

**DEC  
STANDARD  
092 SEC. 0  
REV. F**

**FINISH  
AND  
COLOR  
STANDARD**

**TITLE: FINISH AND COLOR STANDARD - INTRODUCTION AND GENERAL REQUIREMENTS**

**ABSTRACT:** This finish and color standard is made up of six sections; each of which may stand alone as a separate standard. The finish and color standard provides a guideline and lists requirements in the following areas:

- a. Introduction to Digital's finish numbering system.
- b. General finish requirements.
- c. Test panel information.
- d. Material and material supplier selection.
- e. Requirements for evaluation of samples and batch approval.
- f. Environmental, physical and appearance quality test requirements and methods.

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## 1 INTRODUCTION

### 1.1 PURPOSE

The purpose of this section is to explain the system that is used by Digital to ensure that the finish material and finished parts accepted by Digital are of the highest quality and conform to the requirements listed in each section of the standard.

### 1.2 SCOPE

This section of the standard describes the system and furnishes information that may be used by Digital personnel in the selection of materials, finishes, and vendors to be used in the finishing of manufactured parts.

This standard does not apply to the assignment of 92-class purchase part identifiers. For that information, refer to DEC STD 012.

### 1.3 RESPONSIBILITIES

#### 1.3.1 Systems Materials Engineering

The Systems Materials Engineering organization is responsible for any additions, deletions, or changes to this standard. For additional information, contact:

Art Clockedile  
ACO/M38, DTN: 232-2470

#### 1.3.2 Finish Applicator

The finish applicator is responsible for supplying a product that meets the requirements of DEC STD 092, Section 1 and the appropriate finish specification.

### 1.3.3 Coating Material Supplier

The coating material supplier is responsible for the following:

- a. Providing test panels and material samples to Digital as required in DEC STD 092, Section 2, when requested by Digital.
- b. Supplying material that meets the requirements of DEC STD 092, Section 2.

### 1.3.4 Digital Materials Research Lab

The Digital Materials Research Lab is required to provide the standard color and texture panel to be used to match the finish desired by Digital.

The Lab shall receive, and perform acceptance testing on, the panels and material sample supplied by the supplier, when requested by Digital.

The Lab group shall notify the supplier of acceptance or rejection of the material or finish.

The Lab shall be responsible for testing and approval of a pre-shipment sample of finish material from the supplier before its use by in-house processors or vendor-applicators.

## 1.4 REFERENCED STANDARDS, SPECIFICATIONS, AND PUBLICATIONS

### 1.4.1 Digital Standards

DEC STD 012	<u>Unified Numbering Code: Policy on Part and Document Identification Conventions</u>
DEC STD 102	<u>Environmental Standard for Computers and Peripherals</u>

Copies of Digital Standards and Specifications may be obtained from Standards and Methods Control, MLO3-2/E56, DTN: 223-9475.

#### 1.4.2 Government Specification

MIL-F-14072

Finishes for Ground Signal Equipment

#### 1.4.3 Publication

Industrial Ventilation, A Manual of  
Recommended Practice

Copies can be obtained from the Committee on Industrial Ventilation,  
Box 16153, Lansing, MI 48901.

## 2 GENERAL REQUIREMENTS

### 2.1 STANDARD SECTIONS

DEC STD 092 is a finish and color standard made up of eight separate sections. ◀

The standard is designed to be used either in its entirety by Digital personnel or in certain separate sections by Digital vendors. See Table 1, Use of Standards.

#### 2.1.1 Section 1 - Finish Standard For Applicators

Section 1 is directed at finish applicators, either in-house or outside vendors, and defines the Digital finish numbering system, finish requirements, and the method of handling finished parts.

#### 2.1.2 Section 2 - Finish Material Standard For Suppliers

Section 2 provides information for the material supplier and covers material requirements, material tests, shipping requirements, and procedures for handling samples and test panels.

#### 2.1.3 Section 3 - Finish Material Test Requirements

Section 3 is the test requirements section. It defines the test requirements and test methods applied to the finishes used on Digital parts. Section 3 is to be used with Section 1 and Section 2.

#### 2.1.4 Section 4 - Approved Finish Specifications

Section 4 lists the currently approved finish specifications. These specifications were originally part of DEC STD 092, but are now separate documents to facilitate distribution. They are separated into the following categories:

- a. Paint
- b. Metal Plating
- c. Conversion and Oxide Coating

Requirements applicable to the specific finish are listed in each finish specification.

A copy of the applicable finish specification shall be supplied to the finish applicator or material supplier, as needed.

#### 2.1.5 Section 5 - Digital Color List

Section 5 contains the list of Digital's currently-approved colors and their identification numbers.

#### ➡ 2.1.6 Section 6 - Digital-Approved Paint Suppliers

➡ Section 6 correlates Digital's paint identification number with the supplier's paint identification number for all Digital-approved paints.

#### ➡ 2.1.7 Section 7 - Plastic Color Control

➡ Section 7 lists all color-impregnated plastics that have been approved for use by Digital.



Table 1. Purpose and Use of Each DEC STD 092 Section and Separate Specification

DEC STD 092 Sect. Subject	Expected Users		
	Applicators (Vendor or In-House)	Material Suppliers	Digital Designers
0 Introduction and General Requirements	No	No	Yes
1 Finish Standard for Applicators	Yes	No	Yes
2 Finish Material Standard for Suppliers	No	Yes	Yes
3 Finish Material Test Requirements	Yes	Yes	Yes
4 Approved Finish Specifications	Yes	N/A	Yes
Separate Finish Specifications	Yes	N/A	Yes
5 Digital Color List	Yes	No	Yes
6 Approved Paint Suppliers	No	No	Yes
Separate Paint Supplier Specifications	Yes	No	Yes
7 Color-Impregnated Plastics	N/A	No	Yes

## 2.2 DESIGN INFORMATION

### 2.2.1 General Requirements for All Digital Finishes

Finishes approved for use on Digital products shall provide surface protection when subjected to the specific types of environmental conditions described in Section 3, Finish Material Test Requirements.

These environmental capabilities are similar to Type II conditions encountered by "Sheltered Surfaces" as defined in MIL-F-14072.

Type II Sheltered Surfaces are those not totally exposed to the direct action of climatic elements when the equipment is operating on site or in transit. These surfaces will receive direct exposure to temperature, humidity, and normal industrial atmospheres, including concentrations of corrosive vapors up to toxic limits, as defined by the American Conference of Government Industrial Hygienists Industrial Ventilation, A Manual of Recommended Practice.

Exposure to direct chemical spillage will be limited to non-abrasive cleaners and solvents such as turpentine, naphtha, and ethyl and butyl alcohols.

Type II Sheltered Surfaces are not subjected to direct exposure to rain, hail, snow, sleet, salt laden air, direct solar radiation, or the scouring action of windblown sand. Should environmental exposure to the direct action of these elements be required, the project engineer is responsible for the specification and subsequent performance adequacy of the specified finish.

The environmental, physical, and appearance quality tests identified in Section 3, Finish Material Test Requirements are used solely as benchmark performance indicators and do not reflect any intended or implied environmental capabilities for a finished Digital product. The parameters used provide accelerated test results so that evaluation of material performance can be obtained more rapidly.

The appropriate tests and criteria described in Section 3, Finish Material Test Requirements for the specific finishes and substrate will be applied to sample 4- x 6-inch test panels in order to either evaluate a currently approved process or finish, or to evaluate and approve a new process or finish. Test panel requirements and uses are described in Section 1, Finish Standard for Applicators.

### 2.2.2 Environmental Tests On Samples Of Finished Digital Parts

Testing of finished Digital parts may be required to provide random checks on the finishing process and materials. In addition, complex or intricate Digital parts may be tested to determine the adequacy of the specified finish.

The environmental tests performed on samples of finished Digital parts, whether finished in-house or by outside vendors, will be limited to the following:

- a. Two complete cycles of non-operating temperature/humidity test as specified in DEC STD 102.
- b. The sample Digital part will be an individual finished piece only and this test will not be performed on any subassembly, assembly, or finished Digital product.
- c. Acceptance criteria are the same as applied to test panels, in that sharp edges or corners may exhibit local rusting.
- d. Environmental tests for assemblies or finished Digital products are listed in DEC STD 102.

**DEC  
STANDARD  
092 SEC. 1  
REV. F**

TITLE: FINISH AND COLOR STANDARD - FINISH STANDARD FOR APPLICATORS

ABSTRACT: This section provides the finish applicator with a description of the Digital system and requirements in regard to the application of a finish to manufactured parts.

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## 1 INTRODUCTION

### 1.1 PURPOSE

This section is a guideline to be used by the finish applicator of Digital parts.

### 1.2 SCOPE

This standard provides information to the finish applicator that defines the Digital finish numbering system, finish requirements and the method for handling finished parts.

### 1.3 RESPONSIBILITIES

#### 1.3.1 Coating Material Suppliers

Coating material suppliers are responsible for providing a material that meets the requirements of DEC STD 092, Section 2.

#### 1.3.2 Systems Materials Engineering

The Systems Materials Engineering organization is responsible for any additions, deletions, or changes to this standard. For additional information, contact:

Art Clockedile  
ACO/M38, DTN: 232-2470

#### 1.3.3 Finish Applicator

Finish applicators are responsible for supplying a product that meets the requirements of this standard and the appropriate finish specification.

### 1.3.4 Digital Materials Research Lab

The Digital Materials Research Lab is responsible for testing and approval of a pre-shipment sample of finish material from the coating material supplier before its use by in-house processors or vendor-applicators.

### 1.3.5 Design Services Organizations

Design Services organizations are responsible for implementation of the finish numbering system defined in subhead 2 of this section.

## 1.4 REFERENCED DOCUMENTS

### 1.4.1 Digital Standards

DEC STD 012  
Section 0

Unified Numbering Code - Part and  
Document Identification Conventions -  
Digital Corporate Policy

### 1.4.2 Digital Specifications

A-SP-EL00092-0-C250  
(092-C250-xxx)

Surface Preparation for Painting

A-SP-7665303-0-0

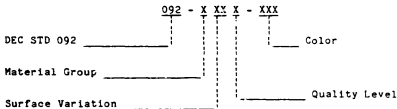
Touch-up Procedure for Air Dry and  
Aerosol Paints

Copies of Digital Standards and Specifications may be obtained from Standards and Methods Control, ML03-2/E56, DTN: 223-9475.

## 2 FINISH/MATERIAL NUMBERING SYSTEM

Digital uses a 3-4-3 format number to specify finish or material requirements. For finishes, this number indicates the finish material group, surface variation, quality level and color as follows:





## 2.1 DIGITAL STANDARD FINISH NUMBER

The first three characters of every Digital standard finish number will always be 092, referring to DEC STD 092, Finish and Color Standard.

All three digits shall always be specified; omission of the leading zero (92) is not allowed. This requirement is necessary to eliminate the possibility of a user misinterpreting a Digital standard finish number as a DEC STD 012 Unified Numbering Code (UNC) 2-5-2 part identifier. The standard finish number is not a part number.

## 2.2 MATERIAL GROUP

An alphabetic character in the first position of the 4-character field of the 3-4-3 format is used to designate a material group. It is always used with a designated surface variation. The following material group letters are assigned:

Group	Material
A	Paints
B	Metal Plating
C	Conversion and Oxide Coatings
D	Molded Plastics
E	Sheet Plastics
F	Inks

## 2.3 SURFACE VARIATIONS

A 2-digit surface variation number is used to designate a specific surface variation, within a material group. For example:

**digital**

092-A10x-xxx smooth surface paint  
092-B05x-xxx zinc plated surface

Each surface variation will have a finish specification that specifies the particulars of that finish. The finish specification must be prepared, approved and controlled in accordance with the requirements of DEC STD 092, Section 4.

## 2.4 QUALITY LEVEL

The five levels, designated 1 through 5, are used to specify the quality level for the finish. The number indicates the application and inspection criteria of a particular finish as follows:

### 092-xxx1-xxx

A "1" is used to indicate that special finish requirements require the optical devices or other special inspection instruments specified on the related engineering drawing for the part.

### 092-xxx2-xxx

A "2" is used for high-quality decorative parts, such as control panels, logos, silk-screening, etc. that are exposed in highly-visible areas of Digital products.

Quality level 2 parts shall be inspected for finish quality from a viewing distance of 18 inches.

### 092-xxx3-xxx

A "3" is used to specify finish quality for parts that are occasionally exposed, such as control panels.

Quality level 3 parts shall be inspected for finish quality from a viewing distance of 36 inches.

### 092-xxx4-xxx

A "4" is used to specify finish quality for external parts such as textured panels and housings.

Quality level 4 parts shall be inspected for finish quality from a viewing distance of 48 inches.

### 092-xxx5-xxx

A "5" is used to specify finish quality level for parts that are inside the cabinet or chassis, or the inner surface of exposed parts.

Quality level 5 parts shall be inspected for finish quality from a viewing distance of 60 inches.

**Note**

The drawing shall specify if more than one quality level is required.

**2.5 COLOR 092-xxxx-CCC**

The color is specified by a 3-digit number in the last three positions of the 3-4-3 number. The currently approved color codes are listed numerically in Table 5-1 of DEC STD 092, Section 5.

**3 PREVIOUS NUMBERING SYSTEM**

The finish numbering system defined by this standard replaces all previous versions of 92-class numbers assigned to paints and finishes.

The previous numbering system provides three groups of information. 92 is the designation for all finishes. The first four digits in the second field designate specific classes or types of finishes. The last digit of the second field and the two digits of the third field designate color.

92-xxxx (c-cc)		92-xxxx(c-cc)
finish	particular	color
group	finish	(last 3 digits in parentheses)
(first 2 digits)	(4 digits)	

These numbers appeared on all drawings of hardware (either as 92-xxxx(c-cc) or 92-xxxxc-cc format) to describe the specific type of finish and the appearance quality desired for the part or assembly.

Existing engineering drawings and documents that use the previous numbering system for paints and finishes will only be changed if specified by an ECO. All new drawings and documents prepared after the release date of this revision (Revision E) shall use the finish numbering system defined in subhead 2.

Table 1-1 provides a cross-reference listing of approved Digital standard finishes and their previously approved finish numbers.

Table 1-1. Obsolete Finish Identifiers - A Cross-Reference List

This table provides a cross-reference list of previously used finish numbers and their equivalent new Digital Standard Finish numbers. (x-xx) indicates color.

<u>NUMBER</u>	<u>NAME</u>	<u>OLD FORMAT</u>	<u>NEW FORMAT</u>
Spec-01	Textured Paint	92-0015(x-xx)	092-A154-xxx
Spec-02	Semi-Gloss Baked Enamel	92-0011(x-xx)	092-A113-xxx
Spec-03	Not Used		
Spec-04	Baked or Air Dry Enamel	92-0012(x-xx)	092-A125-xxx
Spec-05	Not Used		
Spec-06	Zinc-Chromate-Lacquer	92-0006(x-xx)	092-B065-xxx
Spec-07	Zinc-Chromate	92-0007(x-xx)	092-B075-xxx
Spec-08	Not Used		
Spec-09	Not Used		
Spec-10	Decorative Panels (Exposed)	92-0010(x-xx)	092-A102-xxx
Spec-11	Decorative Panels (Usually Unexposed)	92-0011(x-xx)	092-A113-xxx
Spec-12	"Inside the Cast" Finished Parts	92-0012(x-xx)	092-A125-xxx
Spec-13	Finished-Exposed Castings	92-0013(x-xx)	092-A134-xxx
Spec-14	Finished-Unexposed Castings	92-0014(x-xx)	092-A145-xxx
Spec-15	Textured Paint	92-0015(x-xx)	092-A154-xxx
Spec-16	Not Used		
Spec-17	Not Used		
Spec-18	Not Used		
Spec-19	Not Used		
Spec-20	Chemical Conversion Coatings	92-0020(x-xx)	092-C205-xxx
Spec-21	Silk Screen on Baked Enamel	None	
Spec-22	Not Used		
Spec-23	Not Used		
Spec-24	Not Used		
Spec-25	Surface Preparation (Steel)	92-0025(x-xx)	092-C255-xxx
Spec-26	Not Used		
Spec-27	Gold Plating (Proprietary)	92-0027(x-xx)	092-C270-xxx
Spec-28	Surface Preparation (Castings)	92-0028(x-xx)	092-C285-xxx
Spec-29	Not Used		
Spec-30	Not Used		
Spec-31	Not Used		
Spec-32	Not Used		
Spec-33	Not Used		
Spec-34	Not Used		
Spec-35	Anodizing of Aluminum (Sulphuric Acid Process)	92-0035(x-xx)	092-C354-xxx
Spec-36	Anodizing of Aluminum (Chromic Acid Process)	92-0036(x-xx)	092-C364-xxx
Spec-37	87-D (Proprietary by Vendor)	92-0037(x-xx)	092-C374-xxx
Spec-38	Black Anodizing (Sulphuric Acid Process)	92-0038(x-xx)	092-C384-xxx
Spec-39	Hardcoating of Aluminum	92-0039(x-xx)	092-C394-xxx
Spec-40	Surface Preparation (Molded Parts)	92-0040(x-xx)	092-A404-xxx
Spec-41	Painted Molded Parts (Exposed)	92-0041(x-xx)	092-A413-xxx

## 4 APPEARANCE QUALITY CRITERIA

### 4.1 GENERAL REQUIREMENTS

#### 4.1.1 Workmanship

The finish and finished parts shall be clean, neat, and comply with drawings and specifications. Any corrosion of base material will be considered unacceptable.

#### 4.1.2 Packing and Preservation

The items shall be packaged to protect the finish and the parts during normal handling and transporting operations.

#### 4.1.3 Finish Operation Marks

Operation marks caused by the finishing process are acceptable, provided that they are uniform and exhibit good workmanship quality, and are not in a critical appearance area of the product.

#### 4.1.4 Defects

No appearance defect will be allowed to affect the structural integrity or functional use of the affected part, regardless of its appearance at any viewing distance.

### 4.2 APPEARANCE

When a finish is viewed from the required distance, the finish shall not exhibit any imperfections, blemishes, or differences in color or texture that will immediately cause the viewer to focus attention upon them.

### 4.3 LIGHTING AND VIEWING CONDITIONS

The following lighting and viewing conditions shall be used in all inspections of the appearance quality.

#### 4.3.1 Light Source

The light source shall be a cool white fluorescent lamp with uniform illumination and intensity between 100 and 125 foot candles (between 1076.4 and 1345.5 lumens per square meter).

#### 4.3.2 Geometric Conditions

The lighting shall be primarily from an overhead source. The surface under inspection may be viewed at an angle between vertical and 45 degrees to allow perception of the surface.

#### 4.3.3 Inspection Procedure

The inspector shall scan the surface in a continuous manner. Any defects that are immediately obvious, such as color mismatch or texture mismatch, shall be rejected. All judgments shall be made from the specified viewing distance.

#### Note

It is acceptable to determine a texture and/or color match at a viewing distance other than that specified, if deemed necessary by quality control. This distance could be a normal and comfortable viewing distance.

## 5 SPECIFYING FINISH TYPE

Digital finish specifications identify the specific types of finishes that are acceptable for use on Digital products. These specifications provide the Digital Standard finish number, a description of the finish type and its use, any substrate limitations, and the appearance quality criteria. The desired finish for the part is specified by the insertion of the finish specification number 092-xxxx-CCC including the desired color designation (CCC from subhead 2.5) in the "Finish" block on the hardware drawing.

**Note**

Finishes, for which there are no specifications, will require testing prior to use on Digital products.

**6 GENERAL FINISH RULES**

The following general finish rules will be applied during the finishing process, unless otherwise specified by the engineering documentation for a specific part.

**6.1 DRAWING COMPLIANCE**

All drawing requirements shall be met after finish application, unless otherwise specified on the drawing. Finishes shall be in accordance with the finish specifications listed in Table 4-1 of DEC STD 092. Unless otherwise specified, dimensions shall apply after the application of inorganic finishes (such as plating, chromates, oxides, etc.), but before the application of organic finishes (such as lacquers, varnishes, enamels, etc). Any specified machined surface quality shall apply before the application of any type of finish.

**6.2 METAL PARTS**

All metal parts shall be painted with a baked paint, unless otherwise specified on the related drawing or unless baking temperatures affect the mechanical properties of the substrate.

**6.3 NON-METAL PARTS**

All non-metal parts that are permanently fixed or have only one surface which is normally visible on the outside of the cabinet, need only be painted on that visible surface and its adjacent edges. These surfaces may be painted either smooth or textured. Refer to the specific drawing for the part in question.

#### 6.4 THREADED HOLES OR FASTENERS

Threaded holes or fasteners on painted parts do not have to be masked prior to painting unless so specified on the drawing. However, in all cases, the painted fastener or threaded hole must accept its component part or the applicable thread gauge.

#### 6.5 HOOK CONTACT POINTS

Hook contact points, that do not interfere with further finish or processes such as silk-screening, are allowed, provided they are not more than 1/8 inch in area and do not degrade the finished product.

#### 6.6 TOUCH-UP

All Digital finishes shall accept approved touch-up paint with a suitable air-dry lacquer or enamel of a matching color to blend in visually as a uniform finish when viewed from the recommended viewing distance for the particular finish. Refer to Digital Engineering Specification A-SP-7665303-0-0.

#### 6.7 APPROVAL

Paints, colors, and materials used on Digital parts must be approved by Digital.

### 7 GENERAL REQUIREMENTS FOR ALL DIGITAL FINISHES

The performance of finishes approved for use on Digital products shall provide surface protection when subjected to the specific types of conditions described in DEC STD 092, Section 3.

The appropriate tests and criteria described in DEC STD 092, Section 3 for the specific finishes and substrate will be applied to sample test panels, 4 inches by 6 inches to either evaluate a currently approved in-house process or finish, or to evaluate and approve a new in-house process or finish. Test panel requirements and uses are described under subhead 3.



**Note**

In DEC STD 092, Section 3, all test criteria are based upon a smooth finish 1.0 mil thick, unless otherwise specified.

Any paint ordered from any supplier by any Digital facility, or vendor of Digital, for the purpose of painting production parts shall be approved, for color and gloss, by the Digital Materials Research Lab in MLC5-1, Maynard, before shipments are accepted from paint manufacturers.

**Note**

The minimum period of time between sample preparation and testing will be the time specified by the coating material supplier.

**8 TEST PANELS****8.1 REQUIREMENTS**

At the request of Digital, the finish applicator shall furnish a minimum of five test panels of each base material to enable Digital to completely evaluate the paint process or finish according to DEC STD 092, Section 3. There will also be a minimum of three test panels required to completely evaluate all other finishes listed in DEC STD 092, Section 3.

Tests to evaluate the finishing process will be performed on panels per the requirements of 092-C250-xxx. Test panels shall be 1010CRS, or 5052-H32 aluminum, or applicable plastic, 4 inches X 6 inches X 24 gauge.

Test panels shall be prepared and finished in accordance with the individual finish specification.

## 8.2 TEST PANEL INFORMATION

Test panels submitted by the processor shall include the following information:

- a. The Digital Standard Finish specification number.
- b. If paint, indicate and identify the substrate material.
- c. Material manufacturer's name, in-house finishing line identification or vendor name (if samples are from an outside finisher).
- d. Material manufacturer's batch (lot) number (for paint finishes).
- e. Viscosity reading (for paint finishes).
- f. Baking temperature and time in oven (for baked paint finishes).
- g. Date test panels were prepared.

**DEC  
STANDARD  
092, SEC. 2  
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**TITLE:** FINISH AND COLOR STANDARD - FINISH MATERIAL STANDARD FOR SUPPLIERS

**ABSTRACT:** This standard defines the procedure to be followed, and the requirements to be met, by finish material suppliers.

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## 1 INTRODUCTION

### 1.1 PURPOSE

The purpose of this section is to define the requirements that material suppliers must meet to be qualified to provide materials for use in the finishes of Digital products.

### 1.2 SCOPE

This section covers material requirements, material tests, shipping requirements and procedures for handling samples and test panels.

### 1.3 RESPONSIBILITIES

#### 1.3.1 Material Supplier

The material supplier shall be responsible for the following:

- a. Providing test panels and material samples to Digital as required in the standard.
- b. Supplying material that meets the requirements of this standard.

#### 1.3.2 Digital Materials Research Lab

The Digital Materials Research Lab is required to provide the supplier with the standard color and texture panel to be used to match the finish desired by Digital, when requested with the approval of Digital.

The Lab shall receive and perform acceptance testing on the panels and material sample supplied by the supplier.

Digital shall notify the supplier of acceptance or rejection of the material or finish.

### 1.3.3 Systems Materials Engineering

The Systems Materials Engineering organization is responsible for any additions, deletions, or changes to this standard. For additional information, contact:

Art Clockedile  
AC/M38, DTN: 232-2470

## 1.4 REFERENCED STANDARDS

DEC STD 092 Section 3	<u>Finish and Color Standard - Finish Material Test Requirements</u>
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## 2 REQUIREMENTS

### 2.1 SUPPLIER APPROVAL

To be qualified by Digital, a supplier must first contact Digital Purchasing and arrange for the submittal of test panels and samples to Digital.

To be qualified to provide material to a DEC STD 092 specification, the supplier must be capable of meeting the requirements of this standard.

### 2.2 NEW MATERIAL APPROVAL

#### 2.2.1 Test Panels and Samples

Before a new material shall be approved by Digital, the supplier shall submit, for evaluation, a wet sample and five panels coated with the material being evaluated. The panels shall be made of CRS, Bondrite 1000, aluminum, or plastic, whichever is requested by Digital. The sample and panels shall be sent with any related data or documentation to Digital Materials Research Lab in Maynard for testing to environmental, physical and appearance quality criteria.

### 2.3 REQUIREMENTS FOR EVALUATION OF SAMPLES

Wet samples, or panels which are coated with the material, whether submitted for new material approval subhead 2.2, or batch (lot) approval subhead 2.4, shall be capable of meeting the requirements defined in the following paragraphs and Section 3 of DEC STD 892.

#### 2.3.1 Paint Compatibility

2.3.1.1 Touch-up - The finish shall accept touch-up with a suitable air-dry touch-up enamel and/or lacquer of matching color.

2.3.1.2 Silk Screen Compatibility - Screening with silk screen materials on the cured surface shall have good adhesion.

2.3.1.3 Decal Compatibility - Decals applied to the cured surface shall have good adhesion.

### 2.4 BATCH (LOT) APPROVAL

#### 2.4.1 Sample Submittal Preparation

Prior to shipping a batch (lot) of production material to Digital (or approved finishing vendor), the supplier shall prepare a wet and dry sample representing the batch (lot). The supplier shall submit these to Digital Materials Research Lab in Maynard.

#### 2.4.2 Information Needed With Submitted Batch (Lot) Control Panels and Material Sample

With the set of batch (lot) control panels and material sample, the following information is required:

- a. The Digital Standard Finish specification number.
- b. If paint, indicate if air dry or bake finish, and identify the substrate material.



- c. Material manufacturer's name.
- d. Manufacturer's material code number.
- e. Manufacturer's batch (lot) number.
- f. Quantity of material in batch or lot.
- g. Baking temperature and time in oven (for baked paint finishes).
- h. Date test panels and/or material sample were prepared.
- i. Name of the facility that the material is to be shipped to, and the amount to be shipped.

#### 2.4.3 Evaluation of Material

After evaluating the material and the batch panels, the Digital Materials Research Lab shall notify the supplier of the acceptance or rejection of the batch (lot).

### 2.5 PREPARATION FOR SHIPMENT

#### 2.5.1 Marking

Each container of the material shipment shall be identified and marked with the following:

- Name of manufacturer
- Type of material
- Color name
- Digital color number
- Manufacturer's code number
- Purchase order number
- Batch (lot) number

and shall comply with any local regulations governing transportation.

#### 2.5.2 Preservation and Packing

The material shall be preserved and packed in accordance with the best commercial practices and U.S. Department of Transportation regulations.

**DEC  
STANDARD  
092, SEC. 3  
REV. E**

**TITLE:** FINISH AND COLOR STANDARD - FINISH MATERIAL TEST REQUIREMENTS

**ABSTRACT:** This standard defines the test requirements and test methods applied to the finishes used for Digital parts.

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5-Nov-81	Init.	Art Clockedile	Eng. Comm. <i>(Signature)</i>	E

Document Identifier

Size	Code	Number	Rev
A	DS	EL00092-03-0	E

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3	<u>PHYSICAL TEST REQUIREMENTS</u>	5-Nov-81	3-6
4	<u>APPEARANCE QUALITY TEST REQUIREMENTS</u>	5-Nov-81	3-8

## 1 REFERENCED DOCUMENTS

### 1.1 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM-E-376	<u>Film Thickness</u>
ASTM-D-523	<u>Gloss</u>
ASTM-D-878	<u>Distilled Water Immersion</u>

Copies of ASTM Standards may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19183.

### 1.2 FEDERAL AND MILITARY STANDARDS

FED. STD. 141A,	<u>Paint, Varnish, Lacquer and Related Materials, Methods of Inspection, Sampling and Testing</u>
Method 6061	<u>Salt Spray</u>
6201	<u>Humidity</u>
6192	<u>Taber Abrasion</u>
6283.1	<u>Scratch Hardness</u>
6221	<u>Flexibility</u>

Copies of referenced Federal and Military Standards can be obtained from: The Naval Publications and Forms Center  
DOD Single Stock Point  
5801 Tabor Avenue  
Philadelphia Pa 19128  
Phone: 215-697-2000, Ext 3312

### 1.3 PUBLICATIONS

Threshold Limit Value for Toxic Dusts, Fumes and Mists, Federal Register Vol. 36, No. 105, May 29, 1971.

Copies can be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

## 2 ENVIRONMENTAL TEST REQUIREMENTS

### 2.1 TEST SAMPLE PREPARATION

The test panels to be subjected to the first four accelerated environmental tests shall be scribed through to the base material with a sharp instrument, in a line starting approximately 0.25-inch (6.35 mm) from the top edge, running parallel to and approximately one inch (25.4 mm) from the long edge, and ending approximately 0.25-inch (6.35 mm) from the bottom edge of the panel. Scribing shall be done immediately prior to testing.

### 2.2 ACCEPTANCE CRITERIA

When using the test methods specified in the following paragraphs and the test duration specified in Table 3-1, there shall be no evidence of gross film failure such as blistering or corrosion except at the scribe line. The maximum permissible creep shall be 0.125 inch (3.175 mm) from the scribe line after the required number of hours of exposure.

### 2.3 SALT SPRAY

Federal Standard 141A, Method 6061 shall be used to determine salt spray resistance, using a 5% salt concentration.

### 2.4 HUMIDITY

Federal Standard 141A, Method 6201 shall be used to determine humidity resistance.

### 2.5 DISTILLED WATER IMMERSION

ASTM-D-870 shall be used for this test.

Table 3-1. Environmental, Physical and Appearance Quality Testing and Criteria

TESTS	ASTM	FED. SPEC. METHOD				ENVIRONMENTAL				INTERNAL SMOOTH PAINTED STEEL OR ALUM.	ALL OTHER FINISHES			
		AIR DRY PAINTED		BARE PAINT		STEEL		ALUMINUM						
		ALUMINUM	STEEL	PLASTIC	ENVIRONMENTAL	ALUMINUM	STEEL	ALUMINUM	STEEL					
3A Mill Spray	---	6661	192 hours	96 hours	192 hours	288 hours	144 hours	144 hours	96 hours	96 hours	96 hours	288 hours	192 hours	96 hours
Nonfidelity	---	6261	384 hours	288 hours	384 hours	144 hours	288 hours	288 hours	288 hours	288 hours	288 hours	288 hours	288 hours	288 hours
Stabilized Water Immersion	D-978	---	384 hours	192 hours	384 hours	384 hours	384 hours	192 hours	192 hours	192 hours	192 hours	192 hours	192 hours	192 hours
Corrosive Vapor	---	---	96 hours	96 hours	96 hours	96 hours	96 hours	96 hours	96 hours	96 hours	---	---	---	96 hours
PHYSICAL														
Solvent Resist	---	---	W & P Methyls	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	---
Wear Resistance	---	6192	789 Cycles	789 Cycles	789 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	1000 Cycles	---
Stretch Hardness (Traction)	---	6263	288 gms.	288 gms.	288 gms.	300 gms.	300 gms.	300 gms.	300 gms.	300 gms.	300 gms.	300 gms.	300 gms.	---
Flexibility	---	6221	1/4-inch	1/4-inch	1/4-inch	1/8-inch	1/8-inch	1/8-inch	1/8-inch	1/8-inch	1/8-inch	1/8-inch	1/8-inch	---
Impact	---	---	88 in. lb	88 in. lb	88 in. lb	100 in. lb	100 in. lb	100 in. lb	100 in. lb	100 in. lb	100 in. lb	100 in. lb	100 in. lb	---
Adhesion	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Type Test	---	---	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass	Must Pass
Film Thickness	---	---	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	1.8 mil	---
Smooth Finish	E-174	---	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	---
Film Thickness	---	---	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	1.5 mil	---
Texture Finish	E-174	---	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	---
APPEARANCE QUALITY														
Gloss	D-525	---	18 units	18 units	18 units	18 units	18 units	18 units	18 units	18 units	18 units	18 units	18 units	---
Smooth Parts	---	---	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	---
66 Bezel Gray	D-521	---	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	---
Indicator Panels	---	---	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	---
Color and Texture	---	---	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	25 units	---
NOTE 1: "Witness" per INDIVIDUAL FINISH SPECIFICATION SHEET.	---	---	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	Must match samples supplied by Digital	---
NOTE 2: Color per individual specification and color sample, if available.	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DEC-81

Note 1

Note 2

## 2.6 CORROSIVE VAPORS

The test specimens shall be exposed, at room temperatures, to concentrated atmospheres of HF, HCl, SO<sub>2</sub>, Cl<sub>2</sub>, H<sub>2</sub>S and NH<sub>3</sub>. The concentration of each chemical fume shall be within the limits established by the American Conference of Governmental and Industrial Hygienists publication, Threshold Limit Value for Toxic Dusts, Fumes and Mists. The test for each individual chemical is to be performed separately, on the same test specimens.

## 3 PHYSICAL TEST REQUIREMENTS

### 3.1 SOLVENT RESISTANCE

Solvent resistance (also, completeness-of-cure) is determined by placing drops of the solvent (defined for each finish in Table 3-1) on a coated panel and rubbing with a cotton swab saturated with solvent. The solvent shall evaporate before the coating is attacked. It shall be considered a failure if the coating is removed to base material, or softens and does not resume its original hardness.

It shall be considered acceptable if a slight removal of coating shows on the cotton swab and if the coating is softened slightly, but resumes original hardness after five minutes.

The tested area is allowed to show discoloration.

### 3.2 WEAR RESISTANCE TABER ABRASION

Federal Standard 141A, Method 5192 shall be applied using a Taber instrument with CS13 wheels with 1000 gram weight for amount of cycles noted in Table 3-1. No base material shall be visible through the subject coating or finish at end of test.

#### Note

The test panel shall have the required film thickness prior to test.

### 3.3 SCRATCH HARDNESS

Federal Standard 141A, Method 5303-1 shall be applied using a Princeton scratch tester with a sapphire needle. The coating shall not be sheared from the panel surface by the amount of weight required by Table 3-1.



### 3.4 FLEXIBILITY

Federal Standard 141A, Method 6221 shall be used to determine flexibility of the paint film. There shall be no failure such as cracking or flaking of the film when using the diameter mandrel required in Table 3-1.

### 3.5 IMPACT

A Gardner 160 inch-pound impact tester with a 2-pound rod shall be used to subject the test specimen to the required inch-pounds of impact required by Table 3-1. There shall be no loss of adhesion or flaking of the paint film.

### 3.6 ADHESION-CROSS HATCH TEST METHOD

Using a sharp knife, 11 parallel cuts shall be made in the finish 0.125 inch apart and approximately one inch long, being sure the cuts penetrate to the base material. Eleven additional parallel cuts shall be made 0.125 inch apart, perpendicular to and crossing all the first 11 cuts. Scotch Brand #600 tape shall be applied over this area, using uniform pressure.

There shall be no more than 5 percent loss of film when the tape is swiftly pulled from the scribed area.

### 3.7 ADHESION - TAPE TEST METHOD

Scotch Brand #600 tape shall be applied on the surface with uniform pressure, and shall be removed in a quick motion at 90 degrees to the surface. For acceptance, the finish shall remain unbroken after the tape is removed.

### 3.8 FILM THICKNESS

ASTM-E-376 shall be used to determine film thickness. When measured in several places over the surface of the finished part, the coating shall average the thickness required in Table 3-1.

#### 4 APPEARANCE QUALITY TEST REQUIREMENTS

##### 4.1 GLOSS

60 degree specular gloss test of ASTM-D-523-66T shall be used to determine gloss appearance quality. Gloss readings for smooth painted parts and indicator panels, when measured in several areas of the finished part, shall have the average gloss measure listed in Table 3-1.

##### Note

Gloss tests are only to be performed on smooth surfaces.

##### 4.2 COLOR AND TEXTURE

The color and texture must match samples supplied by Digital.

**DEC  
STANDARD  
092 SEC. 4  
REV. F**

**TITLE:** FINISH AND COLOR STANDARD - APPROVED FINISH SPECIFICATIONS

**ABSTRACT:** This standard contains a complete list of specifications for finishes approved for use on Digital products.

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DATE	ECO #	ORIGINATOR	APPROVED	REV
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1.2	RESPONSIBILITY	5-Nov-81	4-3
➡	Table 4-1. Approved Finish Specifications	9-Dec-82	4-4
	Table 4-2. Finish Cross-Reference List	5-Nov-81	4-5

## 1 INTRODUCTION

### 1.1 PURPOSE

The purpose of this section is to list all the currently approved finish specifications and revisions, see Table 4-1, and a cross reference list of previous and current finish specifications numbers, see Table 4-2.

### 1.2 RESPONSIBILITY

The Systems Materials Engineering organization is responsible for any additions, deletions, or changes to this standard. For additional information, contact:

Art Clockedile  
ACO/M38, DTN: 232-2470

Table 4-1. Approved Finish Specifications

Finish Number	Finish	Refer to Specification:
<b>Paint</b>		
092-A10X-XXX	Smooth Paint Finish	A-SP-EL00092-04-A10X
092-A11X-XXX	Smooth Paint Finish	A-SP-EL00092-04-A11X
092-A12X-XXX	Smooth Paint Finish	A-SP-EL00092-04-A12X
092-A13X-XXX	Texture Paint Finish	A-SP-EL00092-04-A13X
092-A14X-XXX	Texture Paint Finish	A-SP-EL00092-04-A14X
092-A15X-XXX	Texture Paint Finish	A-SP-EL00092-04-A15X
092-A16X-XXX	Marking Paint Finish	A-SP-EL00092-04-A16X
092-A17X-XXX	Clear Hard Coat Finish	A-SP-EL00092-04-A17X
092-A40X-XXX	Surface Preparation Finish	A-SP-EL00092-04-A40X
092-A41X-XXX	Texture Paint Finish For Plastic Covers	A-SP-EL00092-04-A41X
092-A45X-XXX	Epoxy Powder Coating (Black)	A-SP-EL00092-04-A45X
092-A46X-XXX	Nylon Coating	A-SP-EL00092-04-A46X
092-A60X-XXX	Urethane Coating For Magnets	A-SP-EL00092-04-A60X
092-A65X-XXX	Black Conductive Nickel Paint	A-SP-EL00092-04-A65X
<b>Metal Plating</b>		
092-B05X-XXX	Zinc Plate With Yellow Chromate	A-SP-EL00092-04-B05X
092-B06X-XXX	Zinc Plate With Yellow Chromate	A-SP-EL00092-04-B06X
092-B07X-XXX	Zinc Plate With Yellow Chromate	A-SP-EL00092-04-B07X
092-B08X-XXX	Zinc Plate With Clear Chromate	A-SP-EL00092-04-B08X
092-B09X-XXX	Bright Cadmium Plate	A-SP-EL00092-04-B09X
092-B30X-XXX	Nickel Plate	A-SP-EL00092-04-B30X
<b>Conversion and Oxide Coatings</b>		
092-C20X-XXX	Chromate Conversion Coating On Aluminum (Yellow)	A-SP-EL00092-04-C20X
092-C21X-XXX	Chromate - Clear	A-SP-EL00092-04-C21X
092-C25X-XXX	Surface Preparation For Painting	A-SP-EL00092-04-C25X
092-C28X-XXX	One-Coat Conversion Coating For Non-Ferrous Castings	A-SP-EL00092-04-C28X
092-C35X-XXX	Anodizing (Sulphuric) Acid	A-SP-EL00092-04-C35X
092-C36X-XXX	Anodizing (Chromic) Acid	A-SP-EL00092-04-C36X
092-C38X-XXX	Black Anodizing	A-SP-EL00092-04-C38X
092-C39X-XXX	Anodic Hard Coating	A-SP-EL00092-04-C39X
092-C50X-XXX	Black Oxide Coating for Iron	A-SP-EL00092-04-C50X
092-C60X-XXX	Passivate - for Stainless Steel	A-SP-EL00092-04-C60X

Table 4-2. Finish Cross-Reference List

Previous Numbering Format	Current Numbering Format	Description
92-00010-00A	092-A010-XXX	Refer to 092-A150-000
92-00010-00B	092-A010-XXX	Refer to 092-A150-000
92-00020-00	092-A020-XXX	Refer to 092-A100-000, 092-A110-000, 092-A120-000
92-00030-00	092-A030-XXX	Refer to 092-A100-000, 092-A110-000, 092-A120-000
92-00040-00	092-A040-XXX	Refer to 092-A100-000, 092-A110-000, 092-A120-000
92-0010(0-00)	092-A102-XXX	External Decorative Panels and Parts Smooth Paint
92-0011(0-00)	092-A113-XXX	External Control Panels and Parts Smooth Paint
92-0012(0-00)	092-A125-XXX	Internal Parts and Assemblies Smooth paint
92-0013(0-00)	092-A134-XXX	External Castings Textured Paint
92-0014(0-00)	092-A145-XXX	Internal Castings Textured Paint
92-0015(0-00)	092-A154-XXX	External Textured Paint Parts
92-0016(0-00)	092-A162-XXX	Hot Stamping applies to Logos, Nameplates, etc.
92-0017(0-00)	092-A172-XXX	Clear Hard Coat
92-0040(0-00)	092-A400-XXX	Surface Preparations for Painted Plastic Parts
92-0041(0-00)	092-A414-XXX	Texture Paint Finish for Plastic Covers
92-0045(0-00)	092-A454-XXX	Epoxy Powder Coating
92-0046(0-00)	092-A464-XXX	Black, Nylon Powder Coating
92-0060(0-00)	092-A604-XXX	Urethane Coating
92-0005(0-00)	092-B055-XXX	Zinc Plating with Yellow Chromate (0.0002)
92-0006(0-00)	092-B065-XXX	Zinc Plating with Yellow Chromate (0.00075)
92-0007(0-00)	092-B075-XXX	Zinc Plating with Yellow Chromate (0.00075)
92-0008(0-00)	092-B085-XXX	Bright Zinc Plating, Clear Chromate
92-0009(0-00)	092-B095-XXX	Bright Cad Plating, Clear Chromate
92-0030(0-00)	092-B304-XXX	Electroless Nickel Plating for Iron Base or Aluminum Base Metal Alloys



Table 4-2. Finish Cross-Reference List (Cont'd)

Previous Numbering Format	Current Numbering Format	Description
92-0020(0-00)	092-C205-XXX	Chromicoat - Alodine - Irridite - Surface Preparation for Aluminum
92-0021(0-00)	092-C215-XXX	Chromicoat - Clear
92-0025(0-00)	092-C255-XXX	Surface Preparation for Painting
92-0029(0-00)	092-C295-XXX	One-Coat Conversion Coating for Non-Ferrous Castings
92-0035(0-00)	092-C354-XXX	Anodizing (Sulfuric Acid)
92-0036(0-00)	092-C364-XXX	Anodizing (Chromic Acid)
92-0038(0-00)	092-C384-XXX	Black Anodizing
92-0039(0-00)	092-C394-XXX	Anodic Hard Coating on Aluminum and Aluminum Alloys
92-0050(0-00)	092-C505-XXX	Black Oxide

**DEC  
STANDARD  
092 SEC. 5  
REV. E**

**TITLE:** FINISH AND COLOR STANDARD - DIGITAL COLOR LIST

**ABSTRACT:** This standard contains a list of currently approved Digital colors and color identification numbers.

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Table 5-1.	Current Colors and Color Identification Numbers	5-Nov-81	5-3

Table 5-1. Current Colors and Color Identification Numbers

#92-YXXX-	First Used On	Name	Reference
065	Old DEC Cabs	Silver	
067	Old DEC Cabs	Blue-Gray	
068	General	Light Gray	
094	Cabinets	Lamp Black	CHM Grayscale P
095	General	Chinese Red	MUN (10YR4/12), CHM 6PC
101	End Panels	Gray	CHM Gray Scale D
102	Packaging	Blue	IPI 66C 950
104	Module	Brite Gold	CHM 2 PC
105	LAB-COM	Gray	CHM Gray Scale G
111	PDP10	Deep Peacock Blue	CHM 16 FC
113	PDP8/I	Dark Luggage Tan	MUN (5 YR4/8), CHM 4
114	PDP10	Wedgewood Green	CHM 24-1/8 EC
115	PDP10	Chalk Blue	CHM 16 EC
116	Peripherals	Brite Olive Green	CHM 24-1/2 PC
123	General	White	MUN (N9.5), CHM Gray Scale
126	PDP8/L	Russet Orange	CHM 4 NC
129	PDP12	Lime Peel	CHM 24 PG
130	PDP12	Brite Chartreuse	CHM 24-1/2 LA
131	PDP15	Brite Copen Blue	MUN (2.5PB 5/10), C
135	PDP15	Brite Navy	CHM 13-1/2 PG
136	PDP14	Amber	MUN (10YR6/10), CHM 3
137	General	Vermillion	MUN (10YR5/14), CHM 6
138	Peripheral Switch	Dark Olive Gray	CHM 1 MI
139	PDP11	Brite Rose	CHM 8 NA
140	PDP11	Magenta	CHM 9 PA
141	PDP8/E	Amber	MUN (10 YR6/12), CHM 3
142	PDP8/E	Terra Cotta	CHM 5 PE
144	KI10	Turquoise Green	MUN (7.5 BG4/6), CHM
145	KI10	Deep Peacock Blue	CHM 16 PE
146	Logic Lab	Deep Purple	CHM 11 PE
147	General	Dark Gray	CHM Gray Scale L
148	10 Systems	Blasi Blue	CHM 16 NC
149	IDAC 11/07	Topaz	MUN (10YR5/10)
150	IDAC 11/07	Clove Brown	MUN (10YR3/4)
151	KI10	Light Aqua	CHM 17 LA
152	PDP11/45 & 25	Alexander Grape	CHM 9 PL
153	NEMA Cabinets	Gray Primer	
154	DECDATA System	Murphy Maroon	MUN (7.5R3/8)
155	PDP11	Morris Maroon	MUN (7.5R2/8)
156	GT40	Crabbe Yellow	MUN-5Y 7/10
157	GT40	Lenny Lime	MUN-5Y 4/6
158	PDP8	Dave Brown	MUN-2.5YR3/8
159	Corp. Ident.	Digital Blue	PMS Process Blue
160	Med. Systems	Blue Janice	MUN-7.5PB 3/12

Table 5-1. Current Colors and Color Identification Numbers (Cont'd)

#92-XXXX-	First Used On	Name	Reference
161	ANT'S (OEM)	ANT'S Orange	Customer Chip
162	ANT'S (OEM)	ANT'S Blue	Customer Chip
163	Philips (OEM)	Philips Blau	Customer Chip
164	Industrial	D.C. Blue	MUN 5PB 3/10
166	W.U. (OEM)	Western Union Blue	Customer Chip
167	Industrial	Can-Red	I.H.C.
169	General	Red Defuser	I.H.C.
170	General	Colorless Defuser	I.H.C.
171	Key Controls	Button Red	G.E. MVCL
172	Dust Covers	Smokey Lexan	G.E. MVCL
173	PDP 8/A	Fog Defuser	I.H.C.
174	Bell Sys (OEM)	Bell Gold	Customer Chip
175	Bell Sys (OEM)	Bell Blue	Customer Chip
176	Foxboro (OEM)	Light Fox Green	Customer Chip
177	Foxboro (OEM)	Dark Fox Green	Customer Chip
178	PDP/15	Blue Devlin Defuser	I.H.C.
179	General	OSHA Yellow	I.H.C.
180	General	OSHA Blue	I.H.C.
181	General	OSHA Green	I.H.C.
182	General	OSHA Orange	I.H.C.
183	General	OSHA Red	I.H.C.
184	General	OSHA Magenta	CHM-9-DA
185	General	Corn Gold	I.H.C.
186	Data Systems	Mullen Blue	I.H.C.
187	OEM	Bell Canada Gray	Customer Chip
188	General	Ocular Red Defuser	I.H.C.
189	General	DEC Clear Hardcoat	I.H.C.
190	PDP-11/60 CAB	PREFER - RED	I.H.C.
191	OEM	Bell Canada Gold	Customer Chip
192	OEM	Canada Post Red	S/S Ink I.H.C.
193	VT100	Digital Brown	I.H.C.
195	General	Charcoal	I.H.C.
196	Labels	Label Code Blue	Inks PMS 306
197	Labels	Label Code Green	Inks PMS 375
198	Labels	Label Code Pink	Inks PMS 191
199	Labels	Label Code Purple	Inks PMS 528
200	Labels	Label Code Orange	Inks PMS 151
201	Labels	Label Code Yellow	Inks PMS 109
202	Labels	Label Code Tan	Inks PMS 472
203	Labels	Label Code Dark Orange	Inks PMS 166
204	Labels	Label Code Yellow Orchner	Inks PMS 117
205	Labels	Label Code Brown	Inks PMS 147
206	Labels	Label Code Olive	Inks PMS 391
207		D.F. Gray Defuser	I.H.C. Silk Screen Ink

Table 5-1. Current Colors and Color Identification Numbers (Cont'd)

#92-XXXX-	First Used On	Name	Reference
208		Gray Lexan	G.E. 9030-713
239		Trans Bronze	Flex-VU M-103 BW
21d		Yellow Defuser	I.H.C. Silk
			Screen Ink
211		Green Defuser	I.H.C. Silk
			Screen Ink
212		Bold Blue	Cycolac T-5500
			(Keycaps)
213		Mellow White	Cycolac T-2502
			(Keycaps)
214		Old Gray	Cycolac T-3502
			(Keycaps)
215		A.J. Brown	G.E. Noryl
			N-193-50139
216		A.J. Beige	G.E. Noryl
			N-193-50192

I.H.C. = In-House Color