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COLOR CHARTS: A Descriptive List

The National Bureau of Standards does not issue any general color chart showing samples representative of the various colors. The following charts showing samples of colors for certain specific purposes are issued or used by some branch of the U. S. Government.

United States Army Color Card, issued by the Textile Color Card Association of the United States, Inc., 200 Madison Avenue, New York, N. Y. This card shows 18 U. S. Army colors standardized for the different arms and services. It has been approved and accepted by the Quartermaster General as being in accord with the standards on file in that office. The samples are 1- by 1/2- inch rectangles of silk. This card is used in the purchase of textile materials by the Army.

Supplement to No. 3-1 and revisions thereof of the U.S. Army General Specification for Paint and Related Materials, issued by the Office of the Quartermaster General, Washington, D. C. This card shows 24 colors, identified by name and number. The samples are stiff paper 1 1/2- by 5/8- inch rectangles, with glossy finish. This card is used in the purchase of paint and related materials by the Army.

Army-Navy Aircraft Color Standards, issued by the Bureau of Aeronautics, Navy Department. This is a group of fifteen colors. The samples are 4- by 6- inch rectangles of vitreous enamel on metal. They are used in the purchase of finishing materials for aircraft.

Color for School Furniture, Simplified Practice Recommendation R111-30, obtainable from the Superintendent of Documents, Washington, D.C., price 5 cents. This publication contains a printed representation of the standard school-furniture brown adopted by a conference of producers, distributors and users of school furniture. The printed reproduction of this color is intended only to indicate the color selected; stained blocks of wood are the actual standards used.

Colors for Sanitary Ware, Commercial Standard CS30-31, obtainable from the Superintendent of Documents, Washington, D.C., price 20 cents. This publication contains a printed representation of 6 standard colors adopted by a conference of producers, distributors and users of sanitary ware, including plumbing fixtures and allied products made of vitreous china, porcelain (all-clay); enameled iron, metals, wood, or glass. The printed reproductions of these colors are intended only to indicate the colors selected; vitreous samples are used as the actual standards.

Colors for Kitchen and Bathroom Accessories, a group of 10 colors, 6 of which apply to kitchen accessories, and 7 of which apply to bathroom accessories, there being 3 colors applying to both. The samples are 3- by 5- inch rectangles of vitreous enamel on metal and are obtainable from the National Bureau of Standards at \$10.00 for the set of 10 colors. These standards are described in two publications, Colors for Kitchen Accessories, Commercial Standard CS62-38, and Colors for Bathroom Accessories, Commercial Standard, CS63-38. Both publications are obtainable from the Superintendent of Documents, Washington, D.C., price 5 cents each. The colors were selected by a committee of the National Retail Drygoods Association and have been accepted by producers, distributors and users of kitchen and bathroom accessories.

Color System for Foundry Patterns of Wood, Commercial Standard CS19-32, now out of print, but mimeographed copies are available at the National Bureau of Standards. The printed standard contains a representation of three colors to be used in marking patterns in order to indicate which surfaces are to be left unfinished, which machined, and so forth. Some variations of these colors are permissible within reasonable limitations.

Ringelmann's Scale for Grading the Density of Smoke, obtainable from the Publications Section, Bureau of Mines, Department of the Interior, Washington, D.C. Consists of four rectangular patterns (5 1/2 by 8 1/4 inches) in black and white to be used as color standards for smoke. The patterns when viewed from a distance of 50 feet are equivalent to 20, 40, 60 and 80 percent black, respectively.

National School Bus Chrome, Minimum Standards for School Buses, Developed and Approved by Representatives of the Forty-eight State Education Departments, in Conference, April 10-16, 1939, Teachers College, Columbia University, obtainable from International Textbook Company, Scranton, Pa., at 50 cents a copy. The cover of this booklet shows National School Bus Chrome and approximately the hues of the red and green limits.

The following charts are issued by societies or associations for certain specific purposes:

Standard and seasonal Color Cards, issued by the Textile Color Card Association of the United States, Inc., 200 Madison Avenue, New York, N. Y. The samples are two-inch by one and one-quarter inch rectangles of silk. Each sample is identified by name and cable number. The standard cards are revised only infrequently and show about 200 staple colors. Two seasonal cards are issued every year, a spring card and a fall card; they supplement the standard card. Similar seasonal Woolen Color Cards are also issued. These cards are widely used in the textile and allied industries, and are there the accepted authority.

The Fischer Color Chart, Pinkham Press, Boston, obtainable

from the New England Gladiolus Society (C. W. Brown, Sec'y, Ashland, Mass.). There are 108 colors printed on semi-glossy paper, 6 variations from light to dark of each of 18 hues, arranged in a 12-inch circle, dark colors toward the center, light toward the edge.

The Goldman and Merwin Color Chart for Sedimentary Rocks, obtainable from the Division of Geology and Geography, National Research Council, Washington, D. C. There are 114 printed reproductions of certain Ridgway colors which have been found particularly useful for field description of sedimentary rocks.

The following publications contain color charts for use for general purposes:

Color Standards and Color Nomenclature, by Robert Ridgway, A. Hoen and Company, Baltimore, Md., 1912. Contains approximately 1,000 named color samples, each sample being a mat or nearly mat paper rectangle one-half by one inch in size. The samples are arranged on each page with light samples at the top of the page grading down from white through eight steps to black at the bottom. Each column shows colors of constant hue, the hue circle being represented by 35 such columns. The first series of hue columns gives samples whose colors are of maximal saturation, then there are four similar series, each showing colors progressively dulled by the addition of gray. The color names are listed alphabetically and the corresponding sample located by giving the plate number and an approximate hue, saturation, and lightness notation. These charts have been widely used for the specification of the colors of flowers, insects, and birds.

Munsell Book of Color, by the Munsell Color Company, Hoffman Brothers, Baltimore, Md., 1929, obtainable from Munsell Color Company, 10 East Franklin Street, Baltimore, Md. Two editions, standard and abridged, each giving approximately 400 different color samples. The standard edition consists of charts, one for each of ten different hues, showing colors varying in lightness (Munsell term: value) and saturation (Munsell term: chroma); there are also charts, one for each of eight chromas, showing colors varying in hue and value; charts, one for each of six values, showing colors varying in hue and chroma; and two charts showing altogether 20 hues at maximal chroma for each of eight values. The samples are rectangles of mat or nearly mat paper,  $5/8$  by  $7/8$  inches, except for those of the constant-value charts which are  $1/2$  by  $5/8$  inches. The abridged edition consists of 20 constant-hue charts made up of  $1/2$  by  $5/8$  inch samples. In both editions the samples of the constant-hue charts are arranged in rows and columns, the samples in any one row being equally light, and the samples in any one column being equally saturated. The colors progress from very light at the top of each chart to very dark at the bottom by steps which are visually equal; and they progress from achromatic colors at the left side of each chart to saturated colors at the right by steps which are also visually equal. Each sample is identified by three symbols -- the first indicating hue, the second, value, and the third, chroma. These charts, because of the logical arrangement of the samples and the fact that the color differences between successive samples

are visually equal, have a wide application; they are used in color education, in the setting of color tolerances, and as practical color standards.

A Dictionary of Color, by A. Maerz and M. Rea Paul, McGraw-Hill Book Company, Inc., 370 Seventh Avenue, New York, N. Y. contains approximately 7,000 different color samples printed on semi-glossy paper, about 6,000 of which are  $1/2$  by  $5/8$  inch rectangles, and about 1,000 of the darker of which are  $1-1/16$  by  $5/8$  inch rectangles. The hue circle is covered in 8 intervals, each interval by a series of 8 charts each, the hues within each interval being obtained by mixtures of the pigments representing the extremes of the interval. The first chart in a series shows one extreme pigment at the upper right-hand corner, the other at the lower left. The upper-left corner is white, the lower right, a mixture in about equal proportions of the two extreme pigments. The samples intermediate on the chart represent colors which are intermediate, and the color steps between successive samples have been adjusted so that they are, in general, about equal. Each chart, therefore, shows a progression of hues from the upper-right to the lower-left corner, while the hues of the samples along the straight lines through the upper-left corner are nearly constant. The second chart in a series differs from the first by admixture of a gray ink; the third chart corresponds to admixture of a darker gray ink; and so on down to the eighth chart which shows very dark colors. An alphabetical list of about 4,000 color names is given together with a key by means of which each corresponding sample may be found in the charts. These samples are also identified by name in the charts themselves. The large number of the samples makes the steps between successive colors so small that interpolation is often not necessary. On this account they may be used conveniently as practical color standards in nearly every field. Furthermore, the scholarship and thoroughness of treatment have given this work a wide reputation as the foremost authority on color names.