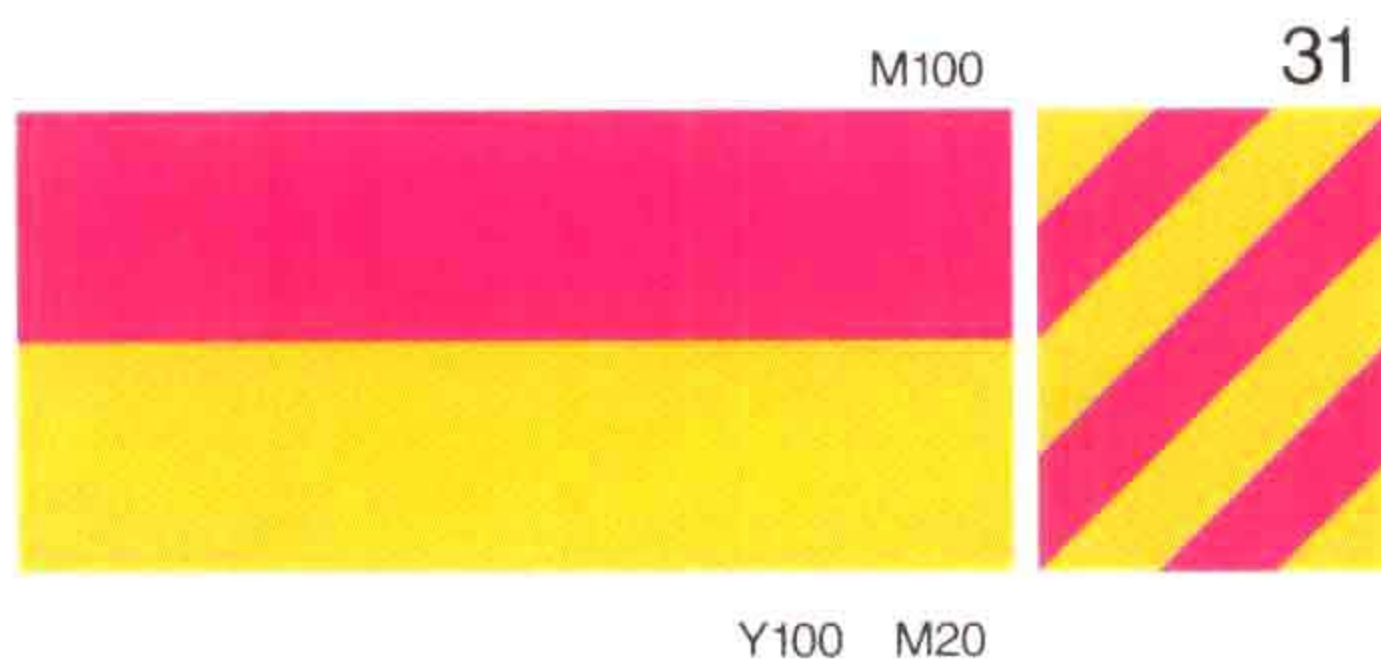


Y80 M100 BL80

30



Y100 M40 C60



41

M100 C30



Y70 M40 C10

46



Y60 M50 C40

42



Y100 M70

47



Y10 M50 C60

43



Y60 C100

48



Y40 C60

44



C100 BL30

49



M80 C100

45



Y50 M50 C70

50



Y100 M40 C100