Team Metal Finishing Inc.

Available Processes:

Anodizing
Hard Coating
Electroless Nickel
Black Nickel
Sulfamate Nickel
Bright and Matte Nickel
Silver Plating
Gold Plating
Tin Plating, Bright & Matte
Chromate Conversion Coating
Immersion Tin
Passivation
Electropolishing
Copper Plating
Tumbling and Polishing

"Your Partner in Precision Metal Finishing"

Thank you for considering Team Metal Finishing for your processing needs. Since 1988, we have proudly served the Aerospace, Automotive, Military, Electronics, Motion Controls and Medical Industries. Our longstanding reputation is built on consistently exceeding customer expectations in quality and service. As an ISO 9001:2015 certified company with Aerospace accreditations, we meet the highest industry standards. We operate a 60,000 square foot facility, situated on 7.6 acres in Eastanollee, GA.

Contact us today to learn how our team can deliver precision solutions tailored to your needs.

www.teammetalfinishing.com *1-800-380-3371* *sales@teammetalfinishing.com*

Process List:

Anodizing
- Clear & Colors: Black, Blue, Red and Gold

Hard Coat
- Clear or Natural, Colors: Black, Blue, Red and Gold

Electroless Nickel
- Medium and High phosphorus; Black Electroless Nickel

Nickel Plating
- Sulfamate, Bright, Matte, and Satin

Silver Plating
- Matte, Semi Bright and Bright

Gold Plating
- 24K

Tin Plating
- Bright, Matte and Immersion Tin

Chromate Conversions on Aluminum
- Color: Clear. Trivalent, RoHs.

Passivation and Electropolishing
- Stainless Steels only

Abrasive Blasting
- Glass bead blasting

Baking
- Hydrogen Embrittlement relief

Teflon
- Bonded teflon designed to be used with all our coatings

Copper Plating

Anodizing:

Anodizing is an electrolytic process that creates a durable aluminum oxide layer on the metal's surface. This oxide layer forms integrally from the base material, with 60% building into the metal and 40% building up. The natural anodized finish is a light silver, but the coating can also be dyed to match specific color requirements. Type II anodizing provides excellent corrosion and wear resistance and adheres to specifications such as Mil-A-8625F Type II, Mil-PRF-8625F Type II (Class 1 for Clear and Class 2 for colors) and AMS-A-8625 Type II.

Hard Coating:

Hard coating, or Type III anodizing, is similar to Type II but uses higher current densities and colder temperatures. This process yields a thicker, denser oxide layer, offering superior wear and corrosion resistance. The natural color ranges from dark gray to black, depending on the aluminum series and coating thickness. Most customers prefer black dye due to its natural appearance, though other colors may darken due to the coating's hue. Specifications include Mil-A-8625 Type III, Mil-PRF-8625 Type III (Class 1 for Clear and Class 2 for colors) and AMS 2469L.

Electroless Nickel:

Electroless nickel plating is an autocatalytic process that deposits a uniform nickel-phosphorous alloy on the metal surface without electric current, ensuring even coverage regardless of shape or surface irregularities. This coating is available in various types, with medium phosphorous being the most common, known for its bright finish, hardness, and corrosion resistance. It meets specifications like Mil-C-26074, AMS-C-26074, ASTM B733, and AMS 2404.

Nickel Plating:

Nickel plating is an electrolytic process that uses an externally applied current to deposit a metallic coating that can be hard or soft, and dull or bright, based on application needs. This coating enhances durability, appearance, and protects parts against environmental corrosion. Due to the nature of the current, thicker layers often form along edges or sharp corners—a common effect known as the "dog bone" effect. Our nickel plating complies with industry standards, including QQ-N-290, AMS 2403, and Mil-P-27418.

Passivation:

Passivation removes free iron from the surface of stainless steel, enriching the nickel and chromium content at the surface. This process also facilitates the formation of a thin, transparent oxide layer, providing additional protection against corrosion. We follow industry specifications for passivation, including ASTM A 380, ASTM A 967, QQ P 35, AMS 2700, and AMS QQ P 35.

Electopolishing:

Electropolishing is an anodic process that smooths and brightens a metal surface by selectively removing high points, resulting in a microscopically smooth, stress-free finish. This unidirectional pattern, free from hydrogen occlusion, is ideal for components used in medical, pharmaceutical, and food processing equipment.

Gold Plating:

Gold plating is achieved through electrolytic or immersion processes, depositing a thin, corrosion-resistant gold layer on the material surface. Known for its excellent electrical conductivity and resistance to tarnishing, gold plating is commonly specified for parts requiring a durable, untarnished finish. Our gold plating meets Mil-DTL-45204 and AMS 2422 standards.

Silver Plating:

Silver plating is an electrolytic process that deposits a silver layer onto the surface of the material, often used as a more affordable alternative to gold plating. While silver is more conductive than gold, it tarnishes more quickly. Therefore, additional tarnish-resistant treatments are applied after coating to maintain durability and appearance. Our silver plating meets specifications QQ-S-365, ASTM B700, and AMS 2410.

Tin Plating:

Tin plating is an electrolytic process that deposits a protective tin layer on both ferrous and non-ferrous surfaces. This coating is widely used in industries like food processing due to tin's non-toxic, ductile, and corrosion-resistant properties. Tin also provides sacrificial protection for metals such as copper and nickel, though it's not suitable for steel. The coating can be applied in either a bright or matte finish to meet customer specifications. Standards for tin plating include ASTM B545, ASTM B578, and Mil-T-10727.

Immersion Tin Plating:

Immersion tin plating, unlike traditional tin plating, is applied chemically, ensuring a uniform coating. This process is commonly used in the circuit board industry to enhance corrosion resistance and reduce the risk of short circuits. The immersion tin layer is extremely thin, typically less than 0.000001".

Conversion Coatings:

Conversion coatings, also known as Chem-Film, Iridite, or Alodine, involve a chemical reaction with the material's surface to create a thin, corrosion-resistant film. Initially soft and gelatinous, the film hardens over time to become hydrophobic, providing corrosion protection and serving as an excellent base for paint primers. Conversion coatings are exceptionally thin, around 0.00001", and adhere to Mil-DTL-5541 specifications for Type II, Class 1A or Class 3.

Process:	Tank Sizes	Minimum Charge
Anodizing:		
Sulfuric Anodize Clear	96” x 30” x 44” & 192” x 24” x 45”	$75.00
Sulfuric Anodize Color	96” x 30” x 44” & 192” x 24” x 45”	$100.00
Hard Coat Clear	96” x 30” x 44”	$125.00
Hard Coat Color	96” x 30” x 44”	$150.0
Electroless Nickel:	60” x 30” x 40”	$150.00
Black Nickel	40” x 20” x 30”	$250.00
Nickel Plating:		
Sulfamate	40” x 45” x 40”	$150.00
Bright	40” x 20” x 30”	$150.00
Gold Plating:	30” x 15” x 15”	$350.00
Silver Plating:	50” x 20” x 30”	$250.00

Note: If Chromate is requested with another process that minimum charge increases an additional $75.00.

Note: If Teflon is requested with another process that minimum charge increases an additional $50.00.

Note: TMF adds a 10% Environmental fee

www.teammetalfinishing.com *1-800-380-3371* *sales@teammetalfinishing.com*

Process:	Tank Sizes	Minimum Charge
Passivation and Electropolish:		
Passivation	30” x 50” x 45”	$75.00
Electropolishing	75” x 60” x 40”	$150.00
Tin Plating: Bright and Matte	60” x 15” x 30”	$150.00
Immersion Tin Plating:	50” x 30” x 30”	$150.00
Conversion Coatings:		
Trivalent Clear	192” x 40” x 45	$75.00
Teflon:	Spray or Dipped	$150.00
Glass Bead Blasting:	Automatic or Booth Blasting	$35.00/Hr
Baking:	50” x 50” x 25”	$50.00/Hr
Truck Delivery and Pick-up (Certain Areas)		$100.00/Stop

Note: TMF adds a 10% Environmental fee

www.teammetalfinishing.com *1-800-380-3371* *sales@teammetalfinishing.com*

PRI Certification
PERFORMANCE REVIEW INSTITUTE

This Certificate of Registration acknowledges

Team Metal Finishing, Inc.

286 Clary Connector

Eastanollee, Georgia, 30538

United States

is registered as a Site quality management system in conformance with

ISO 9001:2015

Scope of Registration:

Plating, anodizing, and other metal finishing services.

ANAB ACCREDITED

IAF

Edward Maschmeier
Vice President of PRI Certification

161 Thorn Hill Road • Warrendale, Pennsylvania 15086-7527, USA
Alexandra House, Ballsbridge, Dublin 4, Ireland, EU
1 York Street, London, W1U 6PA, UK

Number: 023969
Initial Reg Date: 10-Oct-2003
Issued: 15-Sep-2024
Re-Issued: 30-Oct-2024
Expires: 14-Sep-2027

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Federal Firearms License
(18 U.S.C. Chapter 44)

In accordance with the provisions of Title I, Gun Control Act of 1968, and the regulations issued thereunder (27 CFR Part 478), you are licensed to engage in the business specified in this license, within the limitations of Chapter 44, Title 18, United States Code, and the regulations issued thereunder, until the expiration date shown. THIS LICENSE IS NOT TRANSFERABLE UNDER 27 CFR 478.51. See "WARNINGS" and "NOTICES" on reverse.

Direct ATF Correspondence To: ATF Chief, FFLC
FFLC@atf.gov
1-866-662-2750

Chief, Federal Firearms Licensing Center (FFLC)
Tracy Robertson

License Number: **1-58-257-07-9B-04481**

Expiration Date: **February 1, 2029**

Name
TEAM METAL FINISHING INC

Premises Address (Changes? Notify the FFLC at least 30 days before the move.)
286 CLARY CONNECTOR, MEADOWBROOK INDUSTRIAL PARK
TOCCOA, GA 30577-

Type of License
07-MANUFACTURER OF FIREARMS OTHER THAN DESTRUCTIVE DEVICES

Purchasing Certification Statement

The licensee named above shall use a copy of this license to assist a purchaser of firearms to verify the identity and the licensed status of the licensee as provided by 27 CFR Part 478. The signature on each copy must be an original signature. A faxed, scanned or e-mailed copy of the license with a signature intended to be an original signature is acceptable. The signature must be that of the Federal Firearms Licensee (FFL) or a responsible person of the FFL. I certify that this is a true copy of a license issued to the licensee named above to engage in the business specified above under "Type of License."

Licensee/Responsible Person Signature: Chris Terrell
Position/Title: CEO
Printed Name: Chris Terrell
Date: 12/31/25

Mailing Address (Changes? Notify the FFLC of any changes.)
TEAM METAL FINISHING INC
PO BOX 1792
TOCCOA, GA 30577-

ATF Form 8 (5310.12)
Revised September 2022

Federal Firearms License (FFL) Customer Service Information

Federal Firearms Licensing Center (FFLC)
244 Needy Road
Martinsburg, WV 25405-9431

Toll-free Telephone Number: (866) 662-2750
Toll-free Fax Number: (866) 257-2749
E-mail: FFLC@atf.gov

ATF Homepage: www.atf.gov
FFL eZ Check: firearms.atf.gov/FFLEzCheck

Change of Address (27 CFR 478.52). Licensees may during the term of their current license remove their business or activity to a new location at which they intend regularly to carry on such business or activity by filing an Application for an Amended Federal Firearms License, ATF Form 5300.38, in duplicate, not less than 30 days prior to such removal with the Chief, Federal Firearms Licensing Center. The application must be executed under the penalties of perjury and penalties imposed by 18 U.S.C. 924. The application shall be accompanied by the licensee's original license. The license will be valid for the remainder of the term of the original license. (The Chief, FFLC, shall, if the applicant is not qualified, refer the application for amended license to the Director of Industry Operations for denial in accordance with § 478.53.)

Right of Succession (27 CFR 478.56). (a) Certain persons other than the licensee may secure the right to carry on the same firearms or ammunition business at the same address shown on, and for the remainder of the term of, a current license. Such persons are: (1) The surviving spouse or child, or executor, administrator, or other legal representative of a deceased licensee, and (2) A receiver or trustee in bankruptcy, or an assignee for benefit of creditors. (b) In order to secure the right provided by this section, the person or persons continuing the business shall furnish the license for that business for endorsement of such succession to the Chief, FFLC, within 30 days from the date on which the successor begins to carry on the business.

Continued on reverse side.

Cut Here ✂

Federal Firearms License (FFL) Information Card

License Name: TEAM METAL FINISHING INC

Business Name:

License Number: 1-58-257-07-9B-04481

License Type: 07-MANUFACTURER OF FIREARMS OTHER THAN DESTRUCTIVE DEVICES

Expiration: February 1, 2029

Please Note: Not Valid for the Sale or Other Disposition of Firearms.

FFL Newsletter - Electronic Version Available

Sign-Up Today!

FFLs interested in receiving the electronic version of the FFL Newsletter, along with occasional additional information, should submit name, FFL number, and e-mail address to: 3PIB@atf.gov.

The electronic FFL Newsletter will enable ATF to communicate information to licensees on a periodic basis.

Nadcap
Administered by PRI

This certificate is granted and awarded by the authority of the Nadcap Management Council to:

TEAM Metal Finishing Inc

286 Clary Connector
Eastanollee , GA 30538
United States

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Aerospace Quality System (AC7004)

Certificate Number: 10394223661
Expiration Date: 31 May 2028
Accreditation Length: 36 Months

Jay Solomond
Executive Vice President & Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527

Merit Merit

Nadcap
Administered by PRI

This certificate is granted and awarded by the authority of the Nadcap Management Council to:

TEAM Metal Finishing Inc

286 Clary Connector
Eastanollee , GA 30538
United States

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Chemical Processing

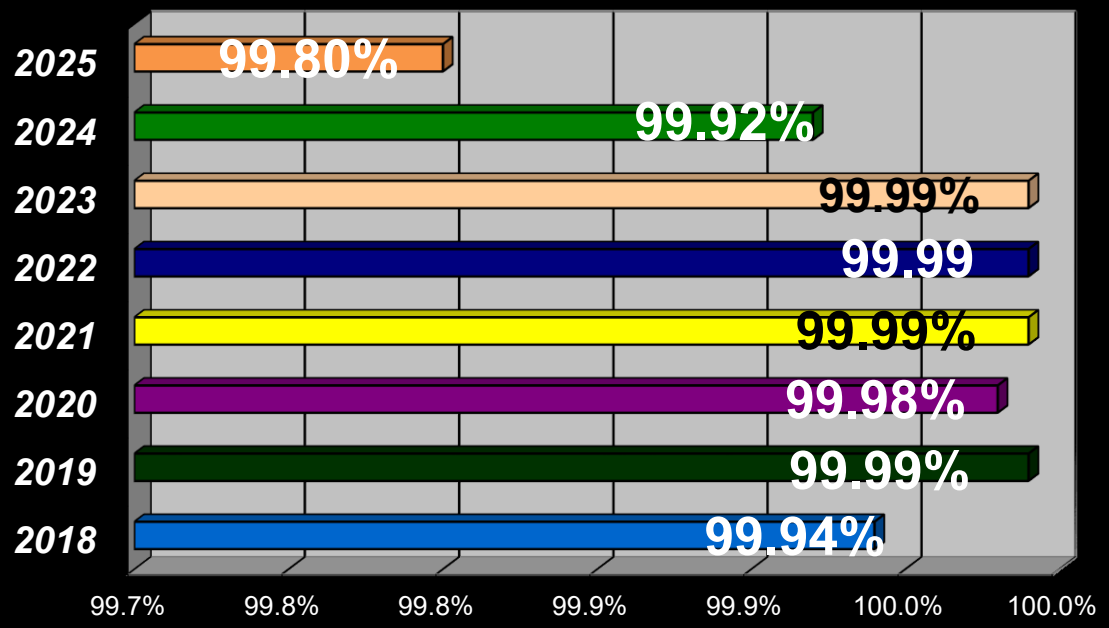
Certificate Number: 10394242217
Expiration Date: 31 May 2028
Accreditation Length: 18 Months

Jay Solomond
Executive Vice President & Chief Operating Officer

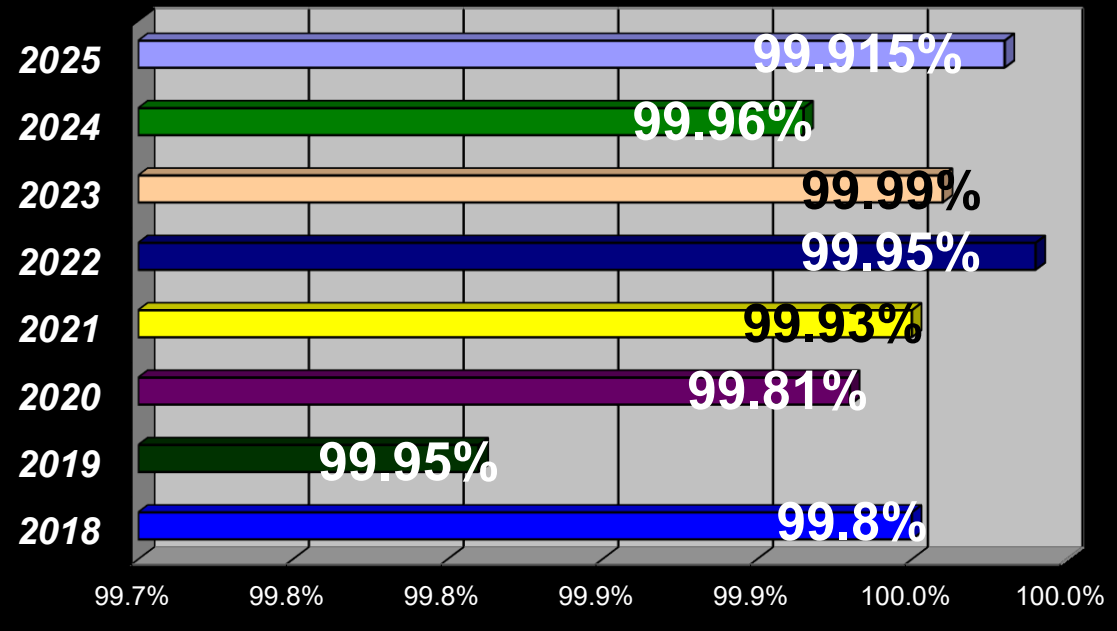
Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527

Merit Merit

Customer Satisfaction 2018 – 2025



On Time Deliveries 2018 – 2025



Rush Options when approved by production

Same day turn around TMF must receive parts by 9:00 a.m. Parts should be complete by end of day.	$350.00
1 day turn around 24 hours from the time the parts are received by TMF TMF must receive parts by 10:00 a.m.	$250.00
2 day turn around TMF must receive parts by 10:00 a.m.	$150.00
3 day turn around TMF must receive parts by 10:00 a.m.	$100.00
4 day turn around TMF must receive parts by 10:00 a.m.	$50.00

Note: TMF works Monday thru Thursday's

Frequently Asked Questions

What is the difference between Anodizing and Hard Coat Anodizing?

Hard Coat Anodizing is processed using much higher current densities than standard anodizing. Because of this the coating is harder, thicker and more corrosion resistant.

Can I paint over the Anodizing?

Yes, but please let us know so we can change the process to promote better adhesion.

What colors are available for Anodizing?

Black, Blue, Red and Gold are standard colors offered by TMF. Call to discuss other color options.

What type of welding rod can be used during the manufacturing of the part prior to Anodizing?

5356 is the best choice but some discoloration will occur after the anodizing coating has been applied.

Can I weld over the Anodizing?

You will have to remove the coating before welding in those areas.

Frequently Asked Questions

What is the difference between Electroless Nickel Medium Phosphorus vs High Phosphorus?

Medium Phosphorus Electroless Nickel has good corrosion resistance in both alkaline and mildly acidic environments. The coating is harder and more decorative that High Phosphorus Electroless Nickel.
High Phosphorus Electroless Nickel provides maximum corrosion protection in the most severe environments. It's not has bright as Medium Phosphorus Electroless Nickel but it's stain resistant, non-magnetic, easily soldered and a great diffusion barrier.

Can Electroless Nickel be stripped and re-plated?
Yes, but depending on the material the parts may receive a duller appearance after the stripping process.

Can Electroless Nickel be plated without stripping off the old coating?
Yes, but it's not recommending because the coating may not adhere to the old electroless nickel.

What information do I need to provide on my purchase order?
Part number, Process requested, Quantity, Thickness of coating, Material series, specification called out if required.

Frequently Asked Questions

MASKING

Masking is required when no build up is desired or when a part needs both anodizing & chemical conversion. Holes with Heli-coils must be masked or removed . Any dissimilar metal (steel, brass, bronze) or any form of plating will burn off in the anodizing tank unless masked. TMF charges $35.00 per hour for liquid masking.

WELDED AREAS

When two or more parts are welded together, acid is entrapped in the weld and the area around the weld. Color variations exist when a welding rod alloy is vastly different from the alloy used to make the part. Halos appear around welds because of the high temperature used in the welding process. The area around the weldment will be slightly lighter in color, causing the welded area to appear larger than it is.

BLIND or THROUGH HOLES

Through holes will hard coat up to twice the length of the diameter and blind holes will only hard coat to a depth equal to the diameter of the hole.

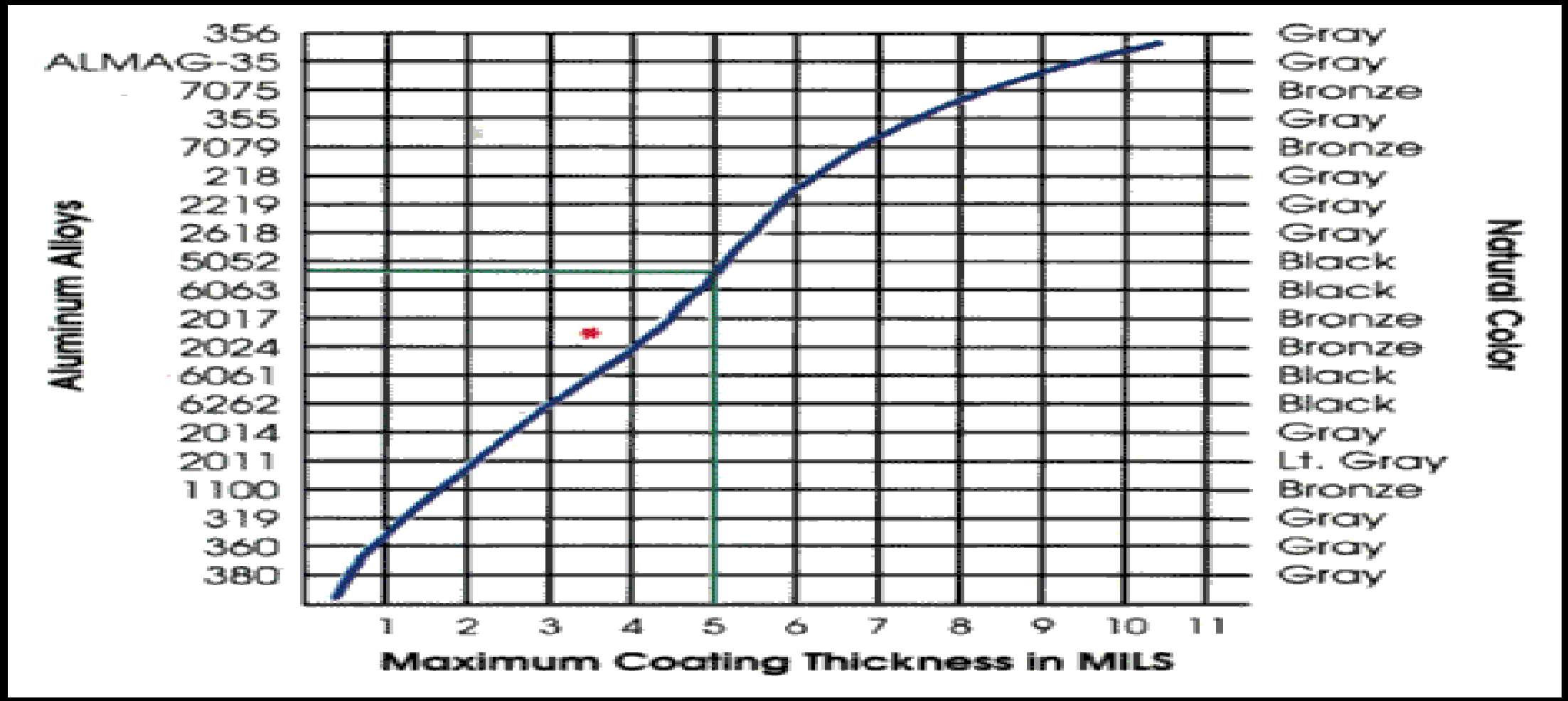
Properties Of Hardcoat Anodizing	
Hardness	65 to 70 Rockwell C, 850 to 900 DPH, Harder Than Hard Chrome Plating
Color	Varies by material series and thickness of coating. See Chart on next slide.
Coating Thickness	0.0005" TO 0.003". (0.015" For salvage purposes on select alloys only.)
Dielectric	Hardcoat is non-conductive and will withstand 800 volts per 0.001" thickness
Machining	Hard coat can be ground, lapped, honed or polished.
Dyeing	Hard coat can be dyed, but the shade will be darker because the coating is very dense and darker than anodize. See Chart on next slide.
Sealing	Hardcoat can be sealed using Dichromate, Nickel Acetate, hot water or teflon. TMF currently uses Nickel Acetate and hot water only.
Resistivity	Between 106 to 1012 Ohm-cm

Avoid the following when designing parts for the Anodizing or Hard Coating Process

Blind Holes, Hollow Weldments, Steel or stainless inserts, thin aluminum and sharp corners.

Frequently Asked Questions

Hard Coat thickness vs. color vs. alloy used



Note: TMF keeps maximum thickness at 0.003"

Anodize and Hard Coat Dimensional Changes

Keys to Remember:

Anodize Thickness will be 60% penetration and 40% buildup per surface on average.

Example: 0.0005” Anodize Thickness will build up 0.0002” on the surface of the part and/or 0.001” Anodize Thickness will build up 0.0004” on the surface of the part. Average thickness for Anodize clear is .0003”. Average thickness for Anodize color is .0008”

Hard Coat Anodize Thickness will be 50% penetration and 50% buildup per surface on average

Example: 0.001” Hard Coat Anodize Thickness will build up 0.0005” on the surface of the part and/or 0.002” Anodize Thickness will build up 0.001” on the surface of the part.

Note: Blind Holes will Hard Coat to a depth equal to the diameter of the opening.
Through holes will Hard Coat up to twice the length of the diameter on each opening.

CONTACT LIST

Chris Terrell
President & CEO
chris@teammetalfinishing.com
706-779-3371 x119

Lauren Moavero
Accounting & CFO
lauren.moavero@teammetalfinishing.com
706-779-3371 x103

Craig Watkins
Production
craig.watkins@teammetalfinishing.com
706-779-3371 x104

Heather Wilson
Quality/Safety/Customer Service
heather.wilson@teammetalfinishing.com
706-779-3371 x105

TEAM METAL FINISHING INC.

www.teammetalfinishing.com 1-800-380-3371 sales@teammetalfinishing.com