MIL-HDBK-1516
24 January 1996

SUPERSEDING
MIL-STD-1516B
13 November 1990

MILITARY HANDBOOK

UNIFIED CODE FOR COATINGS AND FINISHES FOR DOD MATERIEL

AMSC N/A

AREA MFFP

FOREWARD

1. This military handbook is approved for use by all Departments and Agencies of the Department of Defense.

2. This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.

3. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to ASD/ENSI, Wright–Patterson Air Force Base, Ohio 45433–6503, by using the self addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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1. SCOPE

1.1 Scope. This handbook establishes a uniform code and to serve as a general guide to the selection of suitable materials, procedures, and systems for cleaning, plating, painting and otherwise finishing metal, plastic, wood, and other surfaces, for use by the Department of Defense (DOD). This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.

1.2 Selection of finish system. Unless otherwise specified, the responsibility for selecting the cleaning method, surface treatment, metal coating, paint system or other finish should rest with the procuring activity. The finishing system should be selected from those listed in this document and should be referenced on drawings, contracts, and item specifications. Code finish cross reference numbers are preceded by the CODE to avoid possible confusion, for example, MIL-HDBK-1516, Code 1012-3105. This does not preclude the acceptance of a proven commercial finish selected by the manufacturer, suppliers, or contractor and concurred in by the procuring activity. Additional information relative to protective finishes and their selection may be found in MIL-HDBK-132 and MIL-STD-171.

1.3 Exposure classification. Type I surfaces are areas, either exposed to view when equipment is in operating or traveling conditions or areas not exposed to view but subject to combined direct action of climatic elements. Climatic elements include temperature extremes, humidity extremes, rain, hail, snow, sleet, salt laden air, industrial atmospheres, direct solar radiation, dust and scouring action of wind-blown sand.

1.31 Type I (exposed). Type I surfaces are areas, either exposed to view when equipment is in operating or traveling conditions or ares not exposed to view but subject to combined direct action of climatic elements. Climatic elements include temperature extremes, humidity extremes, rain, hail, snow, sleet, salt laden air, industrial atmospheres, direct solar radiation, dust and scouring action of wind-blown sand.

1.3.2 Type II (sheltered). Type II surfaces are not exposed to view during equipment operation and not subject to direct action of rain, hail, snow, sleet, direct solar radiation, and sand.

2. REFERENCE DOCUMENTS

The documents listed below are not necessarily all of the documents reference herein, but are the ones that are needed in order to fully understand the information provided by this handbook. Documents cited herein are intended to provide supplemental technical data and guidance. Documents referenced in this handbook should be tailored before contractual use. The documents are listed here to provide guidance for developing requirements for specification sections 3 and 4 and program tasking. Section 2, of the contractual specification, should list all documents required for the program. DoD is currently implementing new policy to minimize use of military specifications and standards. Programs should verify status of all the document listed and/or cited herein before applying them or referencing them in contracts.

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the latest issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto.

SPECIFICATIONS

FEDERAL

AA-371	Linseed Oil, Boiled (for Use in Organic Coatings)
AA-1452	Lacquer (Spraying, Chemical Resistant)
AA-1558	Paint, Stencil
QQ-C-320	Chromium Plating (Electrodeposited)
QQ-Z-325	Zinc Coating, Electrodeposited, Requirement for
QQ-N-290	Nickel Plating (Electrodeposited)
QQ-P-416	Plating, Cadmium (Electrodeposited)
QQ-S-365	Silver Plating, Electrodeposited, General Requirements for
TT-C-490	Cleaning Methods and Pretreatment of Ferrous Surfaces, for Organic Coatings
TT-C-494	Coating Compound, Bituminous, Solvent Type, Acid Resistant
TT-C-542	Coating Polyurethane, Oil Free, Moisture Curing
TT-E-485	Enamel, Semi-gloss Rust-inhibiting
TT-E-489	Enamel, Alkyd, Gloss (for Exterior and Interior Surfaces)
TT-E-515	Enamel, Alkyd, Lusterless, Quick-drying
TT-E-516	Enamel, Lusterless, Quick-drying Styrenated Alkyd Type
TT-E-527	Enamel, Alkyd, Lusterless
TT-E-529	Enamel, Alkyd, Semi-gloss, Co-polymer
TT-E-1593	Enamel, Silicone Alkyd Co-polymer, Gloss (for Interior and Exterior Use)
TT-F-336	Filler, Wood, Paste
TT-L-20	Lacquer, Camouflage
TT-L-32	Lacquer, Cellulose Nitrate, Gloss for Aircraft Use

TT-L-58	Lacquer, Spraying, Clear and Pigmented (for Interior Use)
TT-P-25	Primer Coating, Exterior Undercoat for Wood, Ready-Mixed, White and Tints
TT-P-28	Paint, Aluminum, Heat Resisting (1200°F)
TT-P-645	Primer, Paint, Zinc-chromate, Alkyd Type
TT-P-662	Primer Surfacer, Sanding, Lacquer and Enamel Type
TT-P-664	Primer, Coating, Synthetic, Rust-inhibiting, Lacquer-resisting
TT-P-1757	Primer Coating, Zinc Chromate, Low Moisture Sensitivity
TT-S-300	Shellac, Cut
TT-V-51	Varnish, Asphalt
TT-V-109	Varnish, Interior, Alkyd-Resin
TT-V-119	Varnish, Spar, Phenolic-Resin
TT-V-121	Varnish, Spar, Water Resisting
TT-W-571	Wood, Preservative, Treating Practices
TT-W-572	Wood-Preservative, Water-repellant
VV-L-800	Lubricating Oil, General Purpose, Preservative (Water Displacing, Low Temperature)
CCC-D-950	Dyeing and After Treating Processes for Cotton Cloths

MILITARY

MIL-V-173	Varnish, Moisture and Fungus Resistant (for Treatment of Communications, Electronic, and Associated Equipment)
MIL-C-450	Coating-compound, Bituminous Solvent Type, Black (for Ammunition)
MIL-F-495	Finish, Chemical, Black, for Copper Alloys
MIL-T-704	Treatment and Painting of Materiel
MIL-E-1115	Enamel, Interior, Alkyd, White (Formula No. 30)
MIL-R-3043	Resin Coating, Unpigmented for Engine Components and Metal Parts
MIL-L-3150	Lubricating Oil, Preservative, Medium
MIL-M-3171	Magnesium Alloy, Processes for Pretreatment and Prevention of Corrosion on
MIL-C-3301	Compound, Asphaltic, Hot Melt (Cavity Lining)
MIL-L-3891	Luminescent Material and Equipment (Nonradioactive)
MIL-S-4383	Sealing Compound, Topcoat, Fuel Tank, BUNA-N- Type
MIL-E-4556	Coating Kit, Epoxy, for Interior of Steel Fuel Tanks
MIL-S-5002	Surface Treatments and Inorganic Coatings for Metal Surfaces of Weapon Systems
MIL-W-5044	Walkway Compound, Nonslip and Walkway Matting Nonslip
MIL-W-5050	Walkway, Coating and Matting, Nonslip Aircraft, Application of
MIL-C-5056	Coating, Permanent Resin, Process for Application of, to Aircraft Parts
MIL-C-5541	Chemical Conversion Coatings on Aluminum Alloys
MIL-F-7179	Finishes and Coatings: Protection of Aerospace Weapons Systems,Structures and Parts, General Specifications for
MIL-R-7705	Radomes, General Specification for

MIL-C-8514	Coating Compound, Metal Pretreatment, Resin-Acid
MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys
MIL-S-8784	Sealing Compound, Low Adhesion, for Removable Panels and Fuel Tank Inspection Plates
MIL-S-8802	Sealing Compound, Temperature Resistant, Integral Fuel Tanks and Fuel Cell Cavities, High Adhesion
MIL-C-8837	Coating, Cadmium (Vacuum Deposited)
MIL-T-10727	Tin Plating, Electrodeposited or Hot-Dipped, for Ferrous and Nonferrous Metals
MIL-S-11030	Sealing Compound, Non-curing, Polysulfide Base
MIL-S-11031	Sealing Compound, Adhesive, Curing (Polysulfide Base)
MIL-L-11195	Lacquer, Lusterless, Hot Spray
MIL-P-11414	Primer Coating, Lacquer Rust Inhibiting
MIL-V-12276	Varnish Phenolic, Baking
MIL-T-12664	Treatment, Fungus Resistant, Paranitrophenol, for Cork Products
MIL-C-13335	Coatings for Magnesium and Magnesium Alloys
MIL-L-13762	Lead Alloy Coating, Hot Dip (for Iron and Steel Parts)
MIL-L-13808	Lead Plating (Electrodeposited)
MIL-C-13924	Coating, Oxide, Black for Ferrous Metals
MIL-F-14072	Finishes for Ground Electronic Equipment
MIL-P-14105	Paint Heat Resisting (for Steel Surfaces)
MIL-C-14538	Chromium Plating, Black (Electrodeposited)
MIL-C-14550	Copper Plating (Electrodeposited)
MIL-P-14553	Primer Coating, Dipping Automotive
MIL-E-15090	Enamel, Equipment, Light Gray (Formula 11)
MIL-P-15328	Primer (Wash), Pretreatment, (Formula No. 117 for Metals)
MIL-P-15931	Paint, Anti-fouling, Vinyl (Formula No. 121 and No. 129)
MIL-C-16173	Corrosion Preventive Compound, Solvent Cutback, Cold Application
DOD-P-16232	Phosphate Coatings, Heavy Manganese or Zinc Base (for Ferrous Metals)
MIL-E-16663	Enamel, Semi-gloss (for Meal Surfaces of Ammunition and Ammunition Containers)
MIL-C-17711	Coatings, Chromate, for Zinc Alloy Castings and Hot-Dip Galvanized Surfaces
MIL-F-18264	Finishes, Organic; Weapons Systems, Application and Control of
MIL-P-18317	Plating, Black Nickel (Electrodeposited) on Brass, Bronze, or Steel
MIL-L-19538	Lacquer, Acrylic Nitrocellulose, Camouflage (for Aircraft use)
MIL-C-20218	Chromium Plating, Electrodeposited, Porous
MIL-P-20689	Plastic, Plastisol (for Coating Metallic Objects)
MIL-P-21563	Paint System, Fluorescent for Aircraft Application
MIL-P-21600	Paint System, Fluorescent, Removable, for Aircraft Application
MIL-P-22332	Paint, Priming, Exterior and Interior (for Ammunition)

MIL-P-22735	Film, Elastomeric, Fluorescent, for Weapon Systems
MIL-C-22750	Coating, Epoxy-polyamide
MIL-D-23003	Deck Covering Compound Nonslip, Lightweight
MIL-C-23217	Coating, Aluminum, Vacuum Deposited
DOD-C-23236	Paint Coating Systems, Steel Ship Tank, Fuel and Salt Water Ballast
MIL-P-23377	Primer Coating, Epoxy Polyamide, Chemical and Solvent Resistant
MIL-P-23408	Plating, Tin-Cadmium (Electrodeposited)
MIL-C-23422	Chromium Plating, (Electrodeposited)
MIL-I-24092	Insulating Varnish, Electrical, Impregnating, Solvent Containing
MIL-C-24441	Paint, Epoxy-polyamide, General Specification for
DOD-E-24607	Enamel, Interior, Nonflaming (Dry) Chlorinated Alkyd Resin
MIL-E-24635	Enamel, Silicone Alkyd Co-polymer
MIL-P-26915	Primer Coating, Zinc Dust Pigmented, for Steel Surfaces
MIL-P-27418	Plating, Soft Nickel (Electrodeposited), Sulfamate Bath
MIL-C-27725	Coating, Corrosion Preventive, for Aircraft Integral Fuel Tanks
MIL-P-38336	Primer Coating, Inorganic, Zinc Dust Pigmented, Self-Curing, for Steel Surfaces
MIL-A-40147	Aluminum Coating (Hot-Dip) for Ferrous Parts
MIL-M-45202	Magnesium Alloys, Anodic Treatment for
MIL-G-45204	Gold Plating (Electrodeposited)
MIL-P-45209	Palladium Plating (Electrodeposited)
MIL-I-46058	Insulating Compound, Electrical (for Coating Printed Circuit Assemblies)
MIL-L-46064	Lead Tin Alloy Coating (Electrodeposited)
MIL-P-46085	Rhodum Plating (Electrodeposited)
MIL-P-46105	Primer Coating, Weld-through Zinc-rich
MIL-C-46168	Coating, Aliphatic Polyurethane, Chemical Agent Resistant
MIL-P-47141	Plating, Ternary Alloy (Electrodeposited)
MIL-P-47184	Plating, Nickel Tungsten, Electrodeposit on Aluminum Alloys, by Selective (Brush) Method
MIL-P-50002	Phosphate Coating Compounds for Phosphatizing Ferrous Metals
MIL-L-52043	Lacquer, Semi-gloss, Cellulose Nitrate
MIL-E-52835	Enamel, Modified Alkyd, Camouflage, Lusterless
MIL-E-52891	Enamel, Lusterless, Zinc Phosphate, Styrenated Alkyd Type
MIL-P-53022	Primer, Epoxy Coating, Corrosion Inhibiting, Lead & Chromate Free
MIL-P-53030	Primer Coating, Epoxy, Water Reducible, Lead & Chromate Free
MIL-P-53039	Coating, Aliphatic Polyurethane, Single Component, Chemical Agent Resistant

MIL-C-62218	Corrosion Preventive Compounds, Cold-Application (For New and Fielded Motor Vehicles and Trailers)
MIL-L-81352	Lacquer, Acrylic
MIL-C-81562	Coating, Cadmium, Tin-Cadmium, and Zinc (Mechanically Deposited)
MIL-C-81706	Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
MIL-P-81728	Plating, Tin Lead (Electrodeposited)
MIL-S-81733	Sealing and Coating Compound, Corrosion Inhibiting
MIL-C-81740	Coating, Aluminum and Aluminum Alloys (Metallic Compound Decomposition)
MIL-C-81751	Coating, Metallic Ceramic
MIL-C-81797	Coating, Inorganically Bonded Aluminum (Electrophdrectically deposited)
MIL-A-81801	Anodic Coating for Zinc and Zinc Alloys
MIL-C-83019	Coating, Polyurethane, for Protection of Integral Fuel Tank Sealing Compound
MIL-C-83445	Coating System, Polyurethane Non-yellowing, White, Rain Erosion Resistant Thermally Reflective
MIL-C-83231	Coatings, Polyurethane, Rain Erosion Resistant for Exterior Aircraft and Missile Plastic Parts
MIL-C-83286	Coating, Urethane, Aliphatic Isocyanate, for Aerospace Application
MIL-C-83488	Coating Aluminum Ion Vapor Deposited
MIL-C-87115	Coating, Immersion Zinc Flake/Chromate Dispersion

STANDARDS

MILITARY

MIL-STD-171	Finishing of Metal and Wood Surfaces
MIL-STD-186	Protective Finishing for Army Missile Weapons Systems
MIL-STD-193	Finishing Procedures, Tactical Vehicles (Tracked and Wheeled)
MIL-STD-194	Systems for Painting and Finishing Fire-Control Materiel
MIL-STD-753	Corrosion Resistant Steel Parts, Sampling, Inspection, and Testing or Surface Passivation
MIL-STD-808	Finishes, Protective, and Codes for Finishing Schemes for Ground Support Equipment
MIL-STD-865	Brush Plating, Electro Deposition
MIL-STD-868	Nickel Plating, Low Embrittlement, Electrodeposition
MIL-STD-870	Cadmium Plating, Low Embrittlement, Electrodeposition
MIL-STD-1303	Painting of Naval Ordnance Equipment
MIL-STD-1501	Chromium Plating, Low Embrittlement, Electrodeposition
MIL-STD-1503	Preparation of Aluminum Alloys for Surface Treatments and Inorganic Coatings
MIL-STD-2000	Standard Requirements for Soldered Electrical and Electronic Assemblies

HANDBOOKS

MILITARY

MIL-HDBK-132 Protective Finishes for Metal and Wood Surfaces

(Unless otherwise indicated, copies of specifications, standards, and handbooks, are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following documents forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the latest issue of the DoDISS, and supplement thereto.

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

AMS 2400	Cadmium Plating
AMS 2401	Cadmium Plating, Low Hydrogen Content Deposit
AMS 2402	Zinc Plating
AMS 2403	Nickel Plating, General Purpose
AMS 2404	Electroless Nickel Plating
AMS 2405	Electroless Nickel Plating Low Phosphorus
AMS 2406	Chromium Plating, Hard Deposit (DoD Adopted)
AMS 2407	Chromium Plating, Porous
AMS 2408	Tin Plating
AMS 2410	Silver Plating, Nickel Strike, High Bake (DoD Adopted)
AMS 2411	Silver Plating, for High Temperature Applications
AMS 2412	Silver Plating, Copper Strike, Low Bake (DoD Adopted)
AMS 2414	Lead Plating
AMS 2415	Lead and Indium Plating (DoD Adopted)
AMS 2418	Copper Plating (DoD Adopted)
AMS 2419	Cadmium-Titanium Alloy Plating (DoD Adopted)
AMS 2422	Gold Plating, Electronic Applications
AMS 2423	Nickel Plating, Hard Deposit
AMS 2424	Nickel Plating, Low Stressed Deposit (DoD Adopted)
AMS 2425	Gold Plating, for Thermal Control (DoD Adopted)
AMS 2426	Cadmium Plating, Vacuum Deposition
AMS 2468	Hard Coating Treatment of Aluminum Alloys
AMS 2469	Process and Performance Requirements for Hard Coating Treatment of Aluminum Alloys (DoD Adopted)
AMS 2470	Anodic Treatment of Aluminum Alloys, Chromic Acid Process
AMS 2471	Anodic Treatment of Aluminum Alloys, Surfacing Acid Process, Undyed Coating

AMS 2472	Anodic Treatment of Aluminum Base Alloys, Sulfuric Acid Process, Dyed Coating
AMS 2473	Chemical Treatment for Aluminum Alloys, General Purpose Coating
AMS 2474	Chemical Treatment for Aluminum Base Alloys (Low Electrical Resistance Coating)
AMS 2475	Protective Treatments, Magnesium Base Alloys
AMS 2476	Electrolytic Treatment, Magnesium Base Alloys, Alkaline Type, Full Coating
AMS 2478	Anodic Treatment of Magnesium Base Alloys, Acid Type, Full Coat
AMS 2479	Anodic Treatment of Magnesium Base Alloys, Acid Type, Thin Coat
AMS 2480	Phosphate Treatment, Paint Base
AMS 2481	Phosphate Treatment, Anti–Chafing

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale PA 15096).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A123	Zinc (Hot–Galvanized) Coatings on Products Fabricated for Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip, Specification for (DoD Adopted)
ASTM A153	Zinc Coating (Hot Dip) on Iron and Steel Hardware, Specification for (DoD Adopted)
ASTM A164	Electrodeposited Coatings of Zinc on Steel, Specification for
ASTM A165	Electrodeposited Coatings of Cadmium on Steel, Specification for
ASTM A380	Cleaning and Descaling Stainless Steel Parts, Equipment and Systems, Recommended Practice for (DoD Adopted)
ASTM A623	Tin Mill Products, General Requirements for (DoD Adopted)
ASTM A624	Tin Mill Products, Electrolytic Tin Plate Single Reduced (DoD Adopted)
ASTM A626	Tin Mill Products, Electrolytic Tin Plate Double Reduced (DoD Adopted)
ASTM A630	Determination of Tin Coating Weights for Hot–Dip & Electrolytic Tin Plate (DoD Adopted)
ASTM B177	Chromium Plating on Steel for Engineering Use, Recommended Practice for
ASTM B200	Electrodeposited Coatings of Lead and Lead–Tin Alloys on Steel and Ferrous Alloys, Specification for
ASTM B201	Chromate Coatings on Zinc and Cadmium Surfaces, Recommended Practice for Testing
ASTM B253	Preparation of and Electroplating on Aluminum Alloys by the Zincate Process, Recommended Practice for

ASTM B454	Mechanically Deposited Coatings of Cadmium and Zinc on Ferrous Metals, Specification for
ASTM B456	Electrodeposited Coatings of Nickel/Cadmium, Specification for
ASTM B488	Electrodeposited Coatings of Gold for Engineering Uses, Specification for (DoD Adopted)
ASTM B499	Coating Thicknesses by the Magnetic Method, Nonmagnetic Coatings on Magnetic Basis Metals, Measurement of (DoD Adopted)
ASTM B545	Electrodeposited Coatings of Tin, Specification for (DoD Adopted)
ASTM B579	Electrodeposited Coatings of Tin–Lead Alloy (Solder Plate), Specification for (DoD Adopted)
ASTM B580	Anodic Oxide Coatings on Aluminum, Specification for (DoD Adopted)
ASTM B633	Zinc on Iron & Steel, Electrodeposited Coatings of (DoD Adopted)
ASTM D2092	Preparation of Zinc–Coated Steel Surfaces for Painting, Recommended Practices for (DoD Adopted)

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia PA 19103–1187.)

(Non–Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this handbook and those of MIL–STD–171, specifications or drawings, the requirements of drawings should have first preference, those of specifications next, MIL–STD–171 next, and those of this handbook last.

2.4 Controlling specifications and handbooks. See appendix for controlling material and process specifications and handbooks.

3. DEFINITIONS

NOT APPLICABLE

4. GENERAL REQUIREMENTS

4.1 MATERIALS. All materials used should conform to the requirements of the applicable specification. Types, classes, grades, etc., should be specified by the acquisition activity.

5. DETAILED REQUIREMENTS

5.1 Finish Codes. Codes which may be specified on Engineering drawings are presented in table I through III. The tables cover the following types of finishes:

Type I. Chemical Coatings
Type II. Metallic Coatings
Type III. Organic Coatings

5.2 Supplementary notes. Supplementary notes may be required on the drawings to complete the identification of a finish when a specification offers options. Not every combination is covered by code in this handbook. Drawing notes should be prepared as required.

5.3 Manufacturers' options. If the finish of a part is to be specified by the manufacturer, the basic code for a specification (e.g. Code 1010 for Cadmium Plate in accordance with QQ-P-416) may be specified. The degree of freedom of selection of types, classes, etc., by the designer or manufacturer, however, is still governed by the system specifications or the particular material specification.

5.4 Multiple finish. A drawing for a part or assembly may have to reflect more than one finish or a partial finish. Such a drawing should contain codes and notes to identify the finishes with the appropriate areas or zones.

5.5 Example codes

5.5.1 Actuator casing. An actuator casing of forged 2014-T6 aluminum alloy is to be reprocured for use on a weapon system requiring MIL-F-7179, type II protection. The part is interior to the aircraft. One code appropriate for this application is MIL-HDBK-1516, A-3105 with MIL-A-8625, class 1, noted on the drawing. In view of features and disadvantages of the three types under MIL-A-8625 it was determined that any type would be acceptable. Type II is the most likely to be supplied due to lowest cost. The coating will be sealed since this is required unless otherwise specified. Two coats of zinc chromate primer, TT-P-1757 are specified since this requirement conforms to the interior protection requirement of MIL-F-7179 (type II, class E).

5.5.2 Carbon steel fitting. A low strength, medium carbon steel special shaped fitting to be reprocured assembles to aluminum alloy airframe. An appropriate finish is MIL-HDBK-1516, 1012/3105 (cadmium plate, chromate treatment and two coats of primer).

5.5.3 Magnesium skin assembly. A skin assembly consists of AZ31B–H24 magnesium skin to which 2024–T3 aluminum stiffeners are riveted. It will be necessary to differentiate between finish for magnesium and finish for aluminum as follows:

a. Finish for aluminum alloy parts should be MIL–HDBK–1516, CC/3105.

b. Finish for magnesium alloy skin should be MIL–HDBK–1516, NB/3104, on interior surface and NB/2101 Color No. 16473 in accordance with FED–STD–595 on exterior surface.

c. Treat faying surfaces in accordance with MIL–F–7179.

5.6 Table arrangement. Tables I, II, and III provide codes for specific materials and processes. The first column CODE identifies the code letter or number of a material/process. The NOMENCLATURE column cites the controlling specification title or identifies the material/process. The specification/handbook alpha–numeric identification is cited in the column CONTROLLING SPECIFICATION. In some cases, classification (types, grades, classes) of the specification is also coded. If specification classification is not coded, type, grade, or class may be added to the code or added to notes. The FEATURES column briefly notes information about the material/process, its intended use, and application. The final column SYSTEM SPECIFICATION identifies the system specifications that call out the treatment or coating and provide, as applicable, the system specification coding scheme.

6. NOTES

6.1 Subject term (key word) listing.

Aluminum alloys
Anodic coating
Black oxide coating
Cadmium plating
Chemical coatings
Magnesium Alloy
Metallic coatings
Phosphate coatings
Organic coatings

6.2 Changes from previous issue. Vertical lines or asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Army – MR
Air Force – 11

Review Activity
Air Force – 99

Preparing Activity:
Air Force – 11

(Project MFFP–0578)

TABLE 1. Chemical Coatings

Code	Nomenclature	Controlling Specifications	Features	System Specifications
A	Anodic Coatings for Aluminum Alloy	MIL–A–8625	Aluminum oxide coatings that are formed by an electrochemical process. and provides base for paints and dry film lubes. Imparts corrosion resistance. Required coatings for parts subject to erosion, abrasion and wear and for exterior surfaces exposed to sea water environment. Available dyed (class 2) or nondyed (class 1). Class 1 is furnished unless otherwise specified See Code C below for MIL–C–5541. Reference: MIL–HDBK–132A, Para 5.9 and 5.10 (ASTM B580) 1/	MIL–S–5002 MIL–STD–194A (Table VII) MIL–T–704J (3.2.2) MIL–STD–808A (D–350) MIL–F–14072C (E511)
		Type 1B	Chromic acid anodize. Uses a lower voltage (current density) process than the Type I to overcome the 5% copper, 7% silicon, or 7.5% total alloying elements limitations. AC	
AC		Type I	Chromic acid anodize. Not suitable for aluminum alloys containing over 5% copper, 7% silicon, or 7.5% total alloying elements. Best flexibility and least reduction of fatigue life of the three types. Coating thickness available from 0.005 to 0.3 mil. Required to be sealed unless otherwise specified. Reference: (ASTM B580, AMS 2470)	MIL–STD–171D (7.1) MIL–STD–186D (201) MIL–STD–193K (Table V) MIL–STD–194A (Table VII)

1/ ( ) indicates similar industry specifications.

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
AS		Type II	Sulfuric acid anodize. Heavier (higher density) coating than Type I or Type IB. Least expensive of the three types Coating thickness available from 0.05 to 1 mil. Coating thickness over 0.5 mil will have the same fatigue disadvantages as type III. Required to be sealed unless otherwise specified. Corrosion resistance of dyed (class 2) coatings may be improved by duplex sealing with sodium dichromate either during or after sealing with nickel acetate. Reference: ASTM B580, AMS 2471 for Class 1 AMS 2472 for Class 2	MIL–STD–171D (7.2) MIL–STD–186D (202) MIL–STD–193K (Table V) MIL–STD–194A (Table VII)
AH		(MIL–A–8625).	Replaces cancelled document MIL–C–60536	
AB		(MIL–A–8625)	Replaces cancelled document MIL–C–60539	
AW		MIL–A–8625 Type III	Hard anodize, produced by proprietary baths. Provides wear and abrasion resistance with best corrosion resistance of the three types. Sealing should be specified when both abrasion and corrosion resistance are required. Sealing should be disallowed for maximum degree of abrasion resistance.	MIL–STD–171D (7.5) MIL–STD–186D (207) MIL–STD–193K (Table V) MIL–F–14072C (E514).

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
AW		MIL–A–8625 Type III	Coating thickness available from 0.5 to 4 mils. Dimension building equals 1/2 coating thickness. Not recommended for use where restoration of dimensions due to wear is planned. *Coating will reduce fatigue strength.* Thick films are brittle and inflexible. Not suited for thin sheet. Reference: (ASTM B580, AMS 2468, and AMS 2469)	
C	Chemical Films for Aluminum Alloys	MIL–C–5541 MIL–C–81706	Chromate conversion coatings 1/ intended as corrosion preventive films for aluminum alloys. May be used in lieu of MIL–A–8625 anodic films where: 1) resistance to wear, abrasion, or erosion are not required. 2) Paint is to follow or where electrical conductivity is essential. Approved for use in touchup damaged MIL–A–8625 anodic coatings. Furnished as liquid (form I), powder (form II), or ready to use premix (form III), under MIL–C–81706.* Solution may be applied by spray brush, or dip (methods A, B, or C).	MIL–S–5002 MIL–STD–193K (Table IV) MIL–STD–808A(D–351) MIL–T–704J (3.2.2) MIL–STD–171D (7.3)

1/ Conversion coatings do not possess the corrosion resistance of anodic coatings.

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
C		MIL–C–5541 MIL–C–81706	Reference: MIL–HDBK–132A, Para. 4.2.1, 4.4.4, and 12.3.5. (ASTM B449)	MIL–STD–171D (7.3.1) MIL–STD–186D (208) MIL–F–14072C(E513)
CC		Class 1A	Corrosion preventive film for painted or unpainted surfaces. Service temperature limit of the unpainted film is 200°F, and of the painted film 350°F. Reference: (AMS 2473)	MIL–STD–171D (7.3.1) MIL–STD–186D (208) MIL–F–14072C(E513)
CR		MIL–C–5541 Class 3	Corrosion preventive film thinner than the class 1A coatings which yields lower electrical resistance (5000 micro–ohms per square inch maximum) Reference: (AMS 2474)	MIL–STD–171D (7.3.3) MIL–STD–14072C (E512)
L	Linseed Oil, Boiled (For use in Organic Coating)	(AA–371)	Replaces cancelled document TT–L–190	MIL–STD–171D (29.7) MIL–HDBK–1516B
M	Anodic Coatings for magnesium alloys	MIL–M–45202	Anodic treatments for magnesium alloys, intended for parts subject to abrasion, erosion, or wear. (HAE) Reference: MIL–HDBK–132A, Para 5.3 and 13.	MIL–S–5002 MIL–STD–171D (8.1) MIL–STD–193K (Table V) MIL–STD–194A (Table VIII)
MA		Type II Class A	AMS 2476	

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
MC		Type I, Class C	Light Green coating with dimensional buildup of approximately 0.2 mil. Most applicable to sheet magnesium. Best base for painting. (DOW 17) Reference: (AMS 2479)	MIL-STD-171D (8.1.1)
MH		Type II, Class D	Dark Green coating with dimensional buildup of approximately 1.2 mil. Most applicable to castings, extrusion, and wrought parts due to hardness and inflexibility. Resists erosion, abrasion, and wear. (Dow 17) Reference: (AMS 2478)	MIL-STD-171D (8.1.2.2)
		Type III Class A, Grade 3		MIL-STD-171D (8.1.2.1)
MZ	Anodic Coatings for Zinc and Zinc Alloys	MIL-A-81801	Reference: MIL-HDBK-132A, Para 5.13.	MIL-STD-186D(224)
N	Chemical Films for Magnesium Alloys	MIL-M-3171	Chemical conversion coatings for magnesium alloys. Normally authorized on Air Force Weapon systems only for touchup of anodic coatings or for temporary protection.	MIL-S-5002 MIL-STD-186D(209) MIL-STD-808A (5.4.2)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
N	Chemical Films for Magnesium Alloys	MIL–M–3171	All types, except type I, provide no appreciable dimensional change. Suitable for close to tolerance surfaces. Reference: MIL–HDBK–132A, Para 4.5 and 13.3 (AMS 2475)	
NA		MIL–M–3171 Type I	Chrome pickle treatment for all magnesium alloys. (DOW 1, MACroMAG 101). Poor paint base Temporary protection only. Electrically conductive; suitable for electrical bonding. Not suitable for close tolerance surfaces. Remove approximately 0.6 mil of metal from each surface. Touchup treatment for all types of magnesium treatments. May be brushed applied, though tank application gives best results. Temperature limit, 450°F.	MIL–STD–171D (8.2) MIL–STD–194A (Table VIII) MIL–T–704J (3.2.3) MIL–STD–193K (Table II)
NB		Type III	Dichromate treatment (Dow 7, MACroMAG D–7). Best paint base and best corrosion protection of the MIL–M–3171 treatments. Not suitable for magnesium alloys EK30A, EK41A, HM21A, HM31A, LA141A, HK31A, and MIA. Temperature limit, 550°F.	MIL–STD–171D (8.4) MIL–STD–194A (Table VIII) MIL–STD–808 (F–400, F–401) MIL–T–704J (3.2.3) MIL–STD–193K (Table II)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
NC		MIL–M–3171 Type IV	Galvanic anodic treatment, (Dow 9, MACroMAG D–9) For all alloys not treatable by Type III though suitable for all alloys. Blackening treatment. Very good paint base. Requires electrochemical (bath) deposition. Temperature 500°F	MIL–STD–171D (8.5) MIL–STD194A (Table VIII)
ND		Type VI	Chromic acid brush–on treatment. (Dow 19, MACroMAG D–19). For temporary protection and touchup of all magnesium treatments. Generally used for parts too large to be immersed for MIL–M–45202 or MIL–M–3171. Type IV, treatments. Preferred over Type I for brush–on or touchup due to less harmful effect of residual solution lower toxicity, lower cost, and less critical application procedures. Temperature limit 450°F	MIL–STD–171D (8.6)
NE		Type VII	Fluoride anodize plus corrosion preventive chromate post treatment. (Magnesium Electron). Replaces certain cleaning and pickling operations. Good base for other treatments, such as Type III.	MIL–STD–171D (8.8)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
NF		M-3171 Type VIII	Chromate treatment. (Iridite 15). Alternate treatment for types I, III, VI, or VII when approved by the procuring activity. Applied by dip or brush. Temperature limit, 550°F.	MIL-STD-171D (8.9)
Q	Phosphate Coatings for ferrous metals	TT-C-490	Steel parts to be phosphated and painted shall receive phosphate treatment conforming to TT-C-490, Type I. Steel parts to be given supplementary oil or preservative shall be treated in accordance with MIL-P-16232. Phosphate processes are embrittling to high strength steels. Reference: MIL-HDBK-132A, Para. 4.3 10.2, 10.3, (AMS 2473, AMS 2480, AMS 2481)	MIL-S-5002 MIL-STD-171D (Table V) MIL-STD-193K (Table V) MIL-STD-194A (Table VI; Item 4) MIL-T-704J (3.2.1) MIL-STD-808A (F-100) MIL-F-14072C(ER) (P211)
QA	Zinc phosphate	TT-C-490 Type I	Zinc phosphate treatment for parts which will receive subsequent organic coatings. Best of the phosphate as a paint base and corrosion preventive. Inhibits underpaint corrosion. Coating weights – 150 mg/ft^2 for spray application and 300 mg/ft^2 for immersion application (minimum values).	MIL-S-5002 MIL-STD-171D (5.1.1) MIL-STD-186D(210) MIL-T-704J (3.2.1)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
QM	Manganese Phosphate	DOD–P–16232 Type M (MIL–P–50002)	Heavy manganese phosphate coating intended primarily as a lubricant or preservative retainer, wear resistant Commonly used on bearing surfaces to facilitate break–in and to maintain lubricity. More resistant than zinc phosphate coating to alkaline environment. Serviceability of the coating without supplementary treatment is poor. Chemically converted (Class 4) coatings provides improved corrosion prevention. Coating weight – 1500 mg/ft^2 minimum. (Thickness – 0.2 to 0.4 mil). Temperature limit, 250°F.	MIL–S–5002 MIL–STD–171D (5.3.1) MIL–STD–193K (Table V)
QMA		Type M, Class 1	Manganese phosphate, with preservative oil treatment as specified by the procuring activity.	MIL–STD–171D (5.3.1.1)
QMB		Type M, Class 2	Manganese phosphate, with lubricating oil in accordance with MIL–L–3150	MIL–STD–171D (5.3.1.2) MIL–F–14072C(E211)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
QMC		DOD-P-16232 Type M, Class 3	Manganese phosphate, no supplementary treatment (for special applications when supplementary treatment cannot be used).	
QMD		Type M, Class 4A	Manganese phosphate, chemically converted, no supplementary treatment.	—
QME		Type M, Class 4B	Manganese phosphate, chemically converted, with lubricating oil in accordance with MIL-L-3150.	MIL-F-14072C(E213)
QMF		Type M, Class 4C	Manganese phosphate, chemically converted, dyed to color specified.	—
QMG		Type M, Class 4D	Manganese phosphate, chemically converted, dyed to color specified and in accordance with MIL-L-3150.	MIL-F-14072C(E213)
QMH		Type M, Class 4E	Manganese phosphate, chemically converted, with supplementary treatment as specified by the procuring activity.	—
QZ	Zinc Phosphate	MIL-P-16232 Type Z (MIL-P-5002)	Heavy zinc phosphate coating to provide porous base for lubricants and preservatives. Commonly specified to facilitate cold drawing of parts or for parts with both painted and lubricated surfaces Less wear resistant and less resistant to alkaline environment than manganese phosphate.	MIL-S-5002 MIL-STD-171D (5.3.2) MIL-STD-193K (Table V) MIL-STD-194A (Table VI, Item 4)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
QZ		MIL–P–16232 Type Z (MIL–P–50002)	Serviceability of the coating without supplementary treatment is poor. Chemically converted (Class 4) coatings provide improved corrosion prevention. Coating weight – 1000 mg/ft^2 minimum (0.2 to 0.6 mil thickness) usually not attainable by spray application. Temperature limit, 200°F.	
QZA		Type Z, Class 1	Zinc phosphate with preservative oil treatment as specified by the procuring activity.	MIL–STD–171D (5.3.2.1)
QZB		Type Z, Class 2	Zinc phosphate with corrosion preventive compound, MIL–C–16173. Grade 1	MIL–STD–171D (5.3.2.2) MIL–F–14072C(E212)
QZC		Type Z, Class 3	Zinc phosphate no supplementary treatment	MIL–STD–171D (5.3.2.3)
QZD		Type Z, Class 4A	Zinc phosphate chemically converted no supplementary treatment	—
QZE		Type Z, Class 4B	Zinc phosphate chemically converted with preservative oil or high melting wax.	MIL–F–14072C(E214)
QZF		Type Z, Class 4C	Zinc phosphate chemically converted dyed to color specified.	MIL–F–14072C(E214)
QZG		Type Z, Class 4D	Zinc phosphate chemically converted dyed to color specified with preservative or high melting wax.	MIL–F–14072C(E214) MIL–STD–171D (5.3.2.4)
QZH		Type Z, Class 4E	Zinc phosphate chemically converted with supplementary treatment as specified by the procuring activity.	MIL–F–14072C(E214)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
P	Passivation	ASTM A 380	Required treatment for 200, 300, and 400 series corrosion resisting steels. Specific passivation process is to be specified or approved by procuring activity. Reference: MIL–HDBK–132A, Para 4.8. For type I surfaces, 200 and 400 series alloys will need further protective treatment.	MIL–S–5002 MIL–STD–171D (5.4.1, 5.4.2) MIL–STD–186D(216) (MIL–STD–193K) (Table V) MIL–T–704J (3.2.6) MIL–STD–808A (D–200) MIL–F–14072C (E300)
R	Black Oxide Coating for Ferrous Metals	MIL–C–13924	Black Oxide coating for ferrous metals which may be used where a black surface and low light reflection is required. Limited value as a corrosion preventive treatment. Use only under mildly corrosive conditions. Shall be used only on surfaces continually coated with oil and not exposed to severe corrosive conditions. Particularly useful on close tolerance surfaces where no dimensional change is required. Should be used with a supplementary preservative such as MIL–C–16173, Grade 3 or VV–L–800.	MIL–S–5002 MIL–STD–171D (3.3) MIL–STD–186D (214) MIL–STD–193K (Table V) MIL–STD–194A (Table VI, Item 3)

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
R		MIL–C–13924	Not suitable as a paint base. Use TT–C–490, Type I. Reference: MIL–HDBK–132A, Para 4.4.1, 4.4.2	
RA		Class 1	Alkaline oxidizing process for wrought iron, plain carbon and low alloys steels.	MIL–STD–171D(3.3.1)
RC		Class 3	Fused salt oxidizing process for corrosion resistant steels with a draw temperature above 900°F.	MIL–STD–171D(3.3.3)
RD		Class 4	Alkaline oxidizing process for 300 series corrosion resistant steels.	MIL–STD–171D(3.3.4)
S	Black Oxide Coating for copper alloys	MIL–F–495	Black chemical finish for copper alloys for decorative or corrosion preventive purposes. Paint base for organic finishes, oils and waxes. Not authorized for use on food service and water supply items. Reference: MIL–HDBK–132A, Para 4.4.3	MIL–STD–171D (3.2) MIL–STD–186D (213) MIL–STD–193K (Table V) MIL–STD–194A (Table VI, Item 2) MIL–F–14072C (E311)
T	Fungus Resistant Treatments for Nonmetallics		Treatment:	MIL–STD–186D
TA	Cork	MIL–T–12664	Fungus	Code #220
TB	Rope	MIL–T–16070	Cancelled	Code #221

TABLE I. Chemical Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
TC	Cotton Duck webbing, and sewed material	CCC–D–950	Mildew	Code #222
TD	Paper	MIL–T–21330	Cancelled.	Code #223
U	Zincate treatment for aluminum	ASTM B253 MIL–STD–1503	Preplate for aluminum. MIL–HDBK–132A: "Although it is possible to plate directly on it, aluminum is usually zincate treated to initiate electroless nickel plating from an acid bath." (page 124)	MIL–STD–186D Code #215
Z	Chemical Treatment for zinc surfaces and no cadmium surfaces	(ASTM D2092 MIL–C–17711)	Replaces cancelled document MIL–T–12879 Prepaint and corrosion inhibitive. Phosphate (type I) or Chromate (type II). Reference: MIL–HDBK–132A, Para 4.2.2 Section II (ASTM B201, ASTM D2092)	MIL–STD–171D (6.1) MIL–STD–193K (Table V) MIL–STD–808A (5.3.2.2.2) MIL–F–14072C (E611, E612)

TABLE II. Metallic Coatings.

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1000	METALLIC COATINGS		NOTE: *Because of strict effluent regulations, cadmium must be avoided when an alternative material may be used.	
1010	Cadmium Plating Electrodeposited	QQ-P-416	Electrodeposited coating to provide corrosion to ferrous parts. Shall not be used on steels heat treated above 180,000 psi. Cadmium is anodic to steel and sacrifices itself to protect the base metals. Supplementary treatments are provided to retard corrosion of the cadmium. Cadmium requires treatment (conversion coating) when it is to be painted or when improved corrosion resistance is required in the unpainted condition. Commonly plated on steel or copper as a preventive of galvanic corrosion with dissimilar metals (e.g., aluminum). Service temperature limit is 450°F. Reference: MIL-HDBK-132A, Para 3.6 ASTM A165; AMS 2400; AMS 2401; AMS 2419; see also Code 1040.	MIL-S-5002
1011		QQ-P-416 Class 1, Type I	0.0005 inch thick, as plated.	MIL-STD-171D (1.1.1.1) MIL-STD-186D (301) MIL-STD-194A (Table V, Item 1)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1012		QQ–P–416, Class 1 Type II	0.0005 inch thick, with supplementary chromate treatment.	MIL–STD–171D (1.1.2.1) MIL–STD–186D (304) MIL–STD–193K (Table IV) MIL–STD–808A (P–114, P–115) MIL–F–14072C (M224, M225)
1013		Class 1, Type III	0.0005 inch thick, with supplementary phosphate treatment.	MIL–STD–171D (1.1.3.1) MIL–STD–186D (307) MIL–STD–808A (P–114) MIL–F–14072C (M224)
1014		Class 2, Type I	0.0003 inch thick, as plated	MIL–STD–171D (1.1.1.2) MIL–STD–186D (302)
1015		Class 2, Type II	0.0003 inch thick, with supplementary chromate treatment	MIL–STD–171D (1.1.2.2) MIL–STD–186D (305) MIL–STD–193K (Table IV) MIL–STD–808A (P–162) MIL–F–14072C (M262)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1010	Cadmium Plating (continued)	QQ–P–416		
1016		Class 2, Type III	0.0003 inch thick, with supplementary phosphate treatment.	MIL–STD–171D (1.1.3.2) MIL–STD–186D (308) MIL–F–14072C (M261)
1017		Class 3, Type I	0.0002 inch thick, as plated	MIL–STD–171D (1.1.1.3) MIL–STD–186D (303) MIL–STD–808A (P–170)
1018		Class 3, Type II	0.0002 inch thick, with supplementary chromate treatment.	MIL–STD–171D (1.1.2.3) MIL–STD–186D (306) MIL–STD–193K (Table IV) MIL–STD–808A (P–161)
1019		Class 3,	0.0002 inch thick, with supplementary phosphate treatment.	MIL–STD–171D (1.1.3.3) MIL–STD–186D (309)
1020	Cadmium Coating Vacuum deposited	MIL–C–8837	Specified for steel parts that would be embrittled (hydrogen embrittlement) by the electrodeposition process. Used on steel parts having a tensile strength of 220,000 psi or above. Reference: MIL–HDBK–132A, Para 6.4; (AMS 2426)	MIL–S–5002

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1021		Class 1, Type I	0.0005 inch thick, without supplementary treatment.	MIL–STD–171D (1.1.4.1) MIL–STD–186D (310)
1020	Cadmium Coating (continued)	MIL–C–8837		
1022		Class 1, Type II	0.0005 inch thick, with supplementary chromate treatment.	MIL–STD–171D (1.1.5.1) MIL–STD–186D (313)
1023		Class 1, Type III	0.0005 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	MIL–STD–171D (1.1.6.1) MIL–STD–186D (316)
1024		Class 2, Type I	0.0003 inch thick, without supplementary treatment.	MIL–STD–171D (1.1.4.2) MIL–STD–186D (311)
1025		Class 2, Type II	0.0003 inch thick, with supplementary chromate treatment.	MIL–STD–171D (1.1.5.2) MIL–STD–186D (314)
1026		Class 2, Type III	0.0003 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	MIL–STD–171D (1.1.6.2) MIL–STD–186D (317)
1027		Class 3, Type I	0.0002 inch thick, without supplementary treatment.	MIL–STD–171D (1.1.4.3) MIL–STD–186D (312)
1028		Class 3, Type II	0.0002 inch thick, with supplementary chromate treatment.	MIL–STD–171D (1.1.5.3) MIL–STD–186D (315)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1029		Class 3, Type III	0.0002 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	MIL–STD–171 (1.1.6.3) MIL–STD–186D (318)
1030	Cadmium Coating Mechanically Deposited	MIL–C–81562 Material C	Mechanically deposited cadmium by impacting (peen plating). Intended for use as protective on ferrous parts. Optional coating for electroplated cadmium, QQ–P–416, and vacuum deposited cadmium, MIL–C–8837, when approved. Reference: MIL–HDBK–132A, Para 6.7; ASTM B454	MIL–S–5002 MIL–STD–171D (1.1.7)
1031		Class 1, Type I	0.0005 inch thick, without supplementary treatment.	—
1032		Class 1, Type II	0.0005 inch thick, with supplementary chromate treatment.	MIL–STD–186D (363) MIL–STD–193K (Table IV)
1033		Class 1, Type III	0.0005 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	—
1034		Class 2, Type I	0.0003 inch thick, without supplementary chromate treatment.	—
1035		Class 2, Type II	0.0003 inch thick, with supplementary treatment.	MIL–STD–186D (364) MIL–STD–193K (Table IV)
1036		Class 2, Type III	0.0003 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	—

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1030	Cadmium Coating Mechanically	MIL–C–81562 Material C		
1037		Class 3, Type I	0.0002 inch thick, without supplementary treatment.	—
1038		Class 3, Type II	0.0002 inch thick, with supplementary chromate treatment.	MIL–STD–186D (365) MIL–STD–193K (Table IV)
1039		Class 3, Type III	0.0002 inch thick, with supplementary phosphate treatment. (TT–D–490, type I).	—
1040	Cadmium Plating Low Embrittlement Electrodeposition	MIL–STD–870	Low embrittlement process for cadmium plating of high–strength steels. Reference: MIL–HDBK–132A, Para 3.6; see Code 1030.	MIL–STD–186D (358)
1045	Aluminum Coating Hot dip, for ferrous parts	MIL–A–40147	Cancelled.	MIL–STD–171D (1.12.1) MIL–STD–186D (369) MIL–STD–193K (Table IV)
1046	Coating, Aluminum and aluminum alloys, Metallic compound decomposition.	MIL–C–81740	Reference: MIL–HDBK–132A, Para 6.1.3	MIL–STD–186D (370)
1047		Class 1 Type I	0.0005 inch thick (type I as coated)	

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1046	Coating Aluminum and aluminum alloys (continued)	MIL–C–81740		
1048		Class 2 Type I	0.0003 inch thick	
1049		Class 3 Type I	0.0002	
1050		Class 4 Type I	0.0001	MIL–STD–808A
1051		Class 1 Type II	0.0005 inch thick	
1052		Class 2 Type II	0.0003	
1053		Class 3 Type II	0.0002	
1054		Class 4 Type II	0.0001	MIL–STD–193K (Table IV)
1055		Class 1 Type III	0.0005 inch thick	
1056		Class 2 Type III	0.0003	
1057		Class 3 Type III	0.0002	
1058		Class 4 Type III	0.0001	

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1059	Coating Aluminum Inorganically bonded, electrophoretically deposited.	MIL–C–81797 Class 1 Class 2	—	MIL–STD–186D (371)
1060	Aluminum Coating Vacuum deposited	MIL–C–23217	Vacuum deposited aluminum coating intended as a protective coating on metal parts Specified for steel parts that would be embrittled (hydrogen embrittlement) by an electrodeposition process. Coating is porous and will not protect against hydrogen embrittlement in service. Also used to provide corrosion resistance to high strength aluminum alloys. Temperature limit, 900°F. Reference: MIL–HDBK–132A, Para 6.4.	MIL–S–5002 MIL–STD–171D (1.12.2) MIL–STD–193K (Table IV)
1061		Class 1	0.0001 inch thick	MIL–STD–186D (367) MIL–STD–193K (Table IV)
1062		Class 2	0.0002 inch thick	MIL–STD–186D (368)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1065	Aluminum Coating Ion Vapor Deposited	MIL–C–83488	IVD process —	—
1066		Class 1 Type I	0.0010 inch thick type I as coated	—
1067		Class 2 Type I	0.0005	
1068		Class 3 Type I	0.0003	
1069		Class 1 Type II	0.0010 inch thick type II with supplementary chromate treatment	
1070		Class 2 Type II	0.0005	
1071		Class 3 Type II	0.0003 inch thick	
1150	Chromium Plate, Electrodeposited	QQ–C–320	Chromium plating used for decorative or industrial applications. Specified for surfaces subject to wear, abrasion, or erosion. Reference: MIL–HDBK–132A, Para 3.4. (ASTM B177; AMS 2046) See code 1170.	MIL–S–5002 MIL–STD–171D (1.2) MIL–STD–194A (Table V, Item 2) MIL–STD–808A (P–106)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1150	Chromium Plate (continued)	QQ-C-320		
1151		Class 1	Decorative plating.	MIL-STD-171D (1.2.1)
1152		Class 1 Type I	Decorative plating, bright finish	MIL-STD-171D (1.2.1.1) MIL-STD-186D (319)
1153		Class 1 Type II	Decorative plating, satin finish	MIL-STD-171D (1.2.1.2)
1154		Class 2	Engineering plating.	MIL-STD-171D (1.2.2) MIL-STD-186D (320) MIL-STD-193K (Table IV)
1155		Class 2a	Engineering plating on parts applied as specified by the procuring agency.	MIL-STD-171D (1.2.2.1)
1156		Class 2b	Engineering plating on parts below Rockwell C40 hardness, designed for limited life under dynamic loads.	MIL-STD-171D (1.2.2.2)
1157		Class 2c	Engineering plating on parts below Rockwell C40 hardness, designed for unlimited life under dynamic loads .	MIL-STD-171D (1.2.2.3)
1158		Class 2d	Engineering plating on parts, Rockwell C40 hardness or above, designed for limited life under dynamic loads.	MIL-STD-171D (1.2.2.4)
1159		Class 2e	Engineering plating on parts,Rockwell C40 hardness or above, designed for unlimited life under dynamic loads.	MIL-STD-171D (1.2.2.5)
1160	Chromium Plating, Black	MIL-C-14538	MIL-HDBK-132A, Para 3.5	MIL-STD-171D (1.2.4) MIL-STD-186D (322) MIL-STD-193K (Table IV)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1161	Chromium Plating, Electrodeposited, Porous	MIL–C–20218	For surfaces operating in lubricating oil. Reference: MIL–HDBK–132A, Para 3.4 (AMS 2407)	MIL–STD–171D (1.2.5) MIL–STD–186D (323) (Table IV)
1162		Type I	Channel porosity	MIL–STD–193K (Table IV)
1163		Type II	Pin–point porosity.	
1164		Type III	Intermediate.	
1165		Type IV	Grit blast.	
1170	Chromium Plating, Low Embrittlement	MIL–STD–1501	Undercoat of nickel must be used for corrosion protection. Reference: MIL–HDBK–132A, Para 3.4	MIL–STD–186D (357)
1171		Class 1 Type I	Crack free	
1172		Class 2 Type I	Limited cracking	
1173		Class 1 Type II	Crack free	
1174		Class 2 Type II	Limited cracking	
1180	Chromium Plating	MIL–C–23422		
1200	Nickel Plating, Electrodeposited	QQ–N–290	Electroplated nickel used for corrosion protection and wear and abrasion resistance. Used to restore dimensions on worn surfaces. Serves as corrosion resistant undercoat for other functional. coatings which lack corrosion resistance. Minimizes dissimilar metal corrosion between mild steel and corrosion resistant steel or between stainless steels. Reference: MIL–HDBK–132A, Para 3.2; MIL–STD–868 (AMS 2423; AMS 2424)	MIL–S–5002 MIL–STD–171D (1.4) MIL–STD–193K (Table IV) MIL–STD–196A (Table V, Item 4) MIL–STD–808A (P–100)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1200	Nickel Plating, (continued)	QQ-N-290		
1201		Class 1	Decorative plating, grade (thickness) as specified by the procuring activity.	MIL-STD-171D (1.4.1) MIL-STD-186D (324-333)
1202		Class 2	Engineering plating, 0.003 inch minimum thickness after finishing.	MIL-STD-171D (1.4.2) MIL-STD-186D (334)
1203		Class 1	Ferrous Alloys	—
1210	Nickel Plating, Electroless	(AMS 2404 AMS 2405 AMS 2433)	Replaces cancelled document MIL-C-26074 Reference: MIL-HDBK-132A, Para 6.5, (AMS 2404, AMS 2405).	MIL-S-5002 MIL-STD-171D (1.4.3)
1211		Class 1	As coated condition, no subsequent heat treatment.	MIL-STD-171D (1.4.3.1)
1212		Class 2	Conditioned for improved hardness (heat treated)	MIL-STD-171D (1.4.3.2) MIL-STD-193K (Table IV)
—		Class 3	Aluminum alloys, non heat treatable.	MIL-STD-171D (1.4.3.3)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1210	Nickel Plating (continued)	(AMS 2404 AMS 2405, 2433)	Replaces cancelled document MIL–C–26074	
—		Class 4	Aluminum alloys, heat treatable	MIL–STD–171D (1.4.3.4)
1211		Class 1, Grade A	0.001 inch thick, iron and aluminum based alloys.	MIL–STD–186D (374)
1212		Class 2, Grade A	0.001 inch thick	MIL–STD–186D (375)
1213		Class 1, Grade B	0.0005 inch	MIL–STD–186D (374)
1214		Class 1, Grade C	0.0015 inch	MIL–STD–186D (378)
1215		Class 2, Grade B	0.0005 inch	MIL–STD–186D (378)
1216		Class 2, Grade C	0.0015 inch	MIL–STD–186D (378)
1217		Class 3, Grade A	0.001 inch	MIL–STD–186D (376)
1218		Class 3, Grade B	0.0005 inch	MIL–STD–186D (376)
1219		Class 3, Grade C	0.0015 inch	MIL–STD–186D (376)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1210	Nickel Plating (continued)	(AMS 2404 AMS 2405, 2433)	Replaces cancelled document MIL–C–26074	
1220		Class 4, Grade A	0.001 inch	MIL–STD–186D (377)
1221		Class 4, Grade B	0.0005 inch	
1222		Class 4, Grade C	0.0015 inch	
1225	Black Nickel Plating, Electrodeposited	MIL–P–18317	For blackening brass, bronze, or steel surfaces, 0.0002 inch minimum Reference: MIL–HDBK–132A, Para 3.3	MIL–STD–171D (1.4.4) MIL–STD–186D (337)
1226	Soft Nickel Plating	MIL–P–27418	Electrodeposited, sulfamate bath, 0.002 inch. *Reference: (AMS 2424)*	MIL–STD–186D (356)
1230	Nickel–Carbon Plating porous	MIL–N–55392	Cancelled.	MIL–STD–186D (380) MIL–STD–171D (1.2.5)
1240	Brush Plating	MIL–STD–865	Special electroplating procedure for coating parts or selected areas of parts without immersion tanks. Reference: MIL–HDBK–132A, Para 3.18	MIL–STD–186D (373)
1241	Cadmium			
1242	Chromium			
1243	Copper			
1244	Gold			

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1245 1246 1247 1248	Nickel Silver Tin Zinc	MIL-STD-865		
1250	Nickel Tungsten plating, brush	MIL-P-47184		
1300	Zinc Plating, Electrodeposited	(ASTM B633)	Replaces cancelled document QQ-Z-325.	MIL-S-5002 MIL-STD-171D (1.9) MIL-STD-194D (Table V, Item 9) MIL-STD-808A (P-116, P-163)
1301		Class 1 Type I	Without supplementary treatment 0.0010 inch thick.	MIL-STD-171D (1.9.1.1)
1302		Class 2 Type I	Without supplementary treatment 0.0005 inch thick.	MIL-STD-171D (1.9.1.2)
1303		Class 3 Type I	Without supplementary treatment 0.0002 inch thick.	MIL-STD-171D (1.9.1.3)
1304		Class 1 Type II	With supplementary chromate, 0.0010 inch thick.	MIL-STD-171D (1.9.2.1) MIL-STD-193K (Table IV)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1300	Zinc Plating, (continued)	(ASTM B633)	Replaces cancelled document QQ–Z–325.	
1305		Class 2 Type II	With supplementary chromate, 0.0005 inch thick.	MIL–STD–171D (1.9.2.2) MIL–STD–193K (Table IV) MIL–F–14072C (M226, M227)
1306		Class 3 Type II	With supplementary chromate, 0.0002 inch thick.	MIL–STD–171D (1.9.2.3) MIL–STD–193K (Table IV)
1307		Class 1 Type III	With supplementary phosphate, 0.0010 inch thick.	MIL–STD–171D (1.9.3.1)
1308		Class 2 Type III	With supplementary phosphate, 0.0005 inch thick.	MIL–STD–171D (1.9.3.2) MIL–F–14072C (M226)
1309		Class 3 Type III	With supplementary phosphate, 0.0002 inch thick.	MIL–STD–171D (1.9.3.3)
1310	Zinc Coating, Hot Galvanized, on Fabricated Parts	ASTM A123	Reference: HDBK–132A, Para 6.2	MIL–STD–193K (Table IV)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1320	Zinc Coating, Hot Dip	ASTM A153	Iron and Steel hardware. Reference: HDBK–132A, Para 6.2	MIL–STD–171D (1.9.4) MIL–STD–193K (Table IV)
1325	Coating, Zinc Flake/ Chromate Dispersion Immersion	MIL–C–87115	—	
1326		Class 1	0.00020 inch thick	
1327		Class 2	0.00025 inch thick	
1328		Class 3	0.00029 inch thick	
1350	Gold Plating Electrodeposited	MIL–G–45204	Gold plate is intended for high corrosion resistance in critical electrical applications. Thickness are available from 0.00002 to 0.00150 inch. Porosity and low corrosion protection of the substrate may occur with thickness under 0.0001 inch. Deposits of 0.0002 inch are normally used for electrical contact surfaces. Reference: HDBK–132A, Para 3.16 (ASTM B488, AMS 2422, AMS 2425).	MIL–S–5002 MIL–STD–171D (1.11) MIL–STD–193K (Table IV)
1351		Type I, Grade A	99.7 percent gold, Knoop hardness 90 maximum class is specified.	MIL–STD–171D (1.11.1) MIL–STD–186D (353–355)
1352		Type I, Grade B	99.7 percent gold, Knoop hardness 91–129, class as specified.	MIL–STD–171D (1.11.1)
1353		Type I, Grade C	99.7 percent gold, Knoop hardness 130–200, class as specified.	MIL–STD–171D (1.11.1)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1350	Gold Plating, (continued)	MIL–G–45204		
1354		Type II, Grade B	99.0 percent gold, Knoop hardness 91–129, class as specified.	MIL–STD–171D (1.11.2)
1355		Type II, Grade C	99.0 percent gold, Knoop hardness 130–200, class as specified.	MIL–STD–171D (1.11.2) MIL–STD–186D (340–343)
1356		Type II, Grade D	99.0 percent gold, Knoop hardness 201–and over, class as specified.	MIL–STD–171D (1.11.2)
1357		Type III, Grade A	99.9 percent gold, Knoop hardness 90 maximum, class as specified.	MIL–STD–171D (1.11.3)
1400	Silver Plating Electrodeposited	QQ–S–365	Silver coatings are used on electrical components and for improvement of bearing life. Has high electrical conductivity and fair solderability. Imparts high resistance to seizure and corrosion by oxidizing oils to bearings. Will tarnish as a result of reaction with sulfur. This is particularly severe in industrial atmospheres. Porosity and low corrosion protection of the substrate may occur with thickness under 0.001 inch. Specification requires 0.0005 inch silver applied over nickel or copper base coating unless otherwise specified. Supplementary chromate treatment increases tarnish resistance. Reference: MIL–HDBK–132A, Para 3.10 AMS 2410; AMS 2411; AMS 2412.	MIL–S–5002 MIL–STD–171D (1.7) MIL–STD–193K (Table IV) MIL–STD–194A (Table V, Item 7)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1400	Silver Plating (continued)	QQ-S-365		
1401		Type I, Grade A	Matte, with supplementary chromate treatment.	MIL-STD-171D (1.7.4) MIL-STD-186D (338)
1402		Type I, Grade B	Matte, without supplementary chromate treatment.	MIL-STD-171D (1.7.1) MIL-STD-186D (339)
1403		Type II, Grade A	Semi-bright, with supplementary chromate treatment .	MIL-STD-171D (1.7.5)
1404		Type II, Grade B	Semi-bright, without supplementary chromate treatment	MIL-STD-171D (1.7.2)
1405		Type III, Grade A	Bright, with supplementary chromate treatment.	MIL-STD-171D (1.7.6)
1406		Type III, Grade B	Bright, without supplementary treatment.	MIL-STD-171D (1.7.3)
1420	Copper Coating Electrodeposited	MIL-C-14550	Reference: MIL-HDBK-132A, Para 3.8 AMS 2418	MIL-STD-171D (1.10) MIL-STD-193K (Table IV) MIL-F-14072C (M214, M254)
1421		Class 1	0.0010 inch thick	MIL-STD-171D (1.10.1) MIL-STD-186D (349)
1422		Class 2	0.0005 inch thick	MIL-STD-171D (1.10.2) MIL-STD-186D (350)

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1470	Palladium Coating	MIL–P–45209	Reference: MIL–HDBK–132A, Para 3.17	MIL–STD–171D (1.13) MIL–STD–186D (372)
1480	Rhodium Coating Electrodeposited	MIL–P–46085	Reference: MIL–HDBK–132A, Para 3.15	MIL–STD–171D (1.14)
1481		Class 1, Type I	0.000001 to 0.000010 inch thick	
1482		Class 2, Type I	0.000010 to 0.000020 inch thick	MIL–STD–186D (347)
1483		Class 3, Type I	0.000020 to 0.000100 inch thick	
1484		Class 4, Type I	0.000100 to 0.000250 inch thick	
1485		Class 5, Type I	0.000250 to 0.000500 inch thick	
1486		Class 1, Type II	0.000001 to 0.000010 inch thick	
1487		Class 2, Type II	0.000010 to 0.000020 inch thick	MIL–STD–186D (348)
1488		Class 3, Type II	0.000020 to 0.000100 inch thick	
1489		Class 4, Type II	0.000100 to 0.000250 inch thick	
1490		Class 5, Type II	0.000250 to 0.000500 inch thick	
1500	Metallic Ceramic Coating	MIL–C–81751	———	MIL–STD–186D (366)
1501		Class 1 Type I	Coating cured at 650°F.	

TABLE II. Metallic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
1500	Metallic Ceramic (continued)	MIL–C–81751		
1502		Class 2 Type I	Cured at 650°F and posttreated.	
1503		Class 3 Type I	Cured at 650°F, burnished prior to topcoat cure.	
1504		Class 4 Type I	Cured at 650°F, posttreat by burnishing.	
1505		Class 1 Type II	Coating cured at 1485°F.	
1506		Class 2 Type II	Cured at 1485°F. Posttreat by burnishing.	
1507		Class 1 Type III	Thermal spray coating.	
1508		Class 2 Type III	Thermal spray coating. Posttreat by burnishing.	
1510	Lead Coatings Electrodeposited	MIL–L–13808	Reference: MIL–HDBK–132A, Para 3.9; (ASTM B200; AMS 2414)	MIL–STD–171D (1.3.1, 1.3.2) MIL–STD–193K (Table IV) MIL–STD–194A (Table V, Item 3) MIL–F–14072C (M223, M260, (M323, M356)
1515	Lead Alloy Coating Hot Dip	MIL–L–13762	Reference: MIL–HDBK–132A, Para 6.2	MIL–STD–171D (1.3.3) MIL–STD–193K (Table IV)
1520	Ternary Alloy Electrodeposited	MIL–P–47141	Cancelled	

TABLE III. Organic Coatings.

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2000	GENERAL EXTERIOR FINISHES			
2100	Acrylic Nitrocellulose Lacquer System	MIL-L-81352 MIL-L-19538	Acrylic nitrocellulose lacquer. Used as a general exterior finish. The finish system consists of wash primer (MIL-C-8514), primer (MIL-P-7962), and topcoat (MIL-L-81352/19538). Finish for aircraft with maximum airspeed under Mach 2.0 and skin temperature under 325°F. Resistant to diester lubricating oils. Gloss and semi-gloss are covered by MIL-L-81352. Camouflage (lusterless) is covered by MIL-L-19538. Color number in accordance with FED-STD-595 should be specified by the procuring activity. Standard exterior color is grey (FED-STD-595, Color No. 16473), except for camouflage and solar resistant finishes.	MIL-F-7179 MIL-F-18264
2101		MIL-F-7179: Class A	1 Coat wash primer MIL-C-8514, 2 coats primer MIL-P-7962, 3 coats topcoat MIL-L-81352/19538.	MIL-STD-1303B (56, 56A)

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2102 2103 2104 2105 2106 2107 2108		MIL–F–7179: Class B Class C	1 coat wash primer MIL–C–8514, 2 coats primer MIL–P–7962, 2 coats topcoat MIL–L–81352/19538. 1 coat wash primer MIL–C–8514, 1 coat primer MIL–P–7962, 2 coats topcoat MIL–L–81352/19538.	—
2110	Lacquer, Vinyl Resin, Semigloss	(MIL–C–46168)	Replaces cancelled document MIL–L–14486 Reference: MIL–HDBK–132A, Para 8.5.9 and 9.3.3.4, covers one type and one grade for use on steel surfaces.	MIL–F–14072C
2111	Varnish,phonelic Darking	MIL–V–12276	Reference: MIL–HDBK–132A, Para 9.3.12.6, covers 3 types or heat–hardening phonelic resin varnish.	MIL–STD–193K (Table III)
2112	Varnish, Spar phonelic Resin	TT–V–119	Reference: MIL–HDBK–132A, Para 9.3.12.8	MIL–STD–171D MIL–STD–808A MIL–STD–1303B MIL–STD–171D (24.13)
2113	Shellac, Cut	TT–S–300	Reference: Type I, Bleached or Type II, Orange, MIL–HDBK–132A, Para 9.3.12.7.	MIL–STD–171D MIL–STD–1303B
2114	Primer, Paint Zinc Chromate Alkyd Type	TT–P–645	—	MIL–STD–1303B

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2115	Paint, Stencil	(AA–1558)	Replaces cancelled document TT–P–98	MIL–STD–1303B MIL–STD–808A
2116	Lacquer, Spraying Clear and Pigmented General Use	(AA–1558)	Replaces cancelled document TT–P–98	MIL–STD–171D MIL–STD–194A MIL–STD–171D (29.3)
2117	Enamel, Silicone/ Alkyd Copolymer Semigloss Exterior	TT–C–490	Reference: MIL–HDBK–132A, Para 8.5.8 and 9.3.2.12 (comparable to TT–E–1593, gloss)	MIL–STD–808A MIL–STD–1303B MIL–STD–171D (22.10)
2118	Enamel, Lusterless Zinc Phosphate Styrenated, Alkyd–type	MIL–E–52891	Finish coat and phosphated or primed steel and on ammunition component for protection against storage corrosion.	MIL–STD–171D (20.2)
2200	Acrylic lacquer System	MIL–L–81352	Acrylic lacquer. The finish system consists of MIL–P–23377 primer and MIL–L–81352 topcoat. Finish for aircraft with maximum airspeed Mach 2 and over or with skin temperatures 325°F to 350°F. Resistant to diester lubricating oil and heat. Color number in accordance with FED–STD–595 should be specified by the procuring activity.	MIL–F–7179 MIL–F–18264

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2200	Acrylic lacquer (continued)	MIL-L-81352	Standard exterior color is grey color No. 16473 in accordance with FED-STD-595 (except for camouflage and solar resistant finishes. Has sufficient heat resistance to provide fair protection over exhaust path surfaces.	
2201		MIL-F-7179:		
		Class A	1 coat primer MIL-P-23377, 3 coats topcoat MIL-L-81352.	—
2202				
2204		Class B	1 coat primer MIL-P-23377, 2 coats topcoat MIL-L-81352.	—
2206		Class D	2 coats primer MIL-P-23377.	MIL-STD-186D, Code 408
2207		Class F	1 coat primer MIL-P-23377. See code 2225.	MIL-STD-186D, Code 407
2208		Class G	1 coat topcoat, MIL-L-81352.	—
		Class H	No finish	—
2210	Primer, Wash, Pre-treatment, Blue Formula 117B	DOD-P-15328	Used on clean metal surfaces as a treatment prior to application of the coating system. Increases adhesion. Reference: MIL-HDBK-132A, Para 4.7 9.3.6.1, 10.3, 11.2, See Code 2282.	MIL-STD-171D (8.7) MIL-STD-186D Code 401 MIL-STD-808A MIL-F-14072C MIL-T-704J (Table II)
2215	Primer Coating Zinc Chromate, Low Moisture Sensitivity	(TT-P-1757)	MIL-P-8585 cancelled; supersession specification TT-P-1757. Used primarily for spray application or surface treated with wash pretreatment coating. Corrosion resistant primer. Two compositions: "G" -General Use; and "L" -Limited used under	MIL-STD-171D (4.6) MIL-STD-186D Code 402, 403, 504 MIL-STD-1303B (Table I) MIL-T-704J (Table I) MIL-STD-808A

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2240	Primer Coating, Alkyd, Wood and Ferrous Metal	(TT–P–664) (MIL–P–53030)	Replaces cancelled document TT–P–636 Reference: MIL–HDBK–132A, Para 9.3, 6.5, 14.5. (See code 3503)	MIL–STD–171D (24.19, 24.21.1, 22.21, 22.10) MIL–STD–193K (Table II & III) MIL–STD–808A MIL–STD–704J (Table II) MIL–F–14072C
2245	Primer Coating, Synthetic, Rust–Inhibiting, Lacquer Resisting	TT–P–664	Durable, quick–drying, sprayable. Reference: MIL–HDBK–132A, Para 9.3, 6.3. (See code 2430)	MIL–STD–171D (24.18, 24.20, 24.21.2, 22.2, 22.4, 22.9, 22.10) MIL–STD–193K (Table III) MIL–STD–1303B Para 4.3 MIL–STD–808A MIL–STD–704J (Table II) MIL–F–14072C (Table II & A)
2255	Primer Coating, Dipping, Automotive	MIL–P–14553	Class 1 – Low Bake; Class 2 – High Bake; "G" =General Use; "L" = Limited Use (air pollution control). Reference: MIL–HDBK–132A, Para 9.3.6.2 (See code 2500)	MIL–STD–171D MIL–STD–193K (Table III)
2260	Primer Coating, Shipboard, Vinyl Zinc Chromate	MIL–P–15930	Formula No. 120 – for hot spray. Reference: MIL–HDBK–132A, Para 8.5.9, 13.4.	MIL–STD–171D MIL–STD–1303B Sys 48, 48A, 49, 53, 63, 73 MIL–F–14072C

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2215	Primer Coating (continued)	(TT–P–1757)	Air pollution regulations. Reference: MIL–HDBK–132A, Para 9.3.6.11. 12.5, 13.4	
2220	Primer, Epoxy	(MIL–P–53022 MIL–P–53030)	Replaces cancelled document MIL–P–52192	MIL–STD–171D MIL–STD–186D Code 404 or 405
2225	Primer, Coating Epoxy–Polyamide Chemical and Solvent Resistant	MIL–P–23377	Reference: MIL–HDBK–132A, Para 8.5.5, 9.3.6.14. See Code 2204, 2206.	MIL–STD–171D MIL–STD–186D Code 407 and 408 MIL–STD–1303B MIL–F–7179E MIL–F–14072C
2230	Primer, Lacquer Rust Inhibiting	MIL–P–11414	Cellulose nitrate primer. Reference: MIL–HDBK–132A, Para 9.3.6.6, 12.5. (See code 2430)	MIL–STD–171D MIL–STD–186D Code 406
2235	Enamel, Semigloss Rust Inhibiting	TT–E–485	Used as primer; see code 2400 for finish coat. Reference: MIL–HDBK–132A, Para 9.3.6.4, 14.5, 15.4	MIL–STD–171D (Finish 23.1, 27.3) MIL–STD–193K (Table II & III) MIL–STD–1303B Sys 22 MIL–T–704J (Table II) MIL–F–14072C

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2265	Primer Surfacer, Sanding, Lacquer and Enamel Type	TT–P–662	Surfacing coat over primed steel to obliterate dents. Reference: MIL–HDBK–132A, Para 9.3.6.8	MIL–STD–171D (20.10) MIL–STD–1303B Sys 81
2270	Primer Surfacer Synthetic	TT–P–662		MIL–STD–171D
2275	Primer, Coating, Synthetic, (for Brake Drums)	MIL–P–46093	Cancelled.	MIL–STD–193K (Table III)
2276	Plastic, Plastisol (for coating metallic objects)	MIL–P–20689	—	MIL–STD–193K (Table III)
2277	Enamel, Camouflage Solar and heat reflecting	MIL–E–46061	Cancelled. Use code 2279 or code 5250	MIL–F–14072C
2278	Enamel, Alkyd Camouflage	(MIL–C–46168 MIL–C–53039)	Replaces cancelled document MIL–E–52798	MIL–T–704J (Table IIA) MIL–F–14072C MIL–STD–186D Code 444, 445 MIL–STD–171D (20.19)

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2279	Coating, Aliphatic, Polyurethane, Chemical–Agent Resistant	MIL–C–46168	Must be applied to 1.8 mil minimum thickness to meet infrared reflectance requirements.	MIL–T–704J (Table IIA)
2280	Primer Coating, Inorganic, Zinc Dust Pigmented, Self–Curing for Steel Surfaces	MIL–P–38336	Zinc rich primer for steel structures.	MIL–STD–171D Finish 24.16 MIL–STD–808A
2281	Primer Coating, Zinc Dust Pigmented for Steel Surfaces	MIL–P–26915	—	MIL–STD–808A
2282	Primer Coating, Pretreatment one Package Wash Primer for Steel, Aluminum and Magnesium	DOD–P–15328	See code 2210	MIL–STD–808A
2283	Coating for Magnesium and Magnesium Alloys	(MIL–M–45202)	Replaces cancelled document MIL–C–13335 Type I,Class A – HAE Film. See Code "M, N". Reference: MIL–HDBK–132A, Para 5.4; AMS 2476	MIL–STD–194A MIL–STD–808A, F–402, F–403
2284	Enamel, Lusterless Quick–drying, for Ammunition	(TT–E–516)	Replaces cancelled document MIL–E–10687 See Code 2420	MIL–STD–194A

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2285	Varnish, Shellac	(TT-S-300)	Replaces cancelled document TT-V-91 See code 2113.	MIL-STD-194A
2286	Paint, Primer, Zinc, Yellow, for Aluminum and Magnesium Surfaces	TT-P-660	Cancelled.	MIL-STD-194A
2287			Cancelled.	
2288	Luminescent, Material, Florescent	MIL-L-25142	Cancelled.	MIL-STD-171D Finish 30.4.1 MIL-STD-186D Code 490
2289	Enamel, Camouflage, Quick Drying	MIL-E-5556	Cancelled. See Code 2320 (TT-E-527)	
2290	Primer Coating, Epoxy Process for Application	MIL-P-46856	Application Specification.	MIL-STD-186D
2291	Paint, Epoxy Polyamide, General Specification for	MIL-C-24441	———	MIL-STD-1303B System 69, 80

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2292	Coating System, Epoxy Polyamide, Chemical and Solvent Resistant, Process for Application of	MIL-C-22751	Cancelled. Apply MIL-C-22750 per manufacturer's instructions.	MIL-STD-1303B MIL-F-7179E
2294	Paint, Outside, Gray No 11, Vinyl-Alkyd Formula 122-11	MIL-P-15935	Cancelled.	MIL-STD-1303B, System 49, 53
2295	Primer Coating, Shipboard, Vinyl-Red Lead (Formula No. 119-for Hot Spray)	(MIL-P-24441 MIL-P-15930)	Replaces cancelled document MIL-P-15929	MIL-STD-1303B, System 49
2296	Enamel, Alkyd Camouflage, Lusterless	MIL-E-52835	Must be applied to 1.8 mil minimum thickness to meet infrared reflectance requirements.	MIL-T-704J (Table IIA) MIL-STD-186D Code 446, 447 MIL-STD-171D (Code 20.20)
2299	Enamel, Equipment, Light Gray, Formula No. 111	MIL-E-15090		MIL-F-14072C MIL-STD-1303B

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2300	Polyurethane Coating Primer: MIL-P-23377 see 2310	MIL-C-83286	Standard finish system for Air Force weapon systems. Flexible, corrosion preventive chemical resistant polyurethane coating of the aliphatic type. The finish system consists of MIL-P-23377 primer and MIL-C-83286 topcoat. Good resistance to all common aircraft fluids. Good heat resistance to provide protection on exhaust path surfaces FED-STD-595 should be specified by the procuring activity. Standard exterior color is grey (FED-STD-595, Color No. 16473) except for camouflage and solar resistant finishes. Reference: MIL-HDBK-132A Para 8.5.7, 9.3.1.7, 12.5.	MIL-F-7179E
		MIL-F-7179:		
2301		Class A	1 coat primer MIL-P-23377, 3 coats topcoat MIL-C-83286.	—
2302		Class B	1 coat primer MIL-P-23377, 2 coats topcoat MIL-C-83286.	MIL-STD-808A, FF909
2304		Class D	2 coats primer MIL-P-23377.	—
2306		Class F	1 coat primer MIL-P-23377.	—

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2300	Polyurethane Coating (continued)			
		MIL-F-7179:		
2307		Class G	1 coat topcoat MIL-C-83286.	—
2308		Class H	No finish.	—
2309			2 coats topcoat MIL-C-83286 (Primer as specified by procuring activity) such as MIL-C-26915 type I.	
2310	Polyurethane Coating (Primer: see 2300 to MIL-P-23377)	MIL-C-83286	Finish system for Air Force flexible wing systems. Top coat in accordance with MIL-C-83286. See code 2300.	MIL-F-7179E
		MIL-F-7179:		
2311		Class A	1 coat primer MIL-P-87112, 3 coats topcoat MIL-C-83286.	—
2312		Class B	1 coat primer MIL-P-87112, 2 coats topcoat MIL-C-83286.	—
2313		Class D	2 coats primer MIL-P-87112.	—
2314		Class E	1 coat primer MIL-P-87112.	—
2315		Class G	1 coat topcoat MIL-C-83286.	—
2316		Class H	No finish.	—
2320	Enamel, Alkyd, Lusterless	TT-E-527	Reference: MIL-HDBK-132A, Para 8.5.4 9.3.2.8, See Code 3503.	MIL-STD-171D (Table XIII) MIL-STD-186D Code 415, 420

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2320	Enamel, Alkyd, Lusterless (continued)	TT-E-527	Reference: MIL-HDBK-132A, Para 8.5.4 9.3.2.8, See Code 3503.	MIL-STD-193J (Table I & II) MIL-STD-194A MIL-STD-808A MIL-STD-1303B System No. 7, 77 MIL-T-704J (Table II) MIL-F-7179E MIL-F-14072C
2326	Lacquer, Acrylic Camouflage, Lusterless	MIL-L-52909	Cancelled.	MIL-T-704J MIL-STD-171D
2327	Lacquer, Camouflage Lusterless, Hot Spray, Forest Green	MIL-L-52926	Cancelled.	MIL-T-704J MIL-STD-171D MIL-HDBK-1516B
2328	Enamel, Alkyd Camouflage, Flash	(MIL-L-52039)	Replaces cancelled document MIL-C-52929. 1/ MIL-C-46018*	MIL-T-704J MIL-STD-171D (20.22) MIL-HDBK-1516B
2330	Enamel, Alkyd, Lusterless	TT-E-529	Reference; MIL-HDBK-132A, Para 9.3.2.9, Class A air drying, Class-B baking. See Code 2410, 3503.	MIL-STD-171D (Table XIV) MIL-STD-186D Code 425, 437 MIL-STD-193J (Table III) MIL-STD-194A MIL-STD-808A MIL-STD-1303B System No. 9, 13

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2330	Enamel, Alkyd (continued)	TT–E–529		MIL–T–704J (Table II) MIL–F–7179E MIL–E–14072C
2340	Enamel, Semigloss	(MIL–L–52043 TT–E–529)	Replaces cancelled specification MIL–E–52227	MIL–STD–171D Finish 21.21. MIL–STD–186D Code No. 449, 461 MIL–STD–193K (Table III)
2350	Lacquer, Semigloss Cellulose Nitrate	MIL–L–52043	Reference: MIL–HDBK–132A, Para 12.5, 13.4. Use code 2279	MIL–STD–171D (Table XIV) MIL–STD–186D Code No. 473 MIL–STD–193K (Table III) MIL–T–704J (Table II)
2360	Coating, Epoxy Polyamide	MIL–C–22750	Reference: MIL–HDBK–132A, Para 9.3.1.5. Application Specification: MIL–C–22751; See code 2292. Replaces cancelled specification MIL–P–22808 (See code 2610). Type I, Gloss; Type II, Semigloss; Type III, Camouflage. Class 1: Non–Air Pollution Regulation Class 2: Air Pollution Regulation	MIL–STD–171D Finish (24.17, 24.8) MIL–STD–186D Code No. 485–488. MIL–STD–193K (Table III) MIL–STD–1303B Sys 57, 75 MIL–F–7179E MIL–F–14072C, Film Designation N, P, or T

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2370	Lacquer, Spraying, Acid Resistant (for Aluminum Surfaces around Storage Batteries)	(A-A-1452)	Replaces cancelled document TT-L-54	MIL-STD-186D, Code 495
2380	Enamel, Exterior, White, Vinyl-Alkyd (Formula No. 122-82)	MIL-E-16738	Cancelled	MIL-STD-186D Code No. 496 MIL-STD-1303B System 48A
2390	Varnish, Moisture and Fungus Resistant	MIL-V-173	For the treatment of communications electronic, and associated electrical equipment.	MIL-STD-171D Finish 30.5 MIL-STD-186D Code No. 497 MIL-STD-1303B System 42
2400	Enamel, Semigloss Rust Inhibiting	TT-E-485	Finish Coat; See code 2235 for use as primer. Reference: MIL-HDBK-132A, Para 9.3.2.7, 12.5, 13.4, 14.2. Type I, dip; Type II, brush, spray; Type III, roller; Type IV, flash dry Comp. L, Air Pollution Regulation.	MIL-STD-171D Finish (21.1, 21.5, 21.19, 21.20, 27.3) MIL-STD-193K (Table II & III) MIL-STD-194A MIL-STD-1303B, System 46, 62 MIL-T-704J Table II MIL-F-14072C P215Y
2420	Enamel, Lusterless Quick-Drying, Styrenated Alkyd Type	(TT-E-516)	Replaces cancelled MIL-E-10687 (see code 2284). One coat lusterless finish for projectiles, grenades, etc Reference: MIL-HKBK-132A, Para 9.3.2.5	MIL-STD-171D Table XIII MIL-STD-1303B Systems 13, 46, 54

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2430	Lacquer, Lusterless Hot Spray	MIL-L-11195	Two coat lusterless lacquer finish for automotive and general use with MIL-P-11414 (Code 2230) or TT-P-664 (Code 2245). Cellulose nitrate vehicle modified with phthalic alkyd resin. Reference: MIL-HDBK-132A, Para 9.3.3.3.	MIL-STD-171D (Table XIII) MIL-STD-193K (Table I) MIL-STD-194A MIL-STD-1303B, System 55
2440	Enamel, Lusterless, Alkyd, Quick Drying	TT-E-515	Reference: MIL-HDBK-132A, Para 8.5.4, 9.3.2.4.	MIL-STD-171D (Table XIII) MIL-STD-1303B Systems 58
2460	Primer Coating, phenolic Water Immersible	(TT-P-636* TT-P-1757)	Replaces cancelled document MIL-P-12742	MIL-STD-171D (Table XIII) MIL-STD-808A F-200, F-218 MIL-T-704J (Table II)
2470	Enamel, Lusterless, phenolic Outside	TT-E-522	Cancelled. See code 2460 for primer. . Reference: MIL-HDBK-132A, Para 8.5.6, 9.3.2.6	MIL-STD-171D (Table XIII) MIL-STD-1303B Systems 50A MIL-T-704J (Table II)
2480	Enamel, Baking, Phenol- or Urea-Formaldehyde	(TT-E-529) (Jan-E-480)	Replaces cancelled document .MIL-E-480	MIL-STD-171D (Table XIV) MIL-STD-194A MIL-STD-1303B Systems 50

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2500	Primer, Coating, Dipping, Automotive	MIL–P–14553	See code 2255.	——
2520	Primer, Weld–thru	MIL–P–46105	Replaces cancelled document MIL–P–13380 (See code 5345)	——
2530	Enamel, Wrinkle Finish, for Aircraft Use	MIL–E–5558	Cancelled.	MIL–STD–171D Finish 23.1 MIL–STD–194A MIL–STD–808A–FF–908
2540	Coating Compound, Bituminous, Solvent Type, Black	MIL–C–450	For ammunition. Type I – Low solids (spray); Type II – Medium solids (spray or brush); Type III – Heavy paste. Reference: MIL–HDBK–132A, Para 9.3.1.1.	MIL–STD–171D Finish 24.2 MIL–STD–1303B, System 47
2550	Coating Compound, Bituminous, Solvent Type	(MIL–C–62218)	Replaces cancelled document TT–C–520	MIL–STD–171D MIL–STD–193K (Table III)
2560	Primer Coating for Red Fuming Nitric Acid Resistant Paint	MIL–P–22636	Cancelled.	MIL–STD–171D Finish 24.4
2570	Paint, Rubber, Red Fuming Nitric Acid Resistant	MIL–P–14458	Cancelled.	MIL–STD–171D Finish 24.4

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2580	Paint, Heat Resisting, Silicone Aluminum	(TT-P-28.) (Code 2804).	Heat resistant aluminum finish for temperatures to 1000°F. Replaces cancelled document MIL-P-14276	———
2590	Paint, Priming, Exterior and Interior	MIL-P-22332	For ammunition. Reference: MIL-HDBK-132A, Para 9.3.6.13.	MIL-STD-171D Finish 24.6 MIL-STD-1303B System 67
2600	Coating Compound Bituminous Solvent Type, Acid Resistant	TT-C-494	———	MIL-STD-171D Finish 24.7
2610	Paint, Epoxy, Hydraulic Fluid Resistant	(MIL-C-22750) (Code 2360)	Replaces cancelled document MIL-P-22808	
2630	Varnish, Asphalt	TT-V-51	Reference: MIL-HDBK-132A, Para 9.3.12.1 Two coats acid resistant finish for general use.	MIL-STD-171D Finish 24.10 MIL-STD-808A Finish Code FF-905
2700	Erosion Resistant Coatings		Coatings to resist erosive effects of rain and sand on frontal surfaces, impact angle of 15 or more.	MIL-F-7179E MIL-F-18264 MIL-R-7705
2701		MIL-C-7439 Class 1	Cancelled.	MIL-STD-1303B System 74

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2701	Erosion Resistant Coating (continued)	MIL–C–7439, Class 1	Qualifies for 40 to 90 minutes exposure to one inch per hour rainfall at 500 mph simulated. Also used for chemical resistance in battery compartments and aircraft latrine use. See code 5337.	
2702		MIL–C–7439, Class 2	Same material as MIL–C–7439, Class 1, with an added antistatic, coating. Intended for use on radomes, antennas, and microwave windows. Prevents radio and radar interference due to buildup of static charges on exterior surfaces. See code 5337.	MIL–STD–1303B, System 72
2703		MIL–C–27315 Class 1	Cancelled.	MIL–STD–1303B System 72
2704		MIL–C–83231 Type I	Black erosion resistant coating based on a polyurethane formulation. Intended to protect exterior laminated plastic parts of high speed aircraft and missiles from erosion. Coating system consists of primer and topcoat included in a kit over properly pretreated surface. Qualified for 100 to 120 minutes exposure to one inch per hour rainfall at 500 mph simulated.	—

ABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
2704	Erosion Resistant Coatings (continued)	MIL–C–83231, Type I	Two classes available, Class A for general use and Class B for use where air pollution regulations dictate.	
2706		MIL–C–83231, Type II	Same material as MIL–C–83231, Type I, with an added antistatic film. Intended for use on radomes, antennas, and microwave windows. Prevents radio and radar interference due to buildup of static charges on exterior surfaces.	———
2708	Coating System Polyurethane, Non–Yellowing White Rain Erosion Resistant, Thermally Reflective	MIL–C–83445		MIL–HDBK–1516
2800 2802	High Temperature Coatings		Protects aircraft materials in specified areas from deterioration at high temperatures. For solar (Thermal) reflective coatings, see code 5200. Cancelled.	MIL–F–7179 MIL–F–18264
2804		TT–P–28	Aluminized silicone coating. Used on hot air and exhaust ducts and on hot surfaces in engine compartments for corrosion prevention. Applies to properly pretreated surfaces without a primer. Temperature limit: 1200°F.	MIL–STD–171D Finished 24.5 MIL–STD–193K (Table III) MIL–STD–1303B System 10 MIL–T–704J 3.3.8

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
3000	GENERAL INTERIOR FINISHES			
3100	Nitrocellulose Lacquer		General purpose interior coating Not resistant to diester lubricant.	MIL-F-7179 MIL-F-18264
		TT-L-32 TT-L-20	Temperature limit: 200°F. Gloss is covered by TT-L-32. Camouflage (lusterless) is covered by TT-L-20. Color number is accordance with FED-STD-595 should be specified by the procuring activity. Reference: MIL-HDBK-132A, Para 9.3.3.2, 12.5, 14.2 Note: MIL-P-8585 superseded by TT-P-1757 (See code 2215)	TT-L-32 (MIL-STD-193J) TT-L-20 (MIL-STD-171D, 24, 23)
		MIL-F-7179:		
3101		Class A	1 coat wash primer MIL-C-8514, 2 coats primer TT-P-1757. 3 coats topcoat TT-L-32/TT-L-20.	
3102		Class B	1 coat wash primer MIL-C-8514, 2 coats primer TT-P-1757. 2 coats topcoat TT-L-32/TT-L-20.	
3103		Class C	1 coat wash primer MIL-C-8514, 1 coat primer TT-P-1757. 2 coats topcoat TT-L-32/TT-L-20.	MIL-STD-808A (F-503) MIL-STD-1303B System 17, 27
3104		Class D	3 coats primer TT-P-1757.	MIL-STD-808A (F-504) MIL-STD-1303B System 59
3105		Class E	2 coats primer TT-P-1757.	

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
3100	Nitrocellulose (continued)	MIL–F–7179		
3106		Class F	1 coat primer TT–P–1757.	
3107		Class G	1 coat topcoat.	
3108		Class H	No finish.	
3500	Finishes for Wood		Reference: MIL–HDBK–132A, Chapter 15	MIL–F–7179 MIL–STD–171D MIL–HDBK–1516
3501	Varnish	TT–V–121	General purpose water resistance spar varnish. Fill open grain woods with wood filler TT–F–336. Topcoat with 2 coats TT–V–121. 4 coats TT–V–121 shall be used when wood is in contact with metal or on exterior locations. Reference: MIL–HDBK–132A, Para 9.3.12.9.	MIL–STD–171D Finish 28.3, Table XIX, Table XVIII MIL–STD–194A, Table III MIL–STD–808A, F–502 MIL–STD–1303B System 31 MIL–HDBK–1516
3502	Varnish	TT–C–542 , Type I	Heavy duty polyurethane varnish for cargo flooring and applications with abrasion resistant requirement. Fill open grain woods with wood filler TT–F–336, and seal all surfaces with TT–S–176. Topcoat with 2 coats TT–C–542. Reference: MIL–HDBK–132A, Para 8.5.7.	MIL–HDBK–1516

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
3503	Enamel	TT–E–489	Covers alkyd enamels TT–E–489 (gloss) TT–E–527 (lusterless), and TT–E–529 (Semigloss). Fill open grain woods with wood filler TT–F–336, and primer all surfaces with TT–P–636. Apply 2 topcoats of enamel, or 4 coats when in contact with metal or on exterior locations. The procuring activity should specify the appropriate color number in accordance with FED–STD–595. Reference: MIL–HDBK–132A, Para 8.5.4, 9.3.2.2.	MIL–HDBK–1516 MIL–STD–171D Finish 28.1, 28.2 MIL–STD–193J (Table II & III) MIL–STD–808A F–500, F–501, F–503 MIL–STD–1303B System 14, 14A MIL–T–704J (Table II, Type A) MIL–F–14072C Finish P911, G or K
3505	Primer, Paint, Exterior Undercoat for Wood, Ready–Mixed, White and Tints	TT–P–25	———	MIL–STD–1303B System 12, 14, 22
3507	Sealer, Surface, Wood Preservative	MIL–S–13518	Cancelled. Type I – teltrachlorophenol; Type II – Pentachlorophenol Class 1 – Linseed oil vehicle; Class 2 – alkyd resin vehicle. Reference: MIL–HDBK–132A, Para 9.3.8.1.	MIL–STD–194A MIL–STD–808, F–500, F–501 Finish code MIL–T–704J Table II, Type A, B MIL–F–14072C, P911

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
3508	Wood Preservative Water Repellant	TT–W–572	TT–W–571, Wood Preservation, Treating Practices.	MIL–STD–171D Finish 25.1, 25.2, 25.3 MIL–STD–186D Code 217, 218, 219 MIL–STD–1303B
3509	Vacuum Pressure or Vacuum Soak Treatment, Composition A	—	Wood Preservation Treatment, TT–W–572, Composition A – See Code 3508.	MIL–STD–171D Finish 25.1 MIL–STD–186D Code 217
3510	Immersion Treatment Composition B	—	Wood Preservation Treatment, TT–W–572, Composition B – See Code 3508.	MIL–STD–171D Finish 25.2 MIL–STD–186D Code 218
3511	Surface Treatment Composition C	—	Wood Preservation Treatment, TT–W–572, Composition C – See Code 3508.	MIL–STD–171D Finish 25.3 MIL–STD–186D Code 219
5000	SPECIAL PURPOSE COATINGS	—	Reference: MIL–HDBK–132A, Chapter 16.	MIL–STD–171D (Table XVI & XX)
5010	Walkway Coating and Matting	MIL–W–5044	Application specification: MIL–W–5050. Nonslip walkway materials for aircraft walkways areas exterior and interior. Reference: MIL–HDBK–132A, Para 16.4.	MIL–F–7179 MIL–STD–171D Finish 30.3 MIL–STD–186D Code 491, 492

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5010	Walkway Coating and matting (continued)	MIL-W-5044		MIL-STD-193K (Table IV)
5011		Type I	Coating, smooth texture (no grit). For use when aerodynamic smoothness is a major factor.	
5012		Type II	Coating, rough texture (with grit). Provides maximum nonslip.	
5013		Type III	Matting, adhesively bonded. Provides maximum nonslip and wear resistance. Provides minimum waiting period after application before it can be placed in service. Cannot be applied to compound curves or projections (e.g., raised rivet heads).	
5100	Walkway compound	(MIL-S-81733)	Replaces cancelled document MIL-C-38713	MIL-HDBK-1516
5110	Deck Covering Compound, Nonslip Light Weight	MIL-D-23003	Reference: MIL-HDBK-132A, Para 16.4.	MIL-F-7179 MIL-STD-171D Finish 30.2 MIL-STD-193K (Table III)

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5230	Coating, Gray Undercoat (Solar Heat Reflecting)	(TT–E–527)	Replaces cancelled document MIL–C–46127	MIL–STD–171D Finish 24.18, 24.19, 24.20 MIL–STD–186D Code No. 410 MIL–STD–193K (Table III)
5235	Enamel, Semigloss, Rust Inhibiting, Solar Heat Reflecting, Olive Drab	(MIL–E–46136* 1/)	Replaces cancelled document MIL–E–46139	MIL–STD–171D Finish 24.22.1 – Type I Finish 24.22.2 – Type II MIL–STD–193K (Table III)
5240	Lacquer, Lusterless Solar Heat Reflecting, Olive Drab	(MIL–E–46096)	Replaces cancelled document MIL–E–46138	MIL–STD–193K (Table III) MIL–STD–171D 24.20
5245	Lacquer, Lusterless Solar Heat Reflecting	MIL–L–46142	Cancelled.	MIL–T–704J MIL–STD–171D (24.24)
5250	Enamel, Lusterless Quick Drying, Solar Heat Reflecting, Olive Drab	(MIL–C–46198* 1/ & MIL–C–53039)	Replaces cancelled document MIL–E–46096	MIL–STD–171D Finish 24.18 MIL–STD–186D Code 409 MIL–STD–193K (Table III) MIL–STD–1303B System 81

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5260	Paint, Heat Resisting, Olive Drab (1400°F)	MIL–P–14105		MIL–STD–193J (Table III) MIL–STD–808A MIL–STD–704J 3.3.8
5200	Solar (Thermal) Reflective Coating	MIL–C–27227	Cancelled. Use code 2300	MIL–F–7179 MIL–HDBK–1516
5205	Coating, Polyurethane Aliphatic Isocyonate, Thermal Flux Resistant, for Aerospace Applications	MIL–C–83466	Cancelled. Use code 2300.	
5210	Enamel, Alkyd, Lusterless, Solar Heat Reflecting	(MIL–E–46096*) (Code 2279)	Reference: MIL–HDBK–132A, Para 9.3.9. Replaces cancelled document MIL–E–46117	MIL–STD–171D Finish 24.19 MIL–STD–186D, Code 411 MIL–STD–193K (Table III)
5220	Enamel, Alkyd, Semigloss, Solar Heat Reflecting	(MIL–E–46096*) (Code 2279)	Reference: MIL–HDBK–132A, Para 9.3.9 Replaces cancelled document MIL–E–46136	MIL–F–193K (Table III) MIL–STD–171D Finish 24.21.1, 24.21.2, 24.21.3 MIL–STD–186D Code 412, 413, 414

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5300	Fluorescent Paint	MIL–P–21563	Conspicuity marking for USAF aircraft to aid in visual detection. Normally applied over existing aircraft finish in two or three coats followed by clear acrylic lacquer overcoat.	MIL–HDBK–1516 MIL–STD–1303B System 79
5310	Fluorescent Film	MIL–F–22735	Conspicuity marking for USAF aircraft to aid in visual detection. Adhesive backed film offered as alternate to paint. Negates masking or stencils.	MIL–HDBK–1516
5325	Coating Kit, Epoxy for Interior of Steel Fuel Tanks	MIL–C–4556	———	MIL–STD–171D Finish 24.14 MIL–STD–808 FF–907
5331	Sealing Compound adhesive curing polysulfide base	MIL–S–11031	———	MIL–STD–186D Code 512 MIL–STD–194A Para 4.4
5332	Sealing Compound Noncuring (Polysulfide Base)	MIL–S–11030	———	MIL–STD–171D Para 4.6 MIL–STD–186D Code 511 MIL–STD–194A Para 4.4
5333	Coating, Anti–Fouling, Hull Bottom for Weapons Systems	MIL–C–23675	Cancelled.	MIL–STD–1303B System 66

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5334	Paint Coating Systems, Steel Ship Tank Fuel and Salt Water Ballast	(DOD-P-23236)	Replaces cancelled document MIL-P-23236	MIL-STD-171D Finish 24.15 MIL-STD-1303B System 80, 80A
5335	Paint System Fluorescent, Removable, for Aircraft Application	MIL-P-21600	Cancelled	MIL-STD-1303B System 79A
5336	Paint, Antifouling Vinyl-Red (Formula No. 121/63)	MIL-P-15931	———	MIL-STD-1303B System 48
5337	Coating System Elastomeric, Rain Erosion Resistant with Anti-static Treatment, for Exterior Aircraft and Missile Plastic Parts.	MIL-C-7439	Codes 2701 and 2702. Cancelled.	MIL-STD-1303B
5338	Compound, Asphatic Hot-melt (Cavity Lining)	MIL-C-3301	Cancelled	MIL-STD-1303B System 47
5339	Lacquer, Vinyl Resin, Gasoline and water Resistant	(MIL-C-4556)	Replaces cancelled document MIL-L-2638	MIL-STD-1303B System 64

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5340	Varnish, Spar, Water Resisting, Formula 80	(TT–V–119)	Replaces cancelled document MIL–V–1174	MIL–STD–1303B System 25, Para 5.6.2.1.3
5341	Enamel, White (Formula 30) for Naval Shipboard Use	MIL–E–1115	———	MIL–STD–1303B System 14B
5342	Varnish, Spar Alkyd–Resin	TT–V–109	———	MIL–STD–1303B System 31
5343	Plastic Material, Foamed Polyurethane for Encapsulating Electronic Components	MIL–P–46847	Cancelled	MIL–STD–186D Code 607
5344	Insulating Compound Electrical (for Coating Printed Circuit Assemblies)			MIL–STD–171D Finish 30.6 MIL–STD–186D Code 603–606
5345	Primer Coating, Weld–through Zinc–rich	MIL–P–46105	Reference: MIL–HDBK–132A, Para 9.3.6.10. See Code 2520.	MIL–STD–171D Finish 24.1 MIL–STD–193K (Table III)
5346	Insulating Varnish, Electrical, Impregnating	MIL–I–24092	Reference: MIL–HDBK–132A, Para 9.3.12.2.	MIL–STD–1303B System 42

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5350	Luminescent Material and Equipment (Non–radio–active)	MIL–L–3891	——	MIL–STD–171D Finish 30.4.2, 30.4.3 MIL–STD–186D Code 489 MIL–STD–1303B System 51, 64
5500	Integral Fuel Tank Materials		Coatings and sealing compounds for aircraft integral fuel tanks.	MIL–HDBK–1516
5510	Sealing Compound	MIL–S–8802	Polysulfide sealant for faying surface and fillet seals. Service temperature limit is 250°F.	MIL–STD–186D Code 503 MIL–STD–1303B System 78 MIL–HDBK–1516 MIL–F–7179 MIL–F–14072C
		Class		
5511		A–1/2	Brushable consistency, 1/2 hour pot life, for faying surfaces and initial penetrating coating over crevices and fasteners.	
5512		A–2	Brushable consistency, 2 hours pot life.	
5513		B–1/2	Heavy bodied sealant, 1/2 hour pot life, for faying surfaces, fillets, and topcoating over crevices and fasteners.	
5514		B–2	Heavy bodied sealant, 2 hours pot life.	
5515		B–4	Heavy bodied sealant, 4 hours pot life.	
5516		C–20	Faying surface sealant, 20 hours pot life, for assemblies requiring long assembly time.	

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5517	Sealing Compound (5510 continued)	MIL–S–8802 Class – C–80	Faying surface sealant, 80 hours pot life.	
5518	Sealing and Coating Compound, Corrosion Inhibiting	MIL–S–81733	Polysulfide sealant for faying surface and fillet seals available as: Type I – Brushable; Type II – Extrusion gun; Type III Spray gun; Type IV – Fraying Surfaces. Pot lifes: 1/2, 1, 2, 4, 12, 24, 40, and 48 hours.	MIL–F–7179 MIL–STD–186D Code 524
5520	Protective Coating	MIL–C–27725	Polyurethane corrosion preventive coating for use on integral fuel tanks metal surfaces. Not suitable over sealants due to lack of flexibility. Specification provides for a Class B material for use where air pollution regulations dictate.	MIL–HDBK–1516 MIL–F–7179F
5521		Type I	One part formulation, applied in accordance with MIL–A–38267.	
5522		Type II	Two part formulation, applied in accordance with MIL–A–38267.	

TABLE III. Organic Coatings. (Continued)

Code	Nomenclature	Controlling Specifications	Features	System Specifications
5530	Protective Coating	MIL–C–83019	Polyurethane coating for protection of fuel tank sealing compound. Protects sealing compound against fuel and fuel contaminants. Applied in one coating, 1 to 3 mils dry film thickness.	MIL–STD–1303B System 69 MIL–HDBK–1516
5540	Low Adhesion Sealant	MIL–S–8784	Sealing compound authorized for use only on faying surfaces of removable fuel tank covers to facilitate maintenance. Available as Class A (brushable), Class B (heavy bodied), 1/2 hour pot life, and 2 hours pot life (A–1/2, A–2, B–1/2, B–2).	
5550	Sealing Compound Topcoat, Fuel Tank, BUNA–N Type	MIL–S–4383	Inactive for new design use 5520	MIL–STD–186D Code 507

* Document's referenced in cancellation notice has also been cancelled.

1/ Cancellation notice references MIL–E–46096 as a replacement document. This document has also been cancelled.

APPENDIX A.

REFERENCE DOCUMENTS WITH MIL-HDBK-1516 CODE NUMBERS

The following documents are coded and cited in this handbook. When applicable, the MIL-HDBK-1516 code numbers follow the controlling specification alphanumeric identification and the title.

Specification Identification	Title	MIL-HDBK-1516 Code No.
FEDERAL		
QQ-C-320	Chromium Plating (Electrodeposited)	1150
QQ-N-290	Nickel Plating (Electrodeposited)	1200, 1203
QQ-P-416	Plating, Cadmium (Electrodeposited)	1010
QQ-S-365	Silver Plating, Electrodeposited, General Requirement for	1400
QQ-T-425	Tinplate (Electrolytic)	1430
QQ-Z-325	Zinc Coating, Electrodeposited, Requirement for	1300
TT-C-490	Cleaning Methods and Pretreatment of Ferrous Surfaces, for Organic Coatings	Q
TT-C-494	Coating Compound, Bituminous, Solvent Type, Acid Resistant	2600
TT-C-520	Coating Compound, Bituminous, Solvent Type, Underbody (for motor vehicles)	2550
TT-C-542	Coating Polyurethane, Oil Free, Moisture Curing	3502
TT-E-485	Enamel, Semi-gloss Rust-inhibiting	2235, 2400
TT-E-489	Enamel, Alkyd, Gloss (for Exterior and Interior Surfaces)	3503
TT-E-490	Enamel, Silicone Alkyd Co-polymer, Semi-gloss (for Exterior and Interior Use)	2117
TT-E-515	Enamel, Alkyd, Lusterless, Quick-drying	2440
TT-E-516	Enamel, Lusterless, Quick-drying Styrenated alkyd Type	2420
TT-E-522	Enamel, Phenolic Outside	2470
TT-E-527	Enamel, Alkyd, Lusterless	2320, 3503
TT-E-529	Enamel, Alkyd, Semi-gloss	2330, 2410 3503
TT-E-1593	Enamel, Silicone Alkyd Co-polymer, Gloss (for Interior and Exterior Use)	2217
TT-F-336	Filler, Wood, Paste	3501, 3502 3503
TT-L-20	Lacquer, Camouflage	3100
TT-L-32	Lacquer, Cellulose Nitrate, Gloss for Aircraft Use	3100
TT-L-54	Lacquer, Spraying, Acid-Resistant (for Aluminum Surfaces Around Storage Batteries)	2370
TT-L-58	Lacquer, Spraying, Clear and Pigmented (for Interior Use)	2116
TT-P-25	Primer Coating, Exterior Undercoat for Wood, Ready-Mixed, White and Tints	3505
TT-P-28	Paint, Aluminum, Heat Resisting (1200°F)	2804
TT-P-98	Paint, Stencil, Flat	2115

Specification Identification	Title	MIL–HDBK–1516 Code No.
FEDERAL		
TT–P–636	Primer Coating, Alkyd, Wood and Ferrous Metal (Primer for code 3503)	2240
TT–P–645	Primer, Paint, Zinc–chromate, Alkyd Type	2114
TT–P–659	Primer, Coating Surfacer, Synthetic Tints and White (for Metal and Wood Surfaces)	2270
TT–P–662	Primer Surfacer, Sanding, Lacquer and Enamel Type	2265
TT–P–664	Primer, Coating, Synthetic, Rust–inhibiting, Lacquer–resisting	2245
TT–P–1757	Primer Coating, Zinc Chromate, Low Moisture Sensitivity (Supersedes MIL–P–8585)	2215
TT–S–300	Shellac, Cut	2113
TT–V–51	Varnish, Asphalt	2630
TT–V–109	Varnish, Interior, Alkyd–Resin	5342
TT–V–119	Varnish, Spar, Phenolic–Resin	2112
TT–V–121	Varnish, Spar, Water Resisting	3501
TT–W–571	Wood, Preservative, Treating Practices	3508
TT–W–572	Wood–preservative, Water–repellent	3508, 3509 3510, 3511
VV–L–800	Lubricating Oil, General Purpose, Preservative, (Water Displacing, Low Temperature)	R
MILITARY		
MIL–V–173	Varnish, Moisture and Fungus Resistant (for Treatment of Communications, Electronic, and Associated Equipment)	2390
MIL–C–450	Coating–compound, Bituminous Solvent Type, Black (for Ammunition)	2540
MIL–E–480	Enamel, Baking, Phenol– or Urea– formaldehyde	2480
MIL–F–495	Finish, Chemical, Black, for Copper Alloys	S
MIL–T–704H	Treatment and Painting of Material	System Specification
MIL–E–1115	Enamel, Interior, Alkyd, White (Formula No. 30)	5341
MIL–L–2638	Lacquer, Vinyl Resin, Gasoline and Water Resistant	5339
MIL–R–3043	Resin Coating, Unpigmented for Engine Components and Metal Parts	5600
MIL–L–3150	Lubricating Oil, Preservative, Medium	QM
MIL–M–3171	Magnesium Alloy, Processes for Pretreatment and Prevention of Corrosion on	
MIL–C–3301	Compound, Asphaltic, Hot Melt (Cavity Lining)	5338
MIL–L–3891	Luminescent Material and Equipment (Nonradioactive)	5350
MIL–S–4383	Sealing Compound, Topcoat, Fuel Tank, BUNA–N– Type	5550
MIL–E–4556	Coating Kit, Epoxy, for Interior of Steel Fuel Tanks	5325
MIL–S–5002C	Surface Treatments and Inorganic Coatings for Metal Surfaces of Weapon Systems	System Specification
MIL–W–5044	Walkway Compound, Nonslip and Walkway Matting Nonslip	5010

Specification Identification	Title	MIL-HDBK-1516 Code No.
MIL-W-5050	Walkway, Coating and Matting, Nonslip Aircraft, Application of	5010
MIL-C-5056	Coating, Permanent Resin, Process for Application of, to Aircraft Parts	5600
MIL-C-5541	Chemical Conversion Coatings on Aluminum Alloys	C
MIL-E-5558	Enamel, Wrinkle-finish, for Aircraft Use	2530
MIL-F-7179E	Finishes and Coatings: Protection of Aerospace Weapons Systems, Structures and Parts, General Specifications for	System Specification
MIL-C-7439	Coating System, Elastomeric, Rain Erosion Resistant with Anti-static Treatment, for Exterior Aircraft and Missile Plastic Parts	2701, 2702 5337
MIL-C-7460	Chromium Plating, Porous Channel Type, Aircraft Engine Cylinders, General Specification for	1162
MIL-R-7705	Radomes, General Specification for	2700
MIL-P-7962	Primer Coating, Cellulose Nitrate Modified Alkyd Type, Corrosion Inhibiting Fast Drying (for Spray Application Over Pretreatment Coating) (Primers for MIL-L-19537 and MIL-L-19538)	2100
MIL-C-8514	Coating Compound, Metal Pretreatment, Resin-Acid (Primers for MIL-L-19537 and MIL-L-19538)	2100
MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys	A
MIL-S-8784	Sealing Compound, Low Adhesion, for Removable Panels and Fuel Tank Inspection Plates	5540
MIL-S-8802	Sealing Compound, Temperature Resistant, Integral Fuel Tanks and Fuel Cell Cavities, High Adhesion	5510
MIL-C-8837	Coating, Cadmium (Vacuum Deposited)	1020
MIL-T-10727	Tin Plating, Electrodeposited or Hot-Dipped, for Ferrous and Nonferrous Metals	1430
MIL-S-11030	Sealing Compound, Non-curing, Polysulfide Base	5332
MIL-S-11031	Sealing Compound, Adhesive, Curing (Polysulfide Base)	5331
MIL-L-11195	Lacquer, Lusterless, Hot Spray	2430
MIL-P-11414	Primer Coating, Lacquer Rust Inhibiting	2230
MIL-V-12276	Varnish Phenolic, Baking	2111
MIL-T-12664	Treatment, Fungus Resistant, Paranitrophenol, for Cork Products	TA
MIL-P-12742	Primer Coating, Phenolic, Water Immersible	2460
MIL-E-16663	Enamel, Semi-gloss (for Metal Surfaces of Ammunition and Ammunition Containers)	2298
MIL-E-16738	Enamel, Exterior, White, Vinyl-alkyd (Formula No. 122-82)	2380
MIL-E-17970	Enamel, Nonflaming (Dry), Chlorinated Alkyd Resin, Soft White, Semi-gloss, Formula No. 124/58	2297
MIL-F-18264	Finishes, Organic; Weapons Systems, Application and Control of	2100, 2200 2700, 2800
MIL-P-18317	Plating, Black Nickel (Electrodeposited) on Brass, Bronze, or Steel	1225
MIL-L-19537	Lacquer, Acrylic Nitrocellulose Gloss (for Aircraft use)	2100
MIL-L-19538	Lacquer, Acrylic Nitrocellulose, Camouflage (for Aircraft use)	2100

Specification Identification	Title	MIL-HDBK-1516 Code No.
MIL-C-20218	Chromium Plating, Electrodeposited, Porous	1161
MIL-P-20689	Plastic, Plastisol (for Coating Metallic Objects)	2276
MIL-T-21330	Treatment, Insect Resistant, for Paper	TD
MIL-P-21563	Paint System, Fluorescent for Aircraft Application	5300
MIL-P-21600	Paint System, Fluorescent, Removable, for Aircraft Application	5335
MIL-P-22332	Paint, Priming, Exterior and Interior (for Ammunition)	2590
MIL-P-22636	Primer Coating, for Red Fuming Nitric Acid Resistant Paint	2560
MIL-P-22735	Film, Elastomeric, Fluorescent, for Weapon Systems	5310
MIL-C-22750	Coating, Epoxy-polyamide	2360
MIL-C-22751	Coating System, Epoxy-polyamide, Chemical and Solvent Resistant, Process for Application of	2292
MIL-D-23003	Deck Covering Compound Nonslip, Lightweight	5110
MIL-C-23217	Coating, Aluminum, Vacuum Deposited	1060
DOD-C-23236	Paint Coating Systems, Steel Ship Tank, Fuel and Salt Water Ballast	5334
MIL-T-12879	Treatment, Chemical Prepaint and Corrosion Inhibitive, for Zinc Surfaces	Z
MIL-S-13518	Wood Preservative, Tetrachlorophenol and Pentachlorophenol, Surface Sealing Compound	3507
MIL-L-13762	Lead Alloy Coating, Hot Dip (for Iron and Steel Parts)	1515
MIL-L-13808	Lead Plating (Electrodeposited)	1510
MIL-C-13924	Coating, Oxide, Black for Ferrous Metals	R
MIL-F-14072	Finishes for Ground Electronic Equipment	System Specification
MIL-P-14105	Paint Heat Resisting (for Steel Surfaces)	5260
MIL-P-14458	Paint, Rubber, Red Fuming Nitric Acid Resistant	2570
MIL-C-14486	Lacquer, Vinyl Resin, Semi-gloss	2110
MIL-C-14538	Chromium Plating, Black (Electrodeposited)	1160
MIL-C-14550	Copper Plating (Electrodeposited)	1420
MIL-P-14553	Primer Coating, Dipping Automotive	2255, 2500
MIL-E-15090	Enamel, Equipment, Light Gray (Formula 11)	2299
MIL-P-15328	Primer (Wash), Pretreatment, (Formula No. 117 for Metals)	2210, 2282
MIL-P-15929	Primer Coatings, Shipboard, Vinyl-Red Lead (Formula No. 119)	2295
MIL-P-15930	Primer Coating, Shipboard, Vinyl-Zinc Chromate (Formula No. 120 – for Hot Spray)	2260
MIL-P-15931	Paint, Anti-fouling, Vinyl (Formula No. 121 and No. 129)	5336
MIL-P-15935	Paint, Outside, Gray (Vinyl alkyd) (Formula No. 122-11)	2294
MIL-E-15936	Enamel, Exterior, Gray, No. 27 (Vinyl-alkyd)	2293
MIL-T-16070	Treatment, Mildew-Resistant, for Rope	TB
MIL-C-16173	Corrosion Preventive Compound, Solvent Cutback, Cold Application	R
DOD-P-16232	Phosphate Coatings, Heavy Manganese or Zinc Base (for Ferrous Metals)	QM
MIL-P-23377	Primer Coating, Epoxy Polyamide, Chemical and Solvent Resistant (Primer for Code 2200, 2300, 2802)	2200, 2225
MIL-P-23408	Plating, Tin-Cadmium (Electrodeposited)	1440
MIL-C-23422	Chromium Plating, (Electrodeposited)	1180

Specification Identification	Title	MIL–HDBK–1516 Code No.
MIL–C–23675	Coating, Anti–fouling, Hull Bottom for Weapons Systems	5333
MIL–I–24092	Insulating Varnish, Electrical, Impregnating, Solvent Containing	5346
MIL–C–24441	Paint, Epoxy–polyamide, General Specification for (MIL–C–22441 –1 thru –7)	2291
MIL–L–25142	Luminescent Material, Fluorescent	2288
MIL–C–26074	Coating, Electroless, Nickel, Requirements for	1210
MIL–P–26915	Primer Coating, Zinc Dust Pigmented, for Steel Surfaces	2281
MIL–C–27227	Coating, Polyurethane, for Aircraft Application	2802 5200
MIL–C–27315	Coating System, Elastomeric, Thermally Reflective and Rain Erosion Resistant	2703
MIL–P–27418	Plating, Soft Nickel (Electrodeposited), Sulfamate Bath	1226
MIL–C–27725	Coating, Corrosion Preventive, for Aircraft Integral Fuel Tanks	5520
MIL–A–38267	Application of Polyurethane Fuel Tank Coatings	5520
MIL–P–38336	Primer Coating, Inorganic, Zinc Dust Pigmented, Self–Curing, for Steel Surfaces	2280
MIL–A–40147	Aluminum Coating (Hot–Dip) for Ferrous Parts	1045
MIL–M–45202	Magnesium Alloys, Anodic Treatment for	M
MIL–G–45204	Gold Plating (Electrodeposited)	1350
MIL–P–45209	Palladium Plating (Electrodeposited)	1470
MIL–I–46058	Insulating Compound, Electrical (for Coating Printed Circuit Assemblies)	5344
MIL–L–46064	Lead Tin Alloy Coating (Electrodeposited)	1450
MIL–P–46085	Rhodium Plating (Electrodeposited)	1480
MIL–P–46093	Primer Coating, Synthetic (for Brake Drums)	2275
MIL–E–46096	Enamel, Lusterless, Quick Drying, Styrenated Alkyd Type, Solar Heat Reflecting	5250
MIL–P–46105	Primer Coating, Weld–through Zinc–rich	5345
MIL–E–46117	Enamel, Alkyd, Lusterless, Solar Heat Reflecting, Olive Drab	5210
MIL–C–46127	Coating, Gray, Undercoat (Solar Heat Reflecting)	5230
MIL–E–46136	Enamel, Semi–gloss, Alkyd, Solar Heat Reflecting, Olive Drab	5220
MIL–E–46138	Lacquer, Lusterless, Acrylic–Nitrocellulose, Solar Heat Reflecting, Olive Drab	5240
MIL–E–46139	Enamel, Semi–gloss, Rust–inhibiting Solar Heat Reflecting, Olive Drab	5235
MIL–L–46142	Lacquer, Lusterless, Solar Heat Reflecting	5245
MIL–L–46159	Lacquer, Acrylic, Low Reflective	5245
MIL–C–46168	Coating, Aliphatic Polyurethane, Chemical Agent Resistant	2279
MIL–S–46844	Solder Bath Soldering of Printed Wire Assemblies	1460
MIL–P–46847	Plastic Material, Foamed Polyurethane for Encapsulating Electronic Components	5343
MIL–P–46856	Primer Coating Epoxy, Process, for Application of	2290
MIL–P–47141	Plating, Ternary Alloy (Electrodeposited)	1520
MIL–P–47184	Plating, Nickel Tungsten, Electrodeposit on Aluminum Alloys, by Selective (Brush) Method	1250
MIL–P–50002	Phosphate Coating Compounds for Phosphatizing Ferrous Metals	QM, QZ

Specification Identification	Title	MIL–HDBK–1516 Code No.
MIL–L–52043	Lacquer, Semi–gloss, Cellulose Nitrate	2350
MIL–P–52192	Primer Coating, Epoxy	2220
MIL–E–52227	Enamel, Semi–gloss, Quick Drying	2340
MIL–E–52798	Enamel, Alkyd, Camouflage	2278
MIL–E–52835	Enamel, Modified Alkyd, Camouflage, Lusterless	2296
MIL–E–52891	Enamel, Lusterless, Zinc Phosphate, Styrenated Alkyd Type	2118
MIL–L–52909	Lacquer, Acrylic, camouflage, Lusterless	2326
MIL–L–52926	Lacquer, Camouflage, Lusterless Hot Spray, Forest Green	2327
MIL–E–52929	Enamel, Alkyd, camouflage, Flash Dry	2328
MIL–N–55392	Nickel–Carbon, Porous, Electrodeposited for Camouflage	1230
MIL–C–60536	Coating, Anodic Hard for Aluminum and Aluminum Alloys	AH
MIL–C–60539	Coating, Anodic, Conventional for Aluminum and Aluminum Alloys	AB
MIL–L–81352	Lacquer, Acrylic (for Naval Weapons Systems)	2200
MIL–C–81562	Coating, Cadmium, Tin–Cadmium, and Zinc (Mechanically Deposited)	1030
MIL–C–81706	Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys	C
MIL–P–81728	Plating, Tin Lead (Electrodeposited)	1450
MIL–S–81733	Sealing and Coating Compound, Corrosion Inhibiting	5518
MIL–C–81740	Coating, Aluminum and Aluminum Alloys (Metallic Compound Decomposition)	1046
MIL–C–81751	Coating, Metallic Ceramic	1500
MIL–C–81797	Coating, Inorganically Bonded Aluminum Electrophdrictically deposited	1059
MIL–A–81801	Anodic Coating for Zinc and Zinc Alloys	MZ
MIL–C–83019	Coating, Polyurethane, for Protection of Integral Fuel Tank Sealing Compound	5530
MIL–C–83445	Coating System, Polyurethane Non–yellowing, White, Rain Erosion Resistant Thermally Reflective	2708
MIL–C–83466	Coating, Polyurethane, Aliphatic Isocyonate, Thermal Flux Resistant, for Aerospace Applications	5205
MIL–C–83231	Coatings, Polyurethane, Rain Erosion Resistant for Exterior Aircraft and Missile Plastic Parts	2704, 2705
MIL–C–83286	Coating, Urethane, Aliphatic Isocyanate, for Aerospace Applications	2300, 2310
MIL–C–83488	Coating Aluminum Ion Vapor Deposited	1065
MIL–P–87112	Primer Coating, Elastomeric, Polysulfide Corrosion Inhibiting	2310
MIL–C–87115	Coating. Immersion Zinc Flake/Chromate Dispersion	1325

Specification Identification	Title	MIL-HDBK-1516 Code No.
STANDARDS		
FEDERAL		
FED-STD-595	Colors	
MILITARY		
MIL-STD-171	Finishing of Metal and Wood Surfaces	System Standard
MIL-STD-186	Protective Finishing for Army Missile Weapons Systems	System Standard
MIL-STD-193	Finishing Procedures, Tactical Vehicles (Tracked and Wheeled)	System Standard
MIL-STD-194	Systems for Painting and Finishing Fire-Control Materiel	System Standard
MIL-STD-753	Corrosion Resistant Steel Parts, Sampling, Inspection, and Testing for Surface Passivation	P
MIL-STD-808	Finishes, Protective, and Codes for Finishing Schemes for Ground Support Equipment	System Standard
MIL-STD-865	Brush Plating, Electro Deposition	1240
MIL-STD-868	Nickel Plating, Low Embrittlement, Electrodeposition	1200
MIL-STD-870	Cadmium Plating, Low Embrittlement, Electrodeposition	1040
MIL-STD-1303	Painting of Naval Ordnance Equipment	System Standard
MIL-STD-1501	Chromium Plating, Low Embrittlement, Electrodeposition	1170
HANDBOOKS		
MILITARY		
MIL-HDBK-132A	Protective Finishes for Metal and Wood Surfaces	
OTHERS – INDUSTRY SPECIFICATIONS		
AEROSPACE MATERIAL SPECIFICATIONS – SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)		
AMS 2400	Cadmium Plating	1010
AMS 2401	Cadmium Plating, Low Hydrogen Content Deposit	1010
AMS 2402	Zinc Plating	1300
AMS 2403	Nickel Plating, General Purpose	1200
AMS 2404	Electroless Nickel Plating	1210
AMS 2405	Electroless Nickel Plating, Low Phosphorus	1210
AMS 2406	Chromium Plating, Hard Deposit	1150
AMS 2407	Chromium Plating, Porous	1161
AMS 2408	Tin Plating	1430
AMS 2410	Silver Plating, Nickel Strike, High Bake	1400
AMS 2411	Silver Plating, for High Temperature Applications	1400
AMS 2412	Silver Plating, Copper Strike, Low Bake	1400

Specification Identification	Title	MIL-HDBK-1516 Code No.
AMS 2414	Lead Plating	1510
AMS 2415	Lead and Indium Plating	1510
AMS 2418	Copper Plating	1420
AMS 2419	Cadmium-Titanium Alloy Plating	1010
AMS 2422	Gold Plating, Electronic Applications	1350
AMS 2423	Nickel Plating, Hard Deposit	1200
AMS 2424	Nickel Plating, Low Stressed Deposit	1200, 1226
AMS 2425	Gold Plating, for Thermal Control	1350
AMS 2426	Cadmium Plating, Vacuum Deposition	1020
AMS 2468	Hard Coating Treatment of Aluminum Alloys	AW
AMS 2469	Process and Performance Requirements for Hard Coating Treatment of Aluminum Alloys	AW
AMS 2470	Anodic Treatment of Aluminum Alloys, Chromic Acid Process	AC
AMS 2471	Anodic Treatment of Aluminum Alloys, Surfacing Acid Process, Undyed Coating	AS
AMS 2472	Anodic Treatment of Aluminum Base Alloys, Sulfuric Acid Process, Dyed Coating	AS
AMS 2473	Chemical Treatment for Aluminum Alloys, General Purpose Coating	CC, Q
AMS 2474	Chemical Treatment for Aluminum Base Alloys (Low Electrical Resistance Coating)	CR
AMS 2475	Protective Treatments, Magnesium Base Alloys	N
AMS 2476	Electrolytic Treatment, Magnesium Base Alloys, Alkaline Type, Full Coating	2283
AMS 2478	Anodic Treatment of Magnesium Base Alloys, Acid Type, Full Coat	MH
AMS 2479	Anodic Treatment of Magnesium Base Alloys, Acid Type, Thin Coat	MC
AMS 2480	Phosphate Treatment, Paint Base	Q
AMS 2481	Phosphate Treatment, Anti-Chafing	Q

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale PA 15096).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A123	Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip, Specification for	1310
ASTM A153	Zinc Coating (Hot Dip) on Iron and Steel Hardware, Specification for	1320
ASTM A164	Electrodeposited Coatings of Zinc on Steel, Specification for	1300
ASTM A165	Electrodeposited Coatings of Cadmium on Steel, Specification for	1010
ASTM A380	Cleaning and Descaling Stainless Steel Parts, Equipment and Systems, Recommended Practice for	P
ASTM B177	Chromium Plating on Steel for Engineering Use, Recommended Practice for	1150

Specification Identification	Title	MIL-HDBK-1516 Code No.
ASTM B200	Electrodeposited Coatings of Lead and Lead-Tin Alloys on Steel and Ferrous Alloys, Specification for	1510
ASTM B201	Chromate Coatings on Zinc and Cadmium Surfaces, Recommended Practice for Testing	Z
ASTM B253	Preparation of and Electroplating on Aluminum Alloys by the Zincate Process, Recommended Practice for	U
ASTM B454	Mechanically Deposited Coatings of Cadmium and Zinc on Ferrous Metals, Specification for	1030
ASTM B456	Electrodeposited Coatings of Nickel/Cadmium, Specification for	1200
ASTM B488	Electrodeposited Coatings of Gold for Engineering Uses, Specification for	1350
ASTM B499	Coating Thicknesses by the Magnetic Method, Nonmagnetic Coatings on Magnetic Basis Metals, Measurement of	C
ASTM B545	Electrodeposited Coatings of Tin, Specification for	1430
ASTM B579	Electrodeposited Coatings of Tin-Lead Alloy (Solder Plate), Specification for	1450
ASTM B580	Anodic Oxide Coatings on Aluminum, Specification for	AC, AS, AW
ASTM D2092	Preparation of Zinc-Coated Steel Surfaces for Painting, Recommended Practices for	Z

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia PA 19103).

APPENDIX B

CROSS REFERENCE TO MIL-STD-171D CODE SYSTEM FINISHING OF METAL AND WOOD SURFACES

MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.	MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.
4.6	2215, 5332	1.2.2.2	1156
4.7.1	5532	1.2.2.3	1157
4.9	2390	1.2.2.4	1158
4.12	5345	1.2.2.5	1159
5.1.1	1020, 1030	1.2.3	1230
5.2.1	2100, 2200, 2210	1.2.4	1160
	2700, 2800	1.2.5	1161
5.2.2	2235, 2240, 2330	1.3.1	1510
	2400, 2410, 2420	1.3.2	1510
	2430	1.3.3	1515
5.3.1	2215, 2225, 2230,	1.4	1200
	2235, 2240, 2245,	1.4.1	1201
	2260		
5.3.2	2210, 2215, 2225,	1.4.2	1202
	2230, 2235, 2240,	1.4.3	1210
	2245, 2260	1.4.3.1	1211
		1.4.3.2	1212
		1.4.4	1225
		1.7	1400
		1.7.1	1402
Finish No.			
1.1.1.1	1011	1.7.2	1404
1.1.1.2	1014	1.7.3	1406
1.1.1.3	1017	1.7.4	1401
1.1.2.1	1012	1.7.5	1403
1.1.2.2	1015	1.7.6	1405
1.1.2.3	1018	1.8	1430
1.1.3.1	1013	1.8.1	1431
1.1.3.2	1016	1.8.2	1432
1.1.3.3	1019	1.9	1300
1.1.4.1	1021	1.9.1.1	1301
1.1.4.2	1024	1.9.1.2	1302
1.1.4.3	1027	1.9.1.3	1303
1.1.5.1	1022	1.9.2.1	1304
1.1.5.2	1025	1.9.2.2	1305
1.1.5.3	1028	1.9.2.3	1306
1.1.6.1	1023	1.9.3.1	1307
1.1.6.2	1026	1.9.3.2	1308
1.1.6.3	1029	1.9.3.3	1309
1.1.7	1030	1.9.4	1320
1.2	1150	1.10	1420

APPENDIX B

CROSS REFERENCE TO MIL-STD-171D CODE SYSTEM FINISHING OF METAL AND WOOD SURFACES

MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.	MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.
1.2.1	1151	1.10.1	1421
1.2.1.1	1152	1.10.2	1422
1.2.1.2	1153	1.10.3	1423
1.2.2	1154	1.10.4	1424
1.2.2.1	1155	1.11	1350
1.11.1	1351, 1352, 1353	20.2	2430
1.11.2	1354, 1355, 1356	20.4	2230, or 2245, 2430
1.11.3	1357	20.5	2230, or 2245, 2420
1.12.1	1045	20.8	2240, or 2245, 2320
1.12.2	1060	20.9	2245, 2440
1.13	1470	20.10	2230, or 2245, 2265
1.14	1480		2430
3.2	S	20.13	2460, or 2470
3.3	R	20.18, 20.19	2460, 2470
		20.20, 20.21	2460, 2470
		20.22, 20.23	
		20.24	
3.3.1	RA	21.1	2400
3.3.2	RB	21.3	2240 or 2245
3.3.3	RC		2230 (2410)
3.3.4	RD	21.5	2220, 2400
Table V	Q	21.7	2220, 2480
5.1.1	QA	21.9	2240 or 2245
5.3.1	QM		2330 (2410)
5.3.1.1	QMA	21.11	2330 or 2245, 2350
5.3.1.2	QMB	21.12	2230 or 2245, 2265
5.3.1.3	QMC		2350
5.3.2	QZ	21.13	2230 or 2245, 2350
5.3.2.1	QZA		
5.3.2.2	QZB	21.19	2215, 2400
5.3.2.3	QZC	21.20	2255 or 2245, 2400
5.3.2.4	QZG		or 2330
5.4.1	P	21.21	2245 or 2230, 2340
5.4.2	P	22.2	2240 or 2245, 3503
6.1	Z	22.3	2230 or 2245, 2510
7.1	AC	22.4	2230 or 2245, or 2265
7.2	AS		2510
7.3	C	22.9	2255 or 2245, or 3503
7.3.1	CC	22.10	No code
7.3.2	CC	23.1	2235, 2530
7.3.3	CR		
7.5	AW	24.1	5345
8.1	M	24.2	2540

APPENDIX B

CROSS REFERENCE TO MIL-STD-171D CODE SYSTEM FINISHING OF METAL AND WOOD SURFACES

MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.	MIL-STD-171D Finish No.	MIL-HDBK-1516 Code No.
8.1.1	MC	24.3	2550
8.1.2.2	MH	24.4	2560, 2570
8.2	NA	24.5	2804
8.4	NB	24.6	2590
8.5	NC	24.7	2600
8.6	ND	24.8	2610
8.7	2210	24.9	2225, 2330
8.8	NE	24.10	2630
8.9	NF	24.11	2220
20.1	2420	24.12	2215
24.13	2113	28.1	2240, 3503
24.14	5325	28.2	2270, 3503
24.15	5334	28.3	not coded (TT-F-336)
24.16	2280		3501
24.17	2225, 2360	28.5	2113
24.18	2245, 5225, 5250	29.1	3501
24.19	2240, 5225, 5210	29.2	2113, 3501
24.20	2245, 5225, 5240	29.3	2113, 2116
24.21	5220	29.4	2113, 2430
24.21.1	2240, 5225, 5220 (I)	29.5	2113, 3501
24.21.2	2245, 5225, 5220 (II)	29.6	3501
		29.7	
24.21.3	2245, 5225, 5220 (III)	29.8	2287
		30.1	
24.22	5230	30.2	5110
24.22.1	5230 (I)	30.3	5010
24.22.2	5230 (II)	30.4.1	2288
24.23			
24.24			
Table XVII	3508	30.4.2	5350
(25.1, 25.2,	(3509, 3510, 3511)	30.4.3	5350
25.3)		30.5	2390
26.1	2240, 3503, + 3503	30.6	5344
		30.7	
		30.8	
26.3	2460, 2470	Appendix A	5600
27.1	2240, 3503	Class 60	
27.3	2235 or 2240, 2400 or 3503		

APPENDIX C

CROSS REFERENCE TO MIL–STD–186D CODE SYSTEM PROTECTIVE FINISHING FOR ARMY MISSILE WEAPON SYSTEMS

MIL–STD–186D has the following tables containing the MIL–STD–186D codes:

Table	Title	Code Number
I	Cleaning Methods	100 series
II	Surface Treatments	200 series
III	Metallic Coatings	300 series
IV	Organic Coatings	400 series
V	Sealing and Bonding	500 series
VI	Encapsulants and Potting Compounds	600 series
VII	Lubrication and Preservation	700 series
VIII	Miscellaneous	800 series

MIL–STD–186D Code No.	MIL–HDBK–1516 Code No.	MIL–STD–186D Code No.	MIL–HDBK–1516 Code No.
201	AC	311	1024
202	AS	312	1027
203	AS(?)	313	1022
207	AW	314	1025
208	CC	315	1028
209	M(?) N(?)	316	1023
210	QA	317	1026
213	S	318	1029
214	R	319	1152
216	P	320	1154
217	3508 or 3509	322	1160
218	3508 or 3510	323	1161
219	3508 or 3510	324–333	1201
220	TA	334	1202
221	TB	337	1225
222	TC	338	1401
223	TD	339	1402
224	MZ	340–343	1335
301	1011	344	1431
302	1014	345	1432
303	1017	346	1460
304	1012	347	1482
305	1015	348	1488
306	1018	349	1421
307	1013	350	1422
308	1016	351	1423
309	1019	352	1424
310	1021	353–355	1351

APPENDIX C

CROSS REFERENCE TO MIL-STD-186D CODE SYSTEM PROTECTIVE FINISHING FOR ARMY MISSILE WEAPON SYSTEMS

MIL-STD-186D Code No.	MIL-HDBK-1516 Code No.	MIL-STD-186D Code No.	MIL-HDBK-1516 Code No.
356	1226	409	5250
357	1170	410	5225
358	1040	411	5210
359	1441	412	5220
360	1442	413	5220
361	1443	414	5220
362	1450	415	2320
363	1032	420	2320
364	1035	425	2330
365	1038	437	2330
366	1500	449	2340
367	1061	461	2340
368	1062	473	2350
369	1045	485	2360
370	1046	486	2360
371	1059	487	2360
372	1470	488	2360
373	1240	489	5350
374	1211, 1213	490	2288
375	1212	491, 492	5010
376	1217	495	2370
377	1220	496	2380
378	1214	497	2390
380	1230	503	5510
401	2210	504	2215
402	2215	507	5550
403	2215	511	5332
404	2220	512	5331
405	2220	524	5518
406	2230	603–606	5344
407	2206 or 2225	607	5343
408	2204 or 2225		

APPENDIX D

CROSS REFERENCE TO MIL-STD-193K TABLES
PAINTING PROCEDURES, TACTICAL VEHICLES (TRACKED AND WHEELED)

No codes are used in MIL-STD-193K. Methods and processes are approved through citation in tables. MIL-HDBK-1516 Code Numbers are shown in parentheses.

Table II – Paint Finishes for Non Ferrous Surfaces

A1	1. (C or A) 2. (2250, 2215, 2230, or 2225) 3.a. (– or 2510 or 3100) b. (2330, 2400, 2297, 2340, or 2350) c. (2320 or 2430) d. (2278, 2296, 2326)
Mg	1. (MC or NB) 2. (2225) 3.a. (– or 2510 or 3100) b. (2330, 2400, 2340, or 2350) c. (2320 or 2430) d. (2278, 2296, 2326)
Cd, Cu, etc	2. (2250, 2215, or 2230) 3.a. (– or 2510 or 3100) b. (2330, 2400, 2340, or 2350) c. (2320 or 2430) d. (2278, 2296, 2326)

Table II – Paint Finishes for Wood

Enamel	1. (2240, 2270, or 2235) 2.a. (3503) b. (3503 or 2400) c. (3503) d. (2278, 2296)

Table III – Paint Finishes for Iron and Steel

Enamel	3. (2240, 2245, 2235, 2250, 2215, or 2255) 4.b. (2330, 2400, 2297, or 2340) c. (2320) d. (2278, 2296)
Lacquer	3. (2230, 2250, 2215, or 2245) 4.a. (2510 or 3100) b. (2350) c. (2430) d. (2326)

APPENDIX D

Table III – Paint Finishes for Fiberglass-Reinforced Plastic Parts

Enamel	1. (2210) 2.b. (2330 or 2400) c. (2278, 2296) d. (2278, 2296)
Lacquer	1. (2210) 2.a. (2510, or 3100) b. (2530) c. (2430) d. (2326)

Table III – Special Finish Requirements

Ammunition Containers, etc.	Ferrous 2. (QA) 3. (2111 or 2360) Aluminum 1. (C or A)
Battery Boxes, etc.	2. (QA) 3. (2276 or 2360)
Brake Drums	(2275)
Corrosion-Resistant Steels	(P)
Dissimilar Metals	2. (2250 or 2215)
Engines	(2330, 2400, —, 2340, or 2350)
Epoxy Coatings (not exterior)	Ferrous 2. (QA) 3. (2220) 4. (2360 or 2610) Aluminum 1. (C or A) 2. (2225) 3. (2360 or 2610)

APPENDIX D

Table III – Special Finish Requirements – (continued)

Heat-Resisting Paints	Ferrous – (5260) A1 – (2804 – 5260)
Non-Slip Coating	(5012, 5013, or 5110)
Solar-Heat-Reflecting	1.c. (2240, 2250, 2215, 2245, 2255) d. (5225) e-1. (5220) e-2. (5250, 5210, or 5240) 2.a. (C) b. (2250 or 2215) c-1. (5220 or 5230) c-2. (5250, 5210, 5240)
Undercoating	(2550)
Weld Through Primer	2. (5345)

Table IV – Metallic Coatings

A1	(1045)
Cd	(1012, 1015, or 1018) (1032, 1035, or 1038)
Cr	(1154) (1160) (1160) (1161)
Cu	(1420)
Au	(1350)
Pb	(1510) (1515)
Ni	(1200) (1212)
Ag	(1400)
Sn	(1430)
Sn-Cd	(1440)
Zn	(1304, 1305, or 1306) (1310, 1320, plus Z)

APPENDIX D

Table V – Miscellaneous Treatments

—A1	(AC or AS)
—A1	(AW)
—Mg	(M)
—Cu	(S)
—Fe	(R)
—A1	(C)
—Zn	(Z)
—Mn	(QM)
—Fe	(P)
—Zn	(QZ)
—Zn	(QA)

APPENDIX E

CROSS REFERENCE TO MIL-STD-194A SYSTEMS FOR PAINTING AND FINISHING FIRE-CONTROL MATERIAL

MIL-STD-194A contains the following tables, which specify "items". Paragraph 4.4 of MIL-STD-194A uses MIL-HDBK-1516 Code Numbers 5330 or 5331. MIL-HDBK-1516 Code Numbers are shown in parentheses in the following tables for their respective "items."

Table I of MIL-STD-194A

Item 1. MIL-STD-171 System 21.5 (2235; 2400)
2. MIL-STD-171 System 21.6 Discontinued, use 21.3
3. MIL-STD-171 System 21.16 Discontinued, use 1.9.3.3 and 21.5 or 21.3
4. MIL-STD-171 System 21.16 Discontinued, use 1.9.3.3 and 21.9
5. MIL-STD-171 System 23.1 (2235; 2530)
6. MIL-STD-171 System 23.2 Discontinued, use 23.1
7. MIL-STD-171 System 21.6 Discontinued, use 21.3
8. MIL-STD-171 System 21.7 (2220; 2480)
9. MIL-STD-171 System 20.11 Discontinued, use 20.8
10. MIL-STD-171 System 20.1 (2420)

Table II or MIL-STD-194A

Item 1. (2235)
2. —
3. —
4. (2220)
5.
6.
7.

Table III of MIL-STD-194A

Item 1. (2235 or 2240 and 2400 or 3503)
2. —
3. (3501)
4. (3501)
5. —
6. (2113)
7. (2113 or 3501)
8. (2113 or 2116)
9. (2113 or 2430)

APPENDIX E

Table IV of MIL-STD-194A – not coded

Table V of MIL-STD-194A

Item 1. (1011)
2. (1150)
3. (1510)
4. (1200)
5. —
6. —
7. (1400)
8. (1430)
9. (1300)
10. —
11. —

Table VI of MIL-STD-194A

Item 1. —
2. (S)
3. (R)
4. (Q; QZ)
5. —

Table VII of MIL-STD-194A

Item 1. (AC, AS)

Table VIII of MIL-STD-194A

Item 1. (M)
2. (NA)
3. —
4. (NB)
5. (NC)

APPENDIX F

CROSS REFERENCE TO MIL–STD–808A CODE SYSTEM

FINISHES, PROTECTIVE, AND CODES, FOR FINISHING SCHEMES FOR GROUND AND GROUND SUPPORT EQUIPMENT

MIL–STD–808A, Paragraph 5.3.2.5 covers Code N in MIL–HDBK–1516
MIL–STD–808A, Paragraph 5.3.2.2.2 covers Code Z in MIL–HDBK–1516

MIL–STD–808D Finish Code No.	MIL–HDBK–1516 Code No.	MIL–STD–808D Finish Code No.	MIL–HDBK–1516 Code No.
F–100	Q, 2215, and 2240 or 2245	FF–906	2112
		FF–907	5325
F–101	2281	FF–908	2530
F–102	2230	FF–909	2302; 2802
F–103	2282 and 2240 or 2245		
		P–106	1150
F–200	2282 and 2235, 2215, or 2460	P–114	1012 or 1013
		P–115	1012
F–211	2282, and 2215 or 2240	P–116	1300
		P–150(?)	1200
F–301	A; 2230	P–161	1016
F–302	C; 2282; 2215	P–162	1015
F–303	C; 2282; 2230	P–163	1300
F–400	NB; 2282; 2215	P–170	1017
F–500	3507; 2240		
F–501	3507; 2230	D–200	P
F–502	3501	D–210	RB
F–503	2112; 3103	D–350	A
FF–905	2630	D–351	C

Most of the finish processes in MIL–STD–808A have, as the last step, a final finish that is selected from Tables II, III, and IV, which list specifications and color code.

Code numbers from MIL–HDBK–1516 for the tables follow:

TABLE II	3503
TABLE III	2330
TABLE IV	2320 or 3503
	5260 and 2320 or 3503

Primers for these three tables have the following MIL–HDBK–1516 code numbers: 2240, 2245, 2215, 2282, or 2281.

APPENDIX G

CROSS REFERENCE TO MIL–STD–1303B CODE SYSTEM PAINTING OF NAVAL ORDNANCE EQUIPMENT

MIL–STD–808D Finish Code No.	MIL–HDBK–1516 Code No.	MIL–STD–808D Finish Code No.	MIL–HDBK–1516 Code No.
7	2215, 2320	54	2215; and 3100,
9	2215 and 2298 or 2330		2440, 2420, or
10	2804		2298; and 2115
12	3503; 2117	55	2230; 2430
13	2215 and 2410 or 2330	56	2102
14	2215; 3503	56A	2102
14A	2215; 3503	57	2360
14B	2215; 5341	58	2214; 2215
14C	2215; 2297		and 2440
17	3103	59	3106; 3107
22	2215, 2235, or 3505	60	2210 and 2114 or
	and 2217		2210 and 2115;
25	2215; 5340		and 2298
27	3103	62	2214; 2400
31	3501, 2111, or 5342	63	2210; 2260, and 2293
33	2113		3100
36	2113	64	5339; 5350 and 3100
37	2215 (2265);	65	2215; 2420
	2299	66	2100 and 2107; 5333
37A	2215 (2265); 2299	67	2590; 3503
42	5346	69	5530 or 2291
46	2215 and 2400;	70	5600
	2420	71	3503
46A	2215; 2420	72	2215; 2702 or 2703
47	2540 or 5338	73	2100; 2260; 2293
48	2210 and 2260;	74	2100; 2260; 2701
	5336	75	2206; 2360
48A	2210 and 2295 or	76	2215; 3503
	2260; and 2380	77	2215; 2320
49	2210; 2260; 2295;	78	5510
	and 2294	79	3106; 3107; 5300
50	2480	79A	2106; 2107; 5335
50A	2470	80	5334 or 2291
51	3106 and 3107;	80A	5334 or 2117
	5350 and 3107	81	2265; 2210; 5250
52	2210, 2215 and 2298	Para 4.3	2245
53	2260; 2294	Para 5.6.2.1.3	3508

APPENDIX H

CROSS REFERENCE TO MIL-T-704J CODE SYSTEM TREATMENT AND PAINTING OF MATERIEL

MIL-T-704J Paragraph	MIL-HDBK-1516 Code No.
3.2.1	2210 or QA
3.2.1.1	2210 or A or C
3.2.2	NA or NB
3.2.3	3507 or 3508
3.2.5	P; 2210 or 2100
3.3.4.1	2278
3.3.5	2320 or 3503
	2330
3.3.8	5260 or 2804
6.8	2235, 2240, 2114, 2225, or 2220

TABLE I: In order of cited specification, the MIL-HDBK-1516 Code No. is 2235 or 2400; 3503; 2320; 2240; 2215; 2210; 2470; 2460; 5260; 2225; 2330; 2279; 2350; 2220; 2278; 2296.

TABLE II:

MIL-T-704J		MIL-HDBK-1516 Code No.
Type A	Metal	2210; 2235; 2400 (or 3503)
	Wood	3507; 2240 (or 2215); 3503
Type B	Metal	2210; 2460; 2460; 2470
	Wood	3507; 2460; 2460; 2470
Type C		2210; 2400
Type D		2210; 2215; 2330
Type E		2210; 2215; 2350
Type F		2210; 2220; 2279
Type G		2210; 2225; 2279

APPENDIX K

CROSS REFERENCE TO MIL-F-14072C CODE SYSTEM FINISHES FOR GROUND ELECTRONIC EQUIPMENT

MIL-F-14072C is organized by tables:

TABLE I – Involves a 3-step procedure prior to application of the final film, step 4 is Table IA.

- Step 1. Reconditioning. When applicable, corresponds to MIL-HDBK-1516 Code N.
- Step 2. Passivation. Corresponds to MIL-HDBK-1516 Codes Z, A, C, N, or M, when applicable.
- Step 3. Pretreatment/Primer. As listed in 3.9.1, corresponds to MIL-HDBK-1516 Code Nos. 2240; 2245; 2215; 2210; 2260; 2225; and should be specified when applicable. A finish number is assigned in Table I consisting of "P" and a number, for example, "P701.1", which converted to MIL-HDBK-1516 code numbers would result in:

  Step 1 = N
  Step 2 = MH
  Step 3 = 2225.

TABLE IA – FINAL PAINT FILM (STEP 4)

Film Designation (MIL-F-14072C)	MIL-HDBK-1516 Code No.
B	2320, 3503
D	3503, 2330, 2410
E	—
F	3503, 2330, 2410
G	3503
K	3503
N	2360
P	2360
T	2360
J	2277
J	2278
J	2296
X	2320, 3503

APPENDIX K

TABLE II – PLATED FINISHES (M)

MIL–STD–14072C Finish No.	MIL–HDBK–1516 Code No.	MIL–STD–14072C Finish No.	MIL–HDBK–1516 Code No.
M211	1400	M310	1200 + 1350
M212, M213	1422 + 1200	M311	1200 + 1400
M214	1421	M312, M313	1200
M216	1422 + 1200 + 1152	M316	1200 + 1150
M217	1432	M317	1430
M218	1230	M323	1510
M222	1450	M230	1424 + 1450
M223	1510	M357	1210
M224	1012 or 1013	M358	1400 + 1480
M225	1012	M359	1200 + 1480
M226	1305 or 1308	M350	1200 + 1350
M227	1305	M362	1200
M228	1310 or 1320	M355	1200 + 1150
M229	1310 or 1320 + Z	M356	1510
M265	1210	M412	1423 + 1200
M252, M253	1423 + 1200	M413	1423 + 1200
M254	1422	M416	1423 + 1200 + 1150
M255	1200 + 1423 + 1150	M417	1423 + 1210
M256	1432	M418	1424 + 1200 + 1480
M260	1510	M419	1424 + 1200 + 1480
M261	1016	M452	1423 + 1200
M262	1015	M455	1423 + 1200 + 1150
M263, M264	1300	M611	1423 + 1200

APPENDIX K

TABLE III – FINISHES OR PROCESS OTHER THAN PAINT OR PLATE (E)

MIL–F–14072C Finish No.	MIL–HDBK–1516 Code No.
E211	QMB
E212	QZB
E213	QME or QMG
E214	QZE, QZF, QZG, or QZH
E300	P
E311	S
E511	A
E512	CR
E513	CC
E514	AW
(E515 and E516 discontinued)	AW
E611	Z
E612	Z

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

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I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-HDBK-1516	2. DOCUMENT DATE *(YYMMDD)* 960124

3. DOCUMENT TITLE
Unified Code for Coatings and Finishes for DOD Materiel

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
c. ADDRESS *(Include Zip Code)*	d. TELEPHONE *(Include Area Code)* (1) Commercial (2) AUTOVON *(If applicable)*	7. DATE SUBMITTED *(YYMMDD)*

8. PREPARING ACTIVITY

A. NAME ASC/ENSI AF CODE 11	B. TELEPHONE *(Include Area Code)* (1) Commercial (513) 255-6281 (2) AUTOVON *(If applicable)* DSN 785-6281
C. ADDRESS *(Include Zip Code)* BLDG 125 2335 SEVENTH ST. SUITE 6 WRIGHT-PATTERSON AFB OH 45433-7809	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340