



Industry Uses:

- Aerospace
- Aircraft
- Hydraulics
- Energy
- Transportation
- Marine

Coating Specifications:

- QQ-C-320
- AMS-QQ-C-320
- AMS 2460
- AMS 2406
- MIL-STD-1501
- ASTM B 177

Nuclear Specifications:

- MIL-DTL-23422
- MIL-C-23422

Properties:

Operating Temperature

128-140° F

Hardness

68-72 Rockwell

Melting Point

1900° C

Density

6.9 g/cm³

Call: (937) 253-5311

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Hard Chrome

Hard chrome is one of the most reliable and widely used metal plating processes in the industry. Typically used to help resistance to abrasion and corrosion, industrial chrome also helps improve a part's wear.

Chrome plating is generally used in offering deposit thicknesses of >0.1 mil, and up to 20 mils or more.

Techmetals application of hard chrome offers moderate corrosion and oxidation protection for the coated substrate. It is especially effective when applied to the cavities of molds, dies, tools and other components where abrasive resins are processed.

Consider a hard chrome finish when rebuilding or salvaging older parts, molding dies, aircraft engine parts and more.



Hard Chrome is also used for hydraulic parts in industrial excavation equipment.

Technical Advantages

- Improves wear resistance
- Perfect solution for part repair
- Protects against corrosion
- Non-magnetic alloy
- Easily applied over any finish, mimicking the base substrate

Hard Chrome Processes

Chrome Over Nickel ■ Nuclear ■ DLA Over Chrome ■ Industrial Chrome

Techmetals Engineered Hard Chrome Finishes

Also available in the Hard Chrome family of products, are the Engineered Finishes we have developed to provide greater benefits for industrial applications. Techmetals has a Research and Development team that will work closely with each client, listening to their needs and creating personalized finishing options to best fit their needs. Our commitment to customer satisfaction is truly unmatched in the industry.

Armatech

Becomes a part of the metal itself and will not chip, peel, crack or flake – even when subjected to standard bend tests. Armatech will not affect dimensions by more than .0002" per surface. It is recommended as a final process eliminating additional grinding and finishing operations. Designed for sliding wear in metal to metal applications, with excellent ability to retain lubricants.

TM 111

TM 111 Electroless Nickel (EN) with a Hard Chrome deposit overlay. The base of the EN provides a uniform corrosion resistant barrier coating.

The EN Hard Chrome overlay provides a hard, wear resistant surface. This deposit can be plated on all ferrous and most non-ferrous metals.

TM 121

TM121 is a crack-free, chromium deposit offering good corrosion resistance. Standard hard chrome has approximately 200 to 400 cracks per linear inch, allowing corrosive material through to attack the base metal.

TM121 crack-free chrome is a barrier coating – depositing somewhat in a softer and more ductile manner than standard hard chrome. As deposited, it is matte gray but may be polished to a bright finish. It is often used in direct contact with molten glass.

Splatter Guard

Splatter Guard is one of Techmetals' latest advances in coating technology. This hybrid version of TM 107 is a very hard coating that provides exceptional wear, corrosion resistance and release. One distinct characteristic of Splatter Guard is the conformity of the deposit to the base metal.

Thickness is typically .0001"-.001", although it may be varied slightly outside of these parameters to meet your needs. Splatter Guard, as deposited, has a coating hardness of 66-70 Rockwell C. Splatter Guard exhibits a low coefficient of friction and anti-galling properties. In most applications, it will last 2 to 10 times longer than other parts or processes. It will not fill in or cover up blemishes or scratches.

TM 105

A unique hard chrome that is brighter, harder and more corrosion resistant than standard hard chrome plating. This deposit can be plated up to 71 Rockwell C compared to standard chrome, which ranges from 64 to 67 Rockwell C. Its brightness and low coefficient of friction make it ideal for molds and metal cutting tools. TM 105 is best known for its release, excellent wear, and anti seizure characteristics.

TM 119

This specially engineered dense hard chrome is deposited, so that it can be impregnated with polytetrafluoroethylene (PTFE). The PTFE enhances the release, wear and corrosion properties of chrome. It is most often used where the chrome deposit needs additional release and a low coefficient of friction – such as metal forming, tooling and molds.

Diamoforce

Diamoforce is one of Techmetals' latest chrome alloy plating technologies. This coating has extreme hardness and an amazing wear resistance. This alloy provides a slick surface that reduces the coefficient of friction.

Diamoforce also reduces galling and improves lubricity. The deposit has a unique nodular structure, which provides for its excellent wear characteristics. A great non-stick solution that helps resist corrosion.

TM-Rx

This process is precisely controlled by our lab staff and engineering team. TM-Rx is a medical-grade, chromium coating designed to prevent wear, galling and corrosion.

Parts and instruments coated with this material are designed to work and look like new after 1,000 cycles in an autoclave. TM-Rx meets or exceeds ISO 10993-1 Certification, as well as the principles governing the biological evaluation of medical devices.

Certified report numbers: 331553, 331617, 331621 and 331555.