



Medical Devices and Chromium Coatings:

What You Need to Know

The success of medical and dental procedures hinges on two things: the skill of the physician or dentist and the quality of the stainless-steel devices they use to perform critical functions like cutting, gripping, protracting, etc. In this context, "quality" describes an item's functionality and its appearance.

If either is lacking, it is much more challenging to achieve the desired outcome. And when a healthcare provider develops a reputation for subpar results, the business suffers.

KEY DEFINITIONS

stainless steel

/stānləs stēl/ noun

Iron-based steel alloys that contain chromium and other metals that make them strong, corrosion resistant, heat resistant, ductile, formable, coatable, and recyclable.

chromium

/krōmēəm/ noun

A shiny, hard, white metal used in stainless steel and other alloys.

Stainless Steel: A Metal With Many Medical Uses

- Orthopedic tooling
- Endoscopic cutters
- Dental reamers
- Handles
- Housing
- Saws
- Taps
- Drills
- Tubing



What to Expect From Uncoated Assets

Stainless-steel devices and instruments that are not protected with chromium show signs of wear after just a few use/cleaning/sterilization cycles. That includes dulling, discoloration, etching, and corrosion. These conditions adversely affect an item's functional and aesthetic properties.

ME-92® Coating: Unmatched Protection for Medical Devices

- Prevents corrosion from sterilization and laser marking.
- Increases surface hardness and wear resistance.
- Produces a hard, scratch-resistant, nonstick, easily cleaned and decontaminated surface.
- Eliminates galling, fretting, and spalling.
- Arrests metallic debris and particulate matter.
- Provides smooth-sliding surfaces.
- Reduces high-intensity light reflection/refraction and glare.
- Provides a long-lasting, like-new appearance.
- Creates a chemical-resistant, hydrophobic finish.
- Bonded (vs. layered) material will not chip, flake, or peel.



ME-92® Tech Specs

- Pure, nickel-free metallic chromium
- Zero-valence
- Biocompatible
- Inert
- Non-magnetic
- USP Class VI
- Tripartite/ISO
- Antimicrobial
- Deposit thicknesses of 0.00004" to 0.001" (1.0-25.0 microns)
- Applied with precision masking



Biocompatibility: Essential to Patient Safety and Procedure Success

ME-92® coating meets or exceeds all relevant standards, including:

- ISO Systemic Toxicity Study (ISO 10993-11)
- ISO Maximization Sensitization Study (ISO 10993-10)
- ISO Pyrogen Study—Material Mediated (Pyrogenicity) (ISO 10993-11)
- Cytotoxicity Study Using the ISO Elution Method (ISO 10993-5)
- ISO Intracutaneous Study (ISO 10993-10)
- ASTM Hemolysis (ISO 10993-4)



Award-Winning Environmental Stewardship

ME-92 invests heavily in maintaining eco-friendly practices. The result is...

11

consecutive years of perfect compliance

with the wastewater discharge regulations of The Narragansett Bay Commission in Rhode Island. When fewer than...

5%

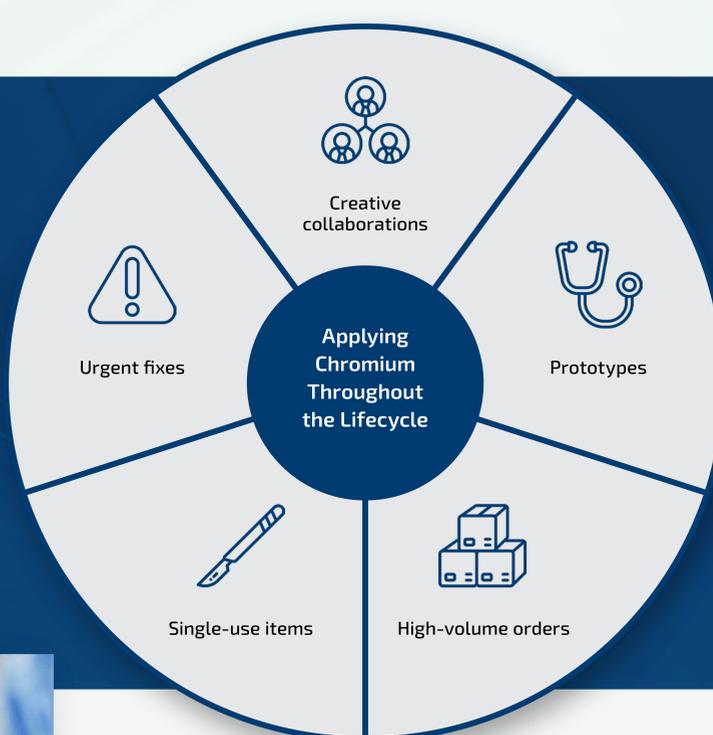
of the organization's industrial accounts

achieve even two consecutive years of perfect compliance.



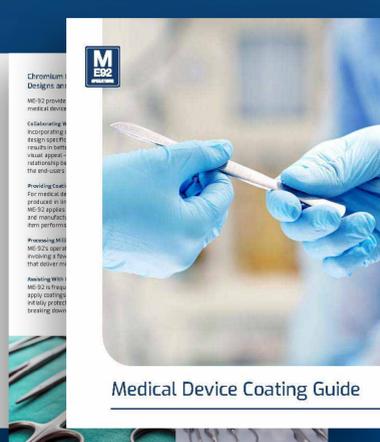
Adhering to the Highest User Expectations

ME-92 Operations maintains a **99.97%** customer acceptance rate.



Get a complimentary copy of our Medical Device Coating Guide to learn more about the ME-92® coating.

[DOWNLOAD](#)



Leading the Way in Our Innovation Center

ME-92 Operations is a division of the Armoloy Corporation that focuses exclusively on chromium coatings for medical instruments and devices. Our Innovation Center aids in the development of coating/plating applications and procurement solutions, including through training programs, chemistry analysis, site evaluations, troubleshooting, and tooling support.



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