



Process Specifications

WET PAINT & PRIMER

Wide variety of pretreatments and primers that can be combined with topcoats to achieve high performance engineered coating systems. Solvent and water based wet paint topcoats offer a uniform, durable, high quality, and long-lasting finish. Unlimited color options available. Specializing in MIL SPEC Coating.

MIS-20007 APPROVED

MIL-P-85582 MIL-PRF-23377 MIL-DTL-53039
MIL-DTL-53030 MIL-PRF-85285 DOD-P-15328
MIL-DTL-53022 MIL-PRF-22750

SULFURIC ANODIZE

A cosmetic finish that protects aluminum from corrosion by forming an aluminum oxide coating on the top layer of the aluminum. Available in various dyes or clear.

MIL-PRF-8625- AMS-2471

TYPE 2 CLASS 1 CLEAR

TYPE 2 CLASS 2 DYED

(BLACK, RED, BLUE, YELLOW, GRAY, OLIVE DRAB)

HARD COAT (HARD ANODIZE)

Similar to the sulfuric anodize process, except the coating is much thicker (0.002" on average). This provides an aluminum oxide coating that protects the product from wear and tear better than any other finish.

MIL-PRF-8625- AMS-2482-

TYPE 3 CLASS 1 CLEAR TYPE 1

TYPE 3 CLASS 2 DYED

(BLACK, RED, BLUE, YELLOW, GRAY, OLIVE DRAB)

NICKEL PLATE

Bright electrolytic process used for corrosion protection and cosmetic appearance. Can be used as is, or as a base for Gold or Silver Plating. Forms a protective barrier between the base material and corrosive elements.

QQ-N-290-

GRADE A .0016" THK GRADE E .0006" THK
GRADE B .0012" THK GRADE F .0004" THK
GRADE C .0010" THK GRADE G .0002" THK
GRADE D .0008" THK CLASS 1 CORROSION PROTECTION

TIN PLATE

Bright or matte plating is used for soldering applications, soft and ductile compared to other finishes.

MIL-T-10727-

Type 1 ELECTRODEPOSITED

ASTM-B545-

SERVICE CLASS A .0001" THK
SERVICE CLASS B .0002" THK
SERVICE CLASS C .00032" THK
SERVICE CLASS D .0006" THK
SERVICE CLASS E .0012" THK
SERVICE CLASS F .00006" THK

CONVERSION COATINGS FOR ALUMINUM (CHROMATE OR CHEM FILM)

A less robust finish for aluminum than anodization, that provides some corrosion protection while allowing for conductivity. An excellent base for wet paint, powder coat, or other secondary applications.

MIL-DTL-5541-

TYPE 1 CLASS 1A YELLOW CHROMATE
TYPE 1 CLASS 3 YELLOW or CLEAR CHROMATE
TYPE 2 CLASS 1A ROHS COMPLIANT CLEAR
TYPE 2 CLASS 3 ROHS COMPLIANT CLEAR

PASSIVATE

Recommended for cleaning and descaling stainless steel. This process removes any "free iron" contamination left behind on the surface of the stainless steel from machining and fabricating which could lead to premature corrosion.

AMS-2700-

TYPE 6

TYPE 7

METHOD 1

METHOD 2

ASTM-A967-

Nitric 2

Nitric 5

Citric 1,2,3,4,5

ELECTROLESS NICKEL

Process that uses heat instead of electricity to bond the nickel to the substrate. This allows for even plating through the whole part. Contains phosphorus for a harder deposit than regular nickel plate. Excellent for applying a nickel deposit on aluminum, or as a base for Gold or Silver. Can also process to AMS 2404.

MIL-C-26074-

CLASS 1 NO BAKE
CLASS 2 550°F; 2 OR MORE HOURS
CLASS 3 375°F +/-25°; 1-1.5 HOURS
CLASS 4 200°-260°F; 1-1.5 HOURS
GRADE A .0010" MIN THK
GRADE B .0005" MIN THK
GRADE C .0015" MIN THK

ASTM-B733-

SC0 .00004" THK
SC1 .0002" THK
SC2 .0005" THK
SC3 .001" THK
TYPE 1 & 4

COPPER

Shiny finish that can be buffed. Additional corrosion resistance as undercoat.

MIL-C-14550-

CLASS 4 .00010" THK MIN
CLASS 3 .00020" THK MIN
CLASS 2 .00050" THK MIN
CLASS 1 .00100" THK MIN
CLASS 0 .001"-.005" THK MIN

QUOTES IN 24 HOURS

Our experienced team of estimators will work with you to determine what is the best quality and most economic process for your product. Most quotes can be turned around in 24 hours or less.

POWDER COAT

Environmentally friendly process that provides excellent corrosion resistance. Uniform, durable, high quality, and long-lasting finish. Wide Variety of colors, textures, and finishes.

MIL-PRF-32348

SPECIALTY COATINGS

Adhesive Bonding Primers- Providing maximum environmental resistance and durability within the bond line, as well as prevent corrosive undercutting. Can also be used effectively as a protective coating outside bonded areas.

BR-127 EC-2174

Ceramic Coatings- Specialized coating that can be applied to polymers, metals, and plastics that is composed of a polymer-ceramic compound.

CERAKOTE

Dry Film Lube- Used to reduce the friction between two mating surfaces that slide against each other without the need for oils and grease. Using this type of lubrication can help minimize wear and tear while also increasing efficiency in a mechanical system.

AS5272 Type 1 MIL-L-46010 Type 1 MIL-L-8937

ZINC PLATE

An electrolytic process used for corrosion protection. Zinc is a sacrificial metal and so will begin corroding in place of the base substrate (steel).

ASTM-B633-

TYPE 1 ZINC ONLY FE/ZN5 SC1 .0002" MIN
TYPE 2 ZINC BLACK FE/ZN8 SC2 .0003" MIN
TYPE 2 OR 6 ZINC YELLOW FE/ZN12 SC3 .0005" MIN
TYPE 2, 3, OR 5 ZINC CLEAR FE/ZN25 SC4 .0010" MIN

ZINC-NICKEL PLATE

An alkaline alloy (12%-15% nickel to zinc) that is used in the protection of steel, copper, and brass. Recognized as an environmentally safe alternative to cadmium electroplating. Normally applied for corrosion protection purposes. Functions as a "sacrificial coating", corroding before the base material. Can be applied as is or with RoHS chromate (iridescent yellow rainbow appearance).

AMS 2417-

TYPE 1 AS-PLATED WITHOUT SUPPLEMENTARY TREATMENT
TYPE 2 AS-PLATED WITH SUPPLEMENTARY CHROMATE TREATMENT
GRADE B NON-HEXAVALENT

APPLIED GRAPHICS

Silkscreen, pad printing, and laser marking. Choose from a wide variety of colors, textures, and finishes.

FAST TURNAROUND

Average turnaround time on single process parts is 2-3 days. Expedited Services for a 24 Hour or Same Day Turn are available by request.

Other Services

Media Blasting	Iron Phosphate
Tumbling	Salt Spray Testing
Custom Masking	Lab Services
Caustic Etch Cleaning for Aluminum	Special Requests

We continually expand capabilities and service offerings for all markets where metal finishing of high-quality products to tight tolerances is critical. Coating Systems, Inc. is NADCAP certified, RoHS compliant, and ITAR/EAR compliant.

For special requests not listed on this chart or for more information about any of our processes, please call us at (978) 937-3712.

GOLD

Coating provides good corrosion resistance and high tarnish resistance. Low contact resistance and good conductor. Excellent solderability.

MIL-G-45204-

Type 1 99.7% GOLD MIN	CLASS 1 .00005" THK MIN
TYPE 2 99.0% GOLD MIN	CLASS 2 .0001" THK MIN
CLASS 00 .00002" THK MIN	GRADE C KNOOP 130-200
CLASS 0 .00003" THK MIN	

SILVER

Good corrosion resistance. Tarnishes easily. Hardness varies. Solderability is excellent but decreases with age. Best electrical conductor. Excellent lubricity and smear characteristics.

ASTM-B700-

TYPE 1 99.9% SILVER MIN	TYPE 2 SEMI BRIGHT
TYPE 2 99.0% SILVER MIN	GRADE A WITH ANTI-TARNISH
TYPE 3 98.0% SILVER MIN	GRADE B WITHOUT ANTI-TARNISH
CLASS N WITHOUT ANTI-TARNISH	
CLASS S WITH ANTI-TARNISH	
GRADE D SEMI BRIGHT	

TEFLON

Applications for hardcoat anodize and electroless nickel. Commercial spray is also available.

AMS 2482 MIL-A-63576

BRIGHT DIP

Anti-tarnish application for brass and other copper alloys. Traditional non-chrome finishes available.



Nadcap accredited, RoHS compliant, cutting-edge technology, stringent environmental compliance, strict quality control, fast turnaround, unsurpassed customer service & competitive pricing.

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(978) 937-3712