

FEDERAL STANDARD 595B
COLORS USED IN GOVERNMENT PROCUREMENT
DECEMBER 15, 1989

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FSC 8010

FED-STD-595B
December 15, 1989

INFORMATION SHEET
ON
FEDERAL STANDARDS

This Federal Standard is issued in loose-leaf form to permit the insertion or removal of new or revised material.

All users of Federal Standards should keep them up to date by inserting revised or new material as issued.

New and revised material will be issued under Change Notices which will be numbered consecutively and will bear the data of issuance. Change notices should be retained and filed in front of the Standard until such time as it is superseded by a reissue of the entire standard.

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December 15, 1989
SUPERSEDING
FED-STD-595A
January 2, 1968

FEDERAL STANDARD No. 595B

COLORS USED IN GOVERNMENT PROCUREMENT

Authority. This standard is issued pursuant to the Federal Property and Administrative Services Act of 1949, as amended, and its application to the purchase of commodities referred to herein is mandatory on all Federal Agencies.

S1. Scope. This standard presents the colors used by Government Activities in a format suitable for color selection, color matching and for quality control inspection. This document describes the designation and use of the color chips of the standard. For reference purposes, each color is reproduced herein as a 1/2 by 1 inch sample. The standard color chips are also available in the following formats:

1. Fan Deck -- Suitable for color identification and selection.
2. Individual color chips -- A 3 x 5 inch color chip supplied in a 3 x 5 inch protective envelope -- suitable for color matching and quality control inspection purposes.
3. Sets of color chips -- A set containing one 3 x 5 inch color chip each in its protective envelope -- suitable for color matching and quality control inspection purposes.

The standard with color samples, fan decks, individual color chips, and sets of color chips are for sale by the General Services Administration, Specification Section, Room 6662, 7th and D Streets, Washington, DC 20407.

S2. Applicable Documents.

American Society for Testing and Materials (ASTM) Standards:

- D 523 - Specular Gloss.
- D 1729 - Visual Evaluation of Color Differences of Opaque Materials.
- D 2244 - Calculation of Color Differences from instrumentally measured color coordinates.
- E 308 - Spectrophotometry and Description of Color in CIE 1931 System.

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(Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

S3. Color Identification and Reference.

S3.1 Color identification. Each color is identified by a five-digit code. Colors in this standard are not to be referenced without giving the five-digit code, otherwise the reference is ambiguous.

S3.2 Numbering system.

S3.2.1 First Digit. The first digit of the color number indicates the color at a level or degree of gloss. The colors are divided only into three generalized finishes: gloss, semi-gloss and flat. For ease in judging the color matching (see also 3.3) the color number closest in gloss to that required should be specified. Specific levels of gloss, other than these standard levels must be separately specified in the procurement documents.

<u>First Digit</u>	<u>Finish</u>
1	Gloss
2	Semi-Gloss
3	Flat or Lusterless

S3.2.2 Second Digit. The second digit of the color number indicates an arbitrarily selected color classification grouping.

<u>Second Digit</u>	<u>Predominate Color Grouping</u>
0	Brown
1	Red
2	Orange
3	Yellow
4	Green
5	Blue
6	Gray
7	Miscellaneous (whites, blacks, etc.)
8	Fluorescent

S3.2.3 Last Three Digits. The last three digits of the color number are assigned in the approximate order of increasing reflectance.

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S3.3 Color Matching.

S3.3.1 General. This standard covers color chips for color matching and control of items produced for Government use. Unless otherwise specified or designated by the contracting officer, color chips shall be the latest in effect by date of contract. Color matching by chromaticity coordinates or tristimulus values is not authorized for colors referenced in this standard.

S3.3.2 Metamerism. Colors that visually match in lights of certain spectral compositions but not in others are said to be metameric. The light source, condition of viewing and specular reflectance are critical to overcome metamerism and to determine correct matches. Therefore, light sources as specified in ASTM D 1729 shall be used for visual color matching.

S3.3.3 Color Matching Criteria. In specifying color, the procurement documents should state:

- a. The FED-STD-595 color number;
- b. The source (or sources) of illumination under which the color is to be matched; and
- c. The method by which the color is to be matched; either:
 - (1) ASTM D 1729 -- Visual Evaluation of Color Differences of Opaque Materials -- state whether critical or general match; or,
 - (2) ASTM D 2244 -- Calculation of Color Differences from instrumentally measured color coordinates. -- State for CIELAB color space the maximum color difference and the maximum hue difference tolerated. Name and address of organization supplying paint chip.

S3.4 Color Chip Authorization for Use.

S3.4.1 After the publication of this standard, only color chips marked FED-STD-595B shall be used.

S3.4.2 Color chips which are soiled, stained, faded, or otherwise damaged due to improper handling, storage or exposure to light or chemicals shall not be used.

S3.5 Care of color chips. All color chips will change with time and some will change more than others. Color change can be minimized by observing the following procedures.

- a. Store the color chips in a cool, dark place;
- b. avoid exposure of the color chips to direct or scattered UV light or chemicals;
- c. minimize exposure of the color chips to light from any source;
- d. keep the color chips covered when not in use;
- e. do not touch the face of the color chips.

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S4. Color cross reference. The following colors meet the special requirements for safety, highway and camouflage colors.

Safety Colors (OSHA)	Highway Colors (DOT)	Camouflage Colors
Red -- 11120	Brown -- 10055	Green 383 -- 34094
-- 11105	Red -- 11086	Brown 383 -- 30051
-- 1140	-- 11105	Black -- 37030
Orange -- 12300	Orange -- 12243	Tan 686 -- 33446
-- 12246	Yellow -- 13507	Dark Green -- 34082
Yellow -- 13591	-- 13538	Field Drab -- 33105
-- 13655	Green -- 14066	Earth Yellow -- 33245
Green -- 14120	-- 14109	Sand -- 33303
-- 14260	Blue -- 15065	Aircraft Green -- 34031
Blue -- 15092	-- 15090	Aircraft Gray -- 36300
-- 15102	School Bus	Dark Sandstone -- 33510
Purple -- 17155	Yellow -- 13415	Interior
-- 17142		Aircraft Black -- 37031

International

Orange -- 12197

Note: The chips for camouflage colors shall be used for general color matching purposes only. The specifications for camouflage coatings contain requirements for infrared reflectance which must be met in addition to color. The color cards (chips) for the camouflage colors will contain pigments chosen for their stability and compatibility with the color card coating and, therefore, have different infrared reflectance characteristics than those required for camouflage coatings. Merely matching the color chip for color will not be sufficient to assure product acceptance by the contracting activity. For further information, contact: Commander, U.S. Army Belvoir RDE Center, ATTN: STRBE-VO, Fort Belvoir, VA 22060-5606.

S5. Color chip reproduction. Color chips may not be reproduced without the authorization of General Services Administration. Reproduction of color chips from any source other than the master standard is not authorized. The General Services Administration must approve all color matches made when the color chips are reproduced.

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S7. International standardization agreement. Several colors listed in this standard are the subject of international standardization agreement, MAS Army 440, 7 December 1987, NATO STANAG 2321, Edition 4. When there is a change, revision, or cancellation of this standard which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliatory action through international standardization channels including departmental standardization offices, if required. The following colors are covered by the above agreement: silver/aluminum 17178, brown 30117 or 30140, red 31136, light red 31158, yellow 33538, light green 34558 or 34449, dark green 34108, light blue 35109, gray 36231, black 37038, violet 37100, and white 37875.

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APPENDIX I

PIGMENTS USED IN FED-STD 595B MASTER STANDARD

The following list of pigments is provided for information only.

It is a list of the generic names of the primary pigments used in the coating of the standard color chip to be matched. The color chip coating may contain other pigments used in making the final color match.

By providing this list, the Government makes no representation, either explicit or implied that these pigments must be used in the products to be provided. Neither does the provision of this list imply that the standard color chip can be matched using any source of the listed pigments and any vehicle, that a proposed match using these pigments will be accepted, or that a proposed color match using different pigments will be rejected solely because of this listing.

Materials furnished under contracts referencing a FED-STD-595 color must conform to all of the requirements of the product specification. Any conflict between contract requirements and this pigment listing are to be resolved in favor of the contract requirements.

Proposed color matches will be accepted or rejected based solely on the color matching criteria stated in the contract referencing the FED-STD-595 color number.

LIST OF PIGMENTS USED IN COLOR CHIPS OF STANDARD COLORS

Code	Pigment
1	Rutile Titanium Dioxide
2	Lamp Black
4	Yellow Iron Oxide
5	Monoazo Red (Yellow Shade)
6	Phthalocyanine Blue (Red Shade)
7	Benzimidazolone Yellow
8	Phthalocyanine Blue (Green Shade)
9	Red Iron Oxide (Blue Shade)
10	Quinacridone Violet
11	Phthalocyanine Green (Blue Shade)
12	Perylene Vermillion
13	Natural Raw Umber
14	Quinacridone Magenta Y
15	Molybdate Orange (Red Shade)
16	Naphthalene Tetracarboxylic Acid
18	Carbazole Violet
21	Fast Diarylide Yellow
22	Quinacridone Red
23	Brown Iron Oxide
24	Natural Burnt Umber
25	Green Chrome Oxide
26	Chrome Yellow Primrose
27	Chrome Yellow Med. (Red Shade)
31	Phthalocyanine Green (Yellow Shade)
39	Carbon Black (Blue Shade)
41	Green Fluorescent
42	Orange Fluorescent
43	Fire Orange Fluorescent
44	Red Fluorescent
45	Yellow Fluorescent
46	Fine Aluminum Paste
47	Fine Yellow Metallic

Pigments used in production of standard colors.

10032	1,6,10,12,22	13596	1,4,7,39
10045	1,4,9,39	13613	1,4,7,13,15
10049	1,8,10,12,22	13618	1,4,7,9,39
10055	1,15,16,24,31	13637	1,4,7,8,39
10059	1,9,13,39	13655	1,4,7,27
10070	1,6,13,14,23	13670	1,7,8,27
10075	1,4,9,18,39	13690	1,4,7,9,13
10076	1,9,14,27,39	13695	1,4,7,9,39
10080	1,4,15,27,39	13711	1,4,7,9,39
10091	1,7,8,9,15	14036	1,7,11,39
10115	1,4,10,15,39	14050	1,4,31,39
10219	1,15,27,39	14052	1,4,15,39
10233	1,4,9,39	14056	1,7,11,16,39
10260	1,4,7,13	14062	1,26,31,39
10266	1,4,7,9,13	14064	1,4,9,39
10324	1,9,27,39	14066	1,7,11,39
10371	1,4,9,24	14077	1,4,31,39
11086	1,7,16,22	14079	1,7,11,15,39
11105	1,12,22,39	14081	1,4,31,39
11120	1,12,15,39	14084	1,24,27,39
11136	1,7,10,22,39	14087	1,24,27,39
11140	1,4,10,22,27,39	14090	1,7,11,39
11302	1,12,15,39	14097	1,7,13,27,31,39
11310	1,12,15,39	14109	1,6,7,11,39
11328	1,7,22,39	14110	1,4,7,11,39
11350	1,5,10,14,22	14115	1,7,11,39
11400	1,16,22,39	14120	1,10,11,26
11630	1,7,9,10	14151	1,6,27,39
11670	1,4,15,39	14158	1,8,13,39
12160	1,9,16,27,39	14159	1,7,31,39
12197	1,15,16,39	14187	1,4,7,11
12199	1,5,12,27	14193	1,11,21,26
12215	1,7,14,16,39	14223	1,11,27,39
12243	1,5,27,39	14241	1,4,6,31,39
12246	1,8,15,16,27,39	14255	1,7,14,27,39
12300	1,9,16,27,39	14257	1,11,27,39
12473	1,14,16,27	14260	1,4,7,11,39
12648	1,4,9,39	14272	1,4,6,7,11,13
13275	1,4,7,9,16,39	14277	1,4,6,31,39
13415	1,15,27,39	14325	1,4,11,39
13432	1,15,27,39	14449	1,4,7,11,39
13507	1,15,27,39	14491	1,4,6,9,31
13522	1,4,8,10,14	14516	1,6,7,11,39
13523	1,4,7,9,13	14533	1,4,7,8,39
13531	1,7,8,10,16	14672	1,7,13,31
13538	1,14,27,39	15042	1,8,27,39
13578	1,7,13,16	15044	1,4,8,11,22,39
13591	1,4,6,7	15045	1,8,18,27
13594	1,4,7,9,39	15048	1,6,12,27

15050	1, 6, 11, 12	17886	1, 4, 7, 39
15052	1, 6, 11, 12	17925	1
15056	1, 6, 11, 18	20040	1, 4, 5, 39
15065	1, 7, 8, 18	20045	1, 4, 9, 39
15080	1, 8, 11, 22	20059	1, 9, 24, 27, 39
15090	1, 8, 11, 12	20061	1, 6, 14, 16
15092	1, 8, 18, 31	20062	1, 7, 9, 39
15095	1, 6, 11, 18	20095	1, 7, 13, 16, 23
15102	1, 8, 9, 18	20100	1, 7, 9, 23
15107	1, 4, 6, 11, 12	20109	1, 6, 9, 14
15123	1, 8, 10, 18	20117	1, 4, 9, 39
15125	1, 6, 11, 27	20122	1, 5, 7, 27, 39
15177	1, 7, 8, 22	20140	1, 4, 15, 39
15180	1, 8, 11, 18	20152	1, 6, 10, 15, 22
15182	1, 7, 8, 18	20206	1, 15, 23, 39
15187	1, 6, 8, 11, 14	20219	1, 15, 27, 39
15193	1, 8, 11, 18, 39	20227	1, 9, 13, 27, 39
15200	1, 6, 8, 11, 39	20233	1, 4, 9, 39
15450	1, 4, 6, 22	20252	1, 4, 14, 16, 23
15526	1, 6, 11, 39	20260	1, 4, 7, 13
16081	1, 4, 11, 39	20266	1, 4, 7, 9, 13
16099	1, 4, 11, 14, 39	20313	1, 4, 9, 39
16160	1, 4, 9, 39	20318	1, 4, 9, 39
16165	1, 9, 27, 39	20372	1, 4, 23, 39
16187	1, 11, 27, 39	20400	1, 4, 9, 13
16251	1, 7, 27, 39	20450	1, 4, 3, 39
16307	1, 11, 13, 39	20475	1, 4, 9, 39
16314	1, 7, 11, 39	21105	1, 12, 22, 39
16350	1, 4, 18, 39	21136	1, 7, 10, 22, 39
16357	1, 4, 9, 39	21158	1, 5, 18, 22, 27
16360	1, 4, 8, 13, 16	21302	1, 12, 15, 39
16376	1, 6, 11, 13	21310	1, 12, 15, 39
16405	1, 4, 8, 13	21400	1, 16, 22, 39
16440	1, 8, 13, 18	21433	1, 4, 15, 39
16473	1, 4, 11, 22, 39	21575	1, 4, 14, 23
16492	1, 4, 39	21643	1, 7, 9, 39
16515	1, 6, 7, 39	21667	1, 7, 9, 27, 39
16555	1, 2, 4, 13	21668	1, 13, 14, 27
17038	1, 7, 18, 39	21670	1, 4, 15, 39
17043	13, 14, 39, 47	22144	1, 4, 9, 15
17100	1, 10, 12, 18	22190	1, 5, 15, 16
17142	1, 4, 10, 22, 39	22203	1, 4, 15, 39
17155	1, 10, 14, 22, 39	22246	1, 8, 15, 16, 27, 39
17178	6, 39, 46	22276	1, 7, 9, 16, 39
17773	1, 7, 8, 39	22356	1, 9, 15, 27
17778	1, 4, 7, 39	22510	1, 9, 16, 27
17855	1, 4, 7, 39	22516	1, 9, 13, 27
17875	1, 4, 5, 6	22519	1, 4, 9, 39
17877	1, 6, 7, 39	22544	1, 7, 12, 14, 27, 39

22563	1, 4, 13, 14	24300	1, 4, 11, 39
22630	1, 4, 7, 9, 39	24325	1, 4, 11, 39
22648	1, 4, 9, 39	24373	1, 4, 11, 39
23275	1, 4, 7, 9, 16, 39	24410	1, 4, 7, 31, 39
23448	1, 4, 23, 39	24417	1, 4, 7, 11, 13, 39
23522	1, 4, 8, 10, 14	24424	1, 4, 7, 13, 31
23531	1, 7, 8, 10, 16	24432	1, 7, 11, 13
23538	1, 14, 27, 39	24441	1, 4, 7, 11, 13
23540	1, 4, 5, 7	24449	1, 4, 7, 11, 39
23564	1, 4, 7, 39	24466	1, 8, 13, 27
23578	1, 7, 13, 15	24491	1, 4, 6, 9, 31
23594	1, 4, 7, 9, 39	24504	1, 4, 7, 11, 39
23613	1, 4, 7, 13, 15	24516	1, 6, 7, 11, 39
23617	1, 4, 7, 9, 13	24518	1, 4, 8, 13
23619	1, 7, 23, 27	24525	1, 4, 11, 39
23655	1, 4, 7, 27	24533	1, 4, 7, 8, 39
23685	1, 4, 6, 7, 31	24552	1, 7, 11, 27, 39
23690	1, 4, 7, 9, 13	24554	1, 7, 13, 31
23695	1, 4, 7, 9, 39	24558	1, 11, 26, 39
23697	1, 4, 7, 9, 13	24583	1, 4, 7, 11, 39
23711	1, 4, 7, 9, 39	24585	1, 7, 11, 39
23717	1, 7, 9, 13, 27	24664	1, 7, 11, 39
23722	1, 7, 9, 13	24670	1, 4, 11, 26, 39
23727	1, 4, 7, 9, 11, 13	24672	1, 7, 13, 31
23785	1, 7, 27, 39	25042	1, 8, 27, 39
23793	1, 4, 7, 39	25045	1, 8, 18, 27
23814	1, 4, 7, 8	25048	1, 6, 12, 27
24052	1, 4, 15, 39	25051	1, 8, 14, 39
24064	1, 4, 9, 39	25052	1, 6, 11, 12
24079	1, 7, 11, 15, 39	25053	1, 8, 11, 12, 22
24084	1, 24, 27, 39	25056	1, 6, 11, 18
24087	1, 24, 27, 39	25095	1, 6, 11, 18
24091	1, 9, 27, 39	25102	1, 8, 9, 18
24097	1, 7, 13, 27, 31, 39	25109	1, 8, 9, 18
24098	1, 7, 27, 39	25177	1, 7, 8, 22
24108	1, 7, 11, 39	25183	1, 7, 8, 18
24148	1, 4, 11, 39	25184	1, 8, 9, 14
24158	1, 8, 13, 39	25189	1, 8, 13, 14
24159	1, 7, 31, 39	25190	1, 8, 13, 18
24172	1, 4, 11, 39	25193	1, 8, 11, 18, 39
24190	1, 11, 26, 27	25230	1, 6, 11, 18
24201	1, 4, 9, 31, 39	25237	1, 11, 16, 18, 39
24226	1, 7, 8, 13	25240	1, 8, 10, 16
24227	1, 11, 16, 27, 39	25299	1, 7, 10, 11, 39
24233	1, 7, 11, 39	25352	1, 7, 8, 23
24241	1, 4, 6, 31, 39	25414	1, 4, 6, 31, 39
24260	1, 4, 7, 11, 39	25488	1, 4, 8, 18
24272	1, 4, 6, 7, 11, 13	25526	1, 6, 11, 39
24277	1, 4, 6, 31, 39	25550	1, 6, 31, 39

25622	1,4,6,16	27769	1,4,13,39
25630	1,4,21,39	27778	1,4,7,39
26008	1,10,11,39	27780	1,4,7,39
26044	1,11,22,39	27855	1,4,7,39
26081	1,4,11,39	27875	1,4,5,6
26099	1,4,11,14,39	27880	1,13,16,27
26118	1,8,18,39	27886	1,4,7,39
26120	1,4,9,39	27925	1
26122	1,7,9,39	28913	22,42,44
26132	1,4,22,39	28915	22,42,43,45
26134	1,4,9,39	30040	1,4,5,39
26152	1,11,27,39	30045	1,4,9,13
26173	1,6,9,39	30051	1,7,9,13
26176	1,8,10,39	30059	1,9,24,27,39
26187	1,11,27,39	30097	1,7,13,16
26231	1,6,7,39	30099	1,4,23,39
26250	1,4,11,39	30108	1,15,16,27,39
26251	1,7,27,39	30109	1,10,15,27,39
26270	1,6,7,39	30111	1,9,13,18
26280	1,8,13,14	30117	1,4,9,39
26293	1,6,23,31	30118	1,13,23,27,39
26306	1,11,13,14	30140	1,7,9,39
26307	1,11,13,39	30145	1,4,9,39
26314	1,7,11,39	30160	1,4,22,39
26329	1,6,11,23	30166	1,9,18,39
26357	1,4,9,39	30206	1,15,23,39
26360	1,4,8,13,16	30215	1,9,13,27
26373	1,6,13,39	30219	1,15,27,39
26400	1,4,8,9	30227	1,9,13,27,39
26405	1,4,8,13	30233	1,4,9,39
26408	1,4,8,13	30252	1,4,14,16,23
26424	1,8,10,13	30257	1,12,13,27
26440	1,8,13,18	30266	1,4,7,9,13
26492	1,4,39	30277	1,4,13,39
26493	1,7,14,39	30279	1,4,9,13
26496	1,6,13,31	30313	1,4,9,39
26521	1,4,9,13	30315	1,4,22,39
26555	1,2,4,13	30318	1,4,9,39
26559	1,7,13,39	30324	1,9,27,39
26586	1,7,11,13	30372	1,4,23,39
26595	1,7,8,13	30450	1,4,9,39
26622	1,7,8,13	30475	1,4,9,39
27038	1,7,18,39	31090	1,16,24,26,27
27040	1,4,9,16,39	31136	1,7,10,22,39
27043	13,14,39,47	31158	1,5,18,22,27
27142	1,4,10,22,39	31302	1,12,15,39
27144	1,10,14,39	31310	1,12,15,39
27160	1,14,18,22	31350	1,5,10,14,22
27722	1,4,13,39	31400	1,16,22,39

31433	1,4,15,39	34031	1,6,9,399
31575	1,4,14,23	34052	1,4,14,39
31638	1,4,9,22	34058	1,8,11,39
31643	1,7,9,39	34064	1,4,9,39
31667	1,7,9,27,39	34079	1,7,11,15,39
31668	1,13,14,27	34082	1,6,7,18,39
31669	1,9,22,27	34083	1,13,27,39
31670	1,4,15,39	34084	1,24,27,39
32169	1,13,14,16,27	34086	1,4,23,39
32246	1,8,15,16,27,39	34087	1,24,27,39
32276	1,7,9,16,39	34088	1,24,27,39
32356	1,9,15,27	34089	1,6,27,39
32473	1,14,16,27	34090	1,7,11,39
32516	1,9,13,27	34092	1,7,31,39
32544	1,7,12,14,27,39	34094	1,6,13,27
32555	1,15,27,39	34095	1,8,27,39
32630	1,4,7,9,39	34096	1,8,23,27
32648	1,4,9,39	34097	1,7,13,27,31,39
33070	1,6,7,13	34098	1,7,27,39
33105	1,24,27,39	34102	1,6,27,39
33245	1,4,9,13	34108	1,7,11,39
33275	1,4,7,9,16,39	34127	1,7,11,23
33303	1,6,9,27	34128	1,4,31,39
33434	1,4,23,27	34130	1,27,31,39
33440	1,4,23,39	34138	1,4,7,11,39
33446	1,4,13,15	34148	1,4,11,39
33448	1,4,23,39	34151	1,6,27,39
33481	1,4,7,13,39	34158	1,8,13,39
33510	1,4,7,13	34159	1,7,31,39
33522	1,4,8,10,14	34201	1,4,9,31,39
33531	1,7,8,10,16	34226	1,7,8,13
33538	1,14,27,39	34227	1,11,16,27,39
33564	1,4,7,39	34230	1,4,7,11
33578	1,7,13,16	34233	1,7,11,39
33613	1,4,7,13,15	34241	1,4,6,31,39
33617	1,4,7,9,13	34258	1,11,29,39
33637	1,4,7,8,39	34259	1,13,27,31
33655	1,4,7,27	34272	1,4,6,7,11,13
33685	1,4,6,7,31	34277	1,4,6,31,39
33690	1,4,7,9,13	34300	1,4,11,39
33695	1,4,7,9,39	34325	1,4,11,39
33696	1,4,7,27	34373	1,4,11,39
33711	1,4,7,9,39	34410	1,4,7,31,39
33717	1,7,9,13,27	34414	1,6,27,39
33722	1,7,9,13	34424	1,4,7,13,31
33727	1,4,7,9,11,13	34432	1,7,11,13
33793	1,4,7,39	34441	1,4,7,11,13
33798	1,4,7,39	34449	1,4,7,11,39
33814	1,4,7,8	34491	1,4,6,9,31

34504	1,4,7,11,39	36176	1,8,10,39
34516	1,6,7,11,39	36231	1,6,7,39
34518	1,4,8,13	36251	1,7,27,39
34524	1,4,7,8,13	36270	1,6,7,39
34533	1,4,7,8,39	36280	1,8,13,14
34540	1,6,21,31	36293	1,6,23,31
34552	1,7,11,27,39	36300	1,8,9,10
34554	1,7,13,31	36306	1,11,13,14
34558	1,11,26,39	36307	1,11,13,39
34583	1,4,7,11,39	36314	1,7,11,39
34666	1,7,11,27	36320	1,8,22,39
34670	1,4,11,26,39	36357	1,4,9,39
34672	1,7,13,31	36373	1,6,13,39
35042	1,8,27,39	36375	1,8,13,14
35044	1,4,8,11,22,39	36405	1,4,8,13
35045	1,8,18,27	36415	1,4,7,13
35048	1,6,12,27	36424	1,8,10,13
35052	1,6,11,12	36440	1,8,13,18
35056	1,6,11,18	36463	1,8,27,39
35095	1,6,11,18	36473	1,4,11,22,39
35109	1,8,9,18	36492	1,4,39
35164	1,8,22,39	36495	1,7,8,9
35177	1,7,8,22	36521	1,4,9,13
35180	1,8,11,18	36555	1,2,4,13
35183	1,7,8,18	36559	1,7,13,39
35189	1,8,13,14	36586	1,7,11,13
35190	1,8,13,18	36595	1,7,8,13
35193	1,8,11,18,39	36622	1,4,8,13
35231	1,6,22,39	36628	1,8,13,18
35237	1,11,16,18,39	36642	1,4,6,9
35240	1,8,10,16	37030	1,14,27,39
35250	1,6,8,11,14	37031	1,9,12,39
35275	1,8,11,18	37038	1,7,18,39
35299	1,7,10,11,39	37056	1,4,15,39
35352	1,7,8,23	37100	1,10,14,18,22
35414	1,4,6,31,39	37142	1,4,10,22,39
35450	1,4,6,22	37144	1,10,14,39
35466	1,6,8,11,18	37150	1,4,22,39
35488	1,4,8,18	37200	1,6,14,39
35526	1,6,11,39	37722	1,4,13,39
35550	1,6,31,39	37769	1,4,13,39
35622	1,4,6,16	37778	1,4,7,39
35630	1,4,31,39	37855	1,4,7,39
36076	1,6,22,39	37875	1,4,5,6
36081	1,4,11,39	37886	1,4,7,39
36099	1,4,11,14,39	37925	1
36118	1,8,18,39	38901	7,41
36152	1,11,27,39	38903	42,44
36173	1,6,9,39	38905	22,42,44
		38907	27,42

TABLE I
Predominantly browns
(10,000, 20,000, and 30,000 series)

TABLE I. Predominantly brown (10000, 20000, and 30000 series) (cont'd.)

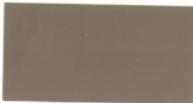
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 10076		
 10080		
 10091		
	 20095	
		 30097
		 30099
	 20100	
		 30108
	 20109	 30109
		 30111
 10115		

TABLE I. Predominantly brown (10000, 20000, and 30000 series) (cont'd.)

<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
	 20117	 30117
	 20122	 30118
	 20140	 30140
	 20152	 30145
	 20160	 30166
	 20206	 30206
	 20215	 30219
	 20219	 30219
	 20219	 30219
	 20219	 30219
	 20219	 30219

TABLE I. Predominantly brown (10000, 20000, and 30000 series) (cont'd.)

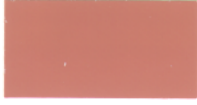
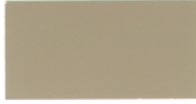
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
	20227	30227
		
10233	20233	30233
		
	20252	30252
		
		30257
		
10260	20260	
		
10266	20266	30266
		
		30277
		
		30279
		
	20313	30313
		
		30315
		
	20318	30318

TABLE I. Predominantly brown (10000, 20000, and 30000 series) (cont'd.)

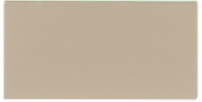
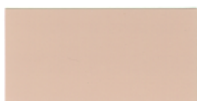
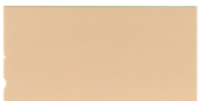
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
10324		30324
		
10371		
		
	20372	30372
		
	20400	
		
	20450	30450
		
	20475	30475

TABLE II

Predominantly reds

(11,000, 21,000, and 31,000 series)

TABLE II. Predominantly red (11000, 21000, and 31000 series)

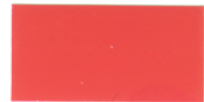
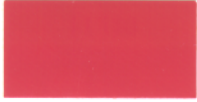
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 11086		
		 31090
 11105	 21105	
 11120		
 11136	 21136	 31136
 11140		
	 21158	 31158
 11302	 21302	 31302
 11310	 21310	 31310
 11328		
 11350		 31350

TABLE II. Predominantly red (11000, 21000, and 31000 series) (cont'd.)

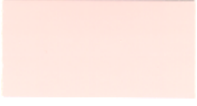
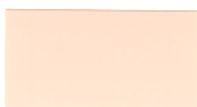
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
11400	21400	31400
		
	21433	31433
		
	21575	31575
		
11630		
		
		31638
		
	21643	31643
		
	21667	31667
		
	21668	31668
		
		31669
		
11670	21670	31670

TABLE III

Predominantly oranges

(12,000, 22,000, and 32,000 series)

TABLE III. Predominantly orange (12000, 22000, and 32000 series)

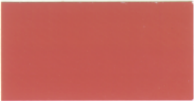
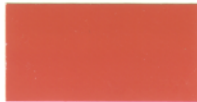
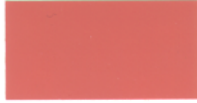
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
	 22144	
 12160		
		 32169
	 22190	
 12197		
 12199		
	 22203	
 12215		
 12243		
 12246	 22246	 32246
	 22276	 32276

TABLE III. Predominantly orange (12000, 22000, and 32000 series) (cont'd.)

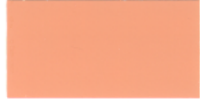
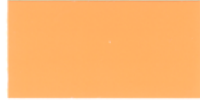
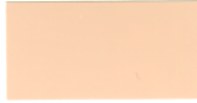
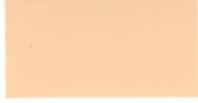
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
12300		
		
	22356	32356
		
12473		32473
		
	22510	
		
	22516	32516
		
	22519	
		
	22544	32544
		
		32555
		
	22563	
		
	22630	32630
		
12648	22648	32648

TABLE IV

Predominantly yellows

(13,000, 23,000, and 33,000 series)

TABLE IV. Predominantly yellow (13000, 23000, and 33000 series)

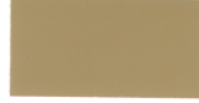
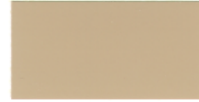
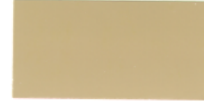
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 33070
		 33105
		 33245
 13275	 23275	 33275
		 33303
 13415		
 13432		
		 33434
		 33440
		 33446
	 23448	 33448

TABLE IV. Predominantly yellow (13000, 23000, and 33000 series) (cont'd.)

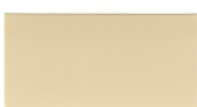
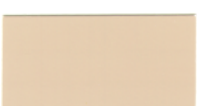
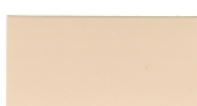
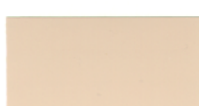
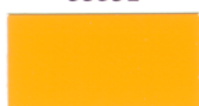
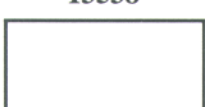
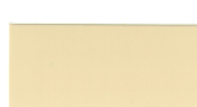
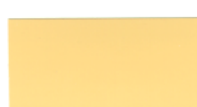
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 33481
 13507		
		 33510
 13522	 23522	 33522
 13523		
 13531	 23531	 33531
 13538	 23538	 33538
	 23564	 33564
 13578	 23578	 33578
 13591		
 13594	 23594	

TABLE IV. Predominantly yellow (13000, 23000, and 33000 series) (cont'd.)

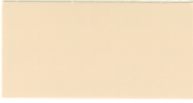
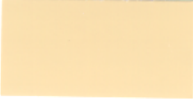
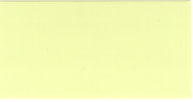
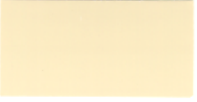
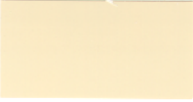
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
13596		
		
13613	23613	33613
		
	23617	33617
		
13618		
		
	23619	
		
13637		33637
		
13655	23655	33655
		
	23685	33685
		
13670		
		
13690	23690	33690
		
13695	23695	33695

TABLE IV. Predominantly yellow (13000, 23000, and 33000 series) (cont'd.)

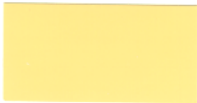
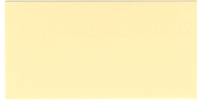
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 33696
	 23697	
 13711	 23711	 33711
	 23717	 33717
	 23722	 33722
	 23727	 33727
	 23785	
	 23793	 33793
		 33798
	 23814	 33814

TABLE V

Predominantly greens

(14,000, 24,000, and 34,000 series)

TABLE V. Predominantly green (14000, 24000, and 34000 series)

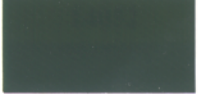
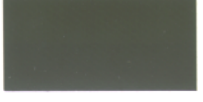
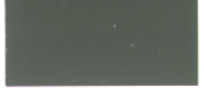
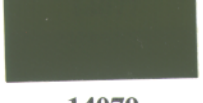
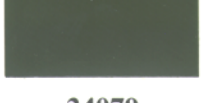
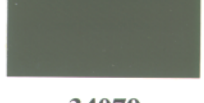
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 34031
 14036		
 14050		
 14052	 24052	 34052
 14056		
		 34058
 14062		
 14064	 24064	 34064
 14066		
 14077		
 14079	 24079	 34079

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 14081		
		 34082
		 34083
 14084	 24084	 34084
		 34086
(Color changed to 14084)	(Color changed to 24084)	(Color changed to 34088)
 14087	 24087	 34087
		 34088
 14090		 34089
	 24091	 34090
		 34092

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
		34094
		
		34095
		
		34096
		
14097	24097	34097
		
	24098	34098
		
		34102
		
	24108	34108
		
14109		
		
14110		
		
14115		
		
14120		

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

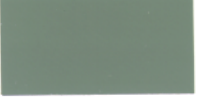
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
		34127
		
		34128
		
		34130
		
		34138
		
	24148	34148
		
14151		34151
		
14158	24158	34158
		
14159	24159	34159
		
	24172	
		
14187		
		
14193		

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
	24201	34201
		
14223		
		
	24226	34226
		
	24227	34227
		
		34230
		
	24233	34233
		
14241	24241	34241
		
14255		
		
14257		
		
		34258
		
		34259

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

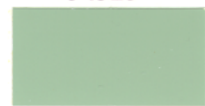
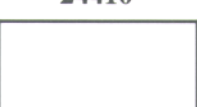
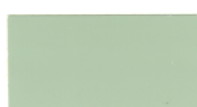
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
14260	24260	
		
14272	24272	34272
		
14277	24277	34277
		
	24300	34300
		
14325	24325	34325
		
	24373	34373
		
	24410	34410
		
		34414
		
	24417	
		
	24424	34424
		
	24432	34432

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

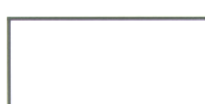
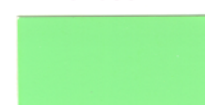
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
	 24441	 34441
 14449	 24449	 34449
	 24466	
 14491	 24491	 34491
	 24504	 34504
 14516	 24516	 34516
	 24518	 34518
		 34524
	 24525	
 14533	 24533	 34533
		 34540

TABLE V. Predominantly green (14000, 24000, and 34000 series) (cont'd.)

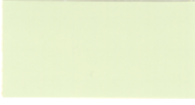
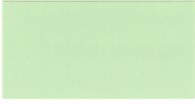
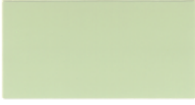
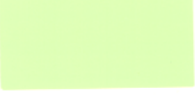
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
	 24552	 34552
	 24554	 34554
	 24558	 34558
	 24583	 34583
	 24585	
	 24664	
		 34666
	 24670	 34670
 14672	 24672	 34672

TABLE VI

Predominantly blues

(15,000, 25,000, and 35,000 series)

TABLE VI. Predominantly blue (15000, 25000, and 35000 series)

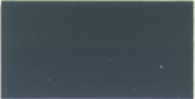
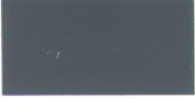
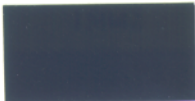
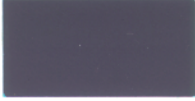
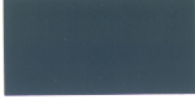
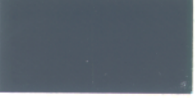
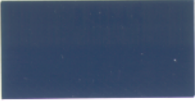
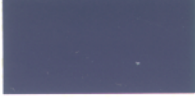
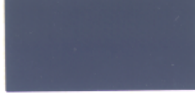
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 15042	 25042	 35042
 15044	 25044	 35044
 15045	 25045	 35045
 15048	 25048	 35048
 15050	 25050	 35050
 15052	 25052	 35052
 15056	 25056	 35056
 15065	 25065	 35065
 15080	 25080	 35080

TABLE VI. Predominantly blue (15000, 25000, and 35000 series) (cont'd.)

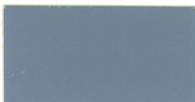
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 15090		
 15092		
 15095	 25095	 35095
 15102	 25102	
 15107		
	 25109	 35109
 15123		
 15125		
		 35164
 15177	 25177	 35177
 15180		 35180

TABLE VI. Predominantly blue (15000, 25000, and 35000 series) (cont'd.)

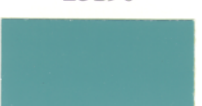
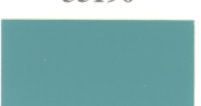
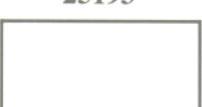
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
15182		
		
	25183	35183
		
	25184	
		
15187		
		
	25189	35189
		
	25190	35190
		
15193	25193	35193
		
15200		
		
		35231
		
	25237	35237
		
	25240	35240

TABLE VI. Predominantly blue (15000, 25000, and 35000 series) (cont'd.)

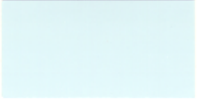
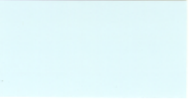
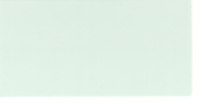
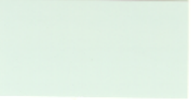
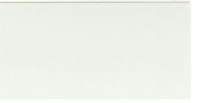
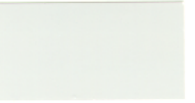
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
		35250
		
		35275
		
	25299	35299
		
	25352	35352
		
	25414	35414
		
15450		35450
		
		35466
		
	25488	35488
		
15526	25526	35526
		
	25550	35550
		
	25622	35622
		
	25630	35630

TABLE VII

Predominantly grays

(16,000, 26,000, and 36,000 series)

TABLE VII. Predominantly gray (16000, 26000, and 36000 series)

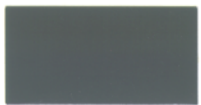
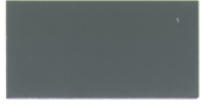
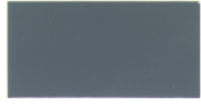
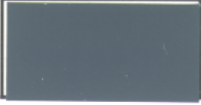
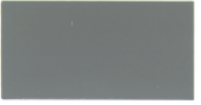
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
	 26008	
	 26044	
	 26081	 36076
 16081	 26081	 36081
 16099	 26099	 36099
	 26120	 36118
	 26122	 36120
	 26132	 36122
	 26134	 36132
	 26152	 36134
	 26152	 36152

TABLE VII. Predominantly gray (16000, 26000, and 36000 series) (cont'd.)

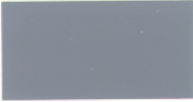
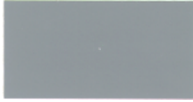
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
16160		
		
16165		
		
	26173	36173
		
	26176	36176
		
16187	26187	
		
	26231	36231
		
	26250	
		
16251	26251	36251
		
	26270	36270
		
	26280	36280
		
	26293	36293

TABLE VII. Predominantly gray (16000, 26000, and 36000 series) (cont'd.)

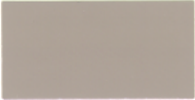
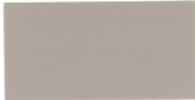
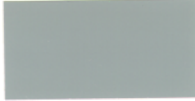
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 36300
	 26306	 36306
 16307	 26307	 36307
 16314	 26314	 36314
		 36320
	 26329	
 16350		
 16357	 26357	 36357
 16360	 26360	
	 26373	 36373
		 36375

TABLE VII. Predominantly gray (16000, 26000, and 36000 series) (cont'd.)

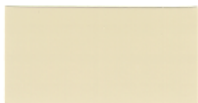
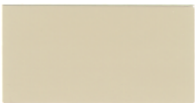
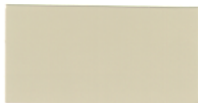
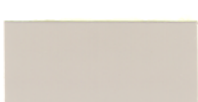
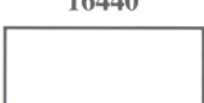
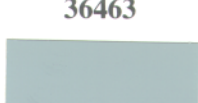
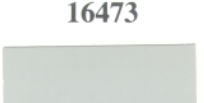
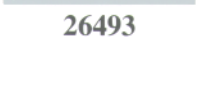
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
 16376		
		
		
		
		
		
		
		
		
		
		
		

TABLE VII. Predominantly gray (16000, 26000, and 36000 series) (cont'd.)

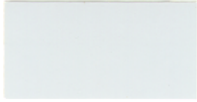
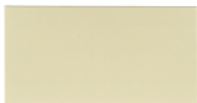
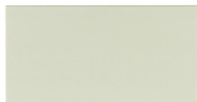
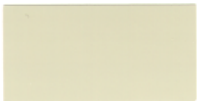
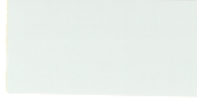
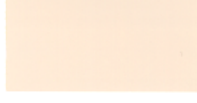
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 36495
	 26496	
 16515		
	 26521	 36521
 16555	 26555	 36555
	 26559	 36559
	 26586	 36586
	 26595	 36595
	 26622	 36622
		 36628
		 36642

TABLE VIII

Miscellaneous (including blacks, whites, and metallics)
(17,000, 27,000, and 37,000 series)

TABLE VIII. Miscellaneous (17000, 27000, and 37000 series)

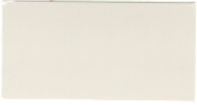
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
		37030
		
		37031
		
17038	27038	37038
		
	27040	
		
17043	27043	
		
		37056
		
17100		37100
		
17142	27142	37142
		
	27144	37144
		
		37150
		
17155		

TABLE VIII. Miscellaneous (17000, 27000, and 37000 series) (cont'd.)

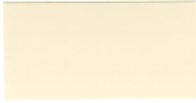
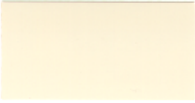
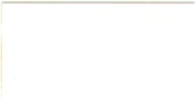
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
17178		
		
		37200
		
	27722	37722
		
	27769	37769
		
17773		
		
17778	27778	37778
		
	27780	
		
17855	27855	37855
		
17875	27875	37875
		
17877		
		
	27880	

TABLE VIII. Miscellaneous (17000, 27000, and 37000 series) (cont'd.)

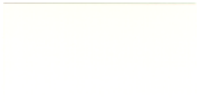
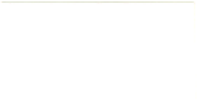
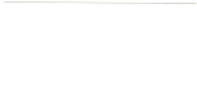
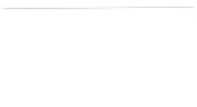
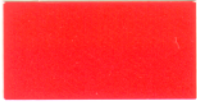
<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		
17886	27886	37886
		
17925	27925	37925

TABLE IX
Fluorescent
(18,000, 28,000, and 38,000 series)

TABLE IX. Fluorescent colors (18000, 28000, and 38000 series)

<u>GLOSS</u>	<u>SEMIGLOSS</u>	<u>LUSTERLESS</u>
		 38901
		 38903
		 38905
		 38907
	 28913	
	 28915	

Federal Standard No. 595b
Addendum to tables listed.

PAGE 26

Table IV, Column 2, add color 23540



23540

PAGE 32

Table V, Column 2, add color 24190



24190

PAGE 39

Table VI, Column 2, add color 25230



25230

PAGE 41

Table VII, Column 2, add color 26118



26118

PAGE 46

Table VIII, Column 2, add color 27160



27160