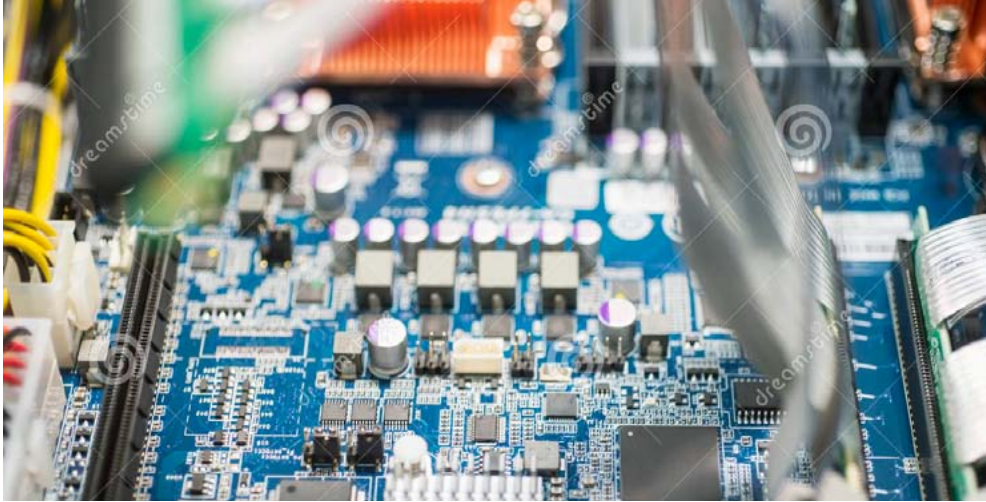


Evershield

Conductive Coatings and Plating Processes



E/M Coating Services is the industry leader in applying conductive coating and electroless plating processes for EMI/RFI shielding and semiconductive coating processes for electrostatic dissipation.

Rely on Evershield for Superior EMI/RFI Shielding

Conductive Coatings for EMI/RFI Shielding

E/M Coating Services offers a broad range of EMI/RFI shielding processes that ensure the reliable performance of electronic devices. As a long-time leader in applying engineered coating solutions, our cost-effective processes meet shielding and ground plane needs ranging from FCC and European Union compliance to critical shielding and electrical bonding requirements for aircraft, missile and medical components.

Semiconductive Coatings for Electrostatic Control

Smaller electronic components are particularly susceptible to damage or failure due to electrostatic discharge. In the search for ways to ensure the operational integrity of new, high-performance products, electronics manufacturers turn to E/M Coating Services for their application needs. E/M Coating Services applies coatings that provide:

- Surface resistivity of 1×10^5 to 1×10^{12}
- Outstanding corrosion protection
- Good lubricity on high-friction surfaces
- Excellent wear resistance
- High temperature and cryogenic stability

E/M has numerous UL recognitions under QMRX2 which applies to the application of conductive coatings that conform to UL 746C adhesion test procedures.

Locations

United States

| | |
|----------------------------|--------------|
| Chicago, Illinois | 630-620-6808 |
| Detroit, Michigan | 586-566-6800 |
| Fremont, Indiana | 260-495-4445 |
| Hartford, Connecticut | 860-224-9148 |
| Minneapolis, Minnesota | 651-780-3202 |
| Los Angeles, California | |
| North Hollywood | 818-983-1952 |
| Chatsworth | 818-407-6280 |
| Philadelphia, Pennsylvania | 215-638-0888 |
| Katy, Texas | 218-391-7765 |

Canada

Ingersoll 519-485-5500

China

Suzhou 86-158-6241-7890

Germany

Unna 49-2303-91880

United Kingdom

Evesham 44-1386-421444

Ireland

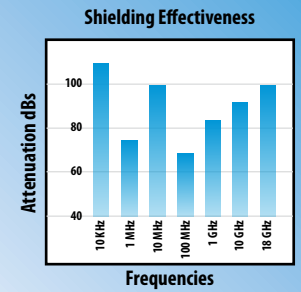
Evesham 353-91-780-300

E/M 6218-B

An extremely smooth, non-oxidizing copper-containing coating with very high levels of shielding.

Typical Applications

Computers and Peripherals, Video Display Terminals, Medical Electronics, Telecommunication Devices, Automotive Electronics

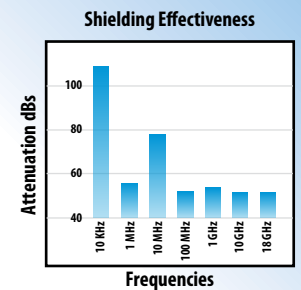


E/M 6305

A durable nickel-containing coating with very high levels of shielding.

Typical Applications

Computers and Peripherals, Video Display Terminals, Medical Electronics, Telecommunication Devices, Automotive Electronics

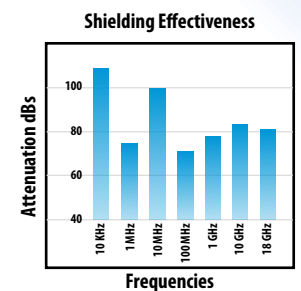


Evershield EC-S-706

A durable silver-containing coating offering significant salt fog resistance and extremely high levels of EMI/RFI shielding.

Typical Applications

Aerospace, Military Electronics



The above shielding effectiveness data applies only to three of E/M's conductive coating processes.

CURTISS - WRIGHT

E/M Coating Services is a division of Curtiss-Wright Surface Technologies. For more information, visit www.cwst.com.

Evershield

Conductive Coatings and Plating Processes

Electroless Plating Processes for EMI/RFI Shielding

E/M Coating Services has led the development of electroless plating technology for plastic, plastic composite, and ceramic substrates that achieve extremely high levels of electromagnetic shielding. We offer the broadest range of solutions to the problems faced in designing and manufacturing electronic devices and components. While achieving extremely high levels of attenuation, our electroless plating processes meet stringent environmental requirements.

Advantages

- High levels of shielding at very thin plating thicknesses—as low as 0.000020" (1/2 micron)
- Extreme uniformity of plating thicknesses and EMI/RFI shielding
- Ability to achieve excellent grounding for lightning protection while withstanding heavy corrosion
- Toughness and durability—excellent results in drop testing
- Applicable to almost any advanced engineering thermoset, thermoplastic or composite

Quality Assurance

To maintain the highest standards of quality, E/M Coating Services employs Statistical Process Control (SPC) methods. We've developed a wide variety of pretreatment techniques that ensure the adhesion of Evershield plating processes to virtually all plastic, glass, or carbon-reinforced plastics and composite materials.

Plated Substrates

ABS (Acrylonitrile Butadiene-Styrene)

Acetals

BMI (Bismaleimide-Carbon Reinforced)

DAP (Diallyl Phthalate)

Epoxy/Glass

Glass

HDPE (High Density Polyethylene)

LCP (Liquid Crystal Polymer-Mineral & Glass Filled)

Nylons - Polyamide

- 6/6 30%, 40%
- 6/6 30%, 40%
- 6/6 40% Carbon Filled
- 6/10 30% Glass Filled
- 6/12 30% Glass Filled

PAI (Polyamide-Imide)

- Unfilled
- 30% Glass Filled

PAS (Polyarylsulfone 30% Glass Filled)

PC (Polycarbonate)

- 20%, 30%
- 40% Glass Filled

PEEK (Polyetheretherketone)

- 30% Glass Filled
- 30%, 40%
- Carbon Filled

PEI (Polyetherimide)

- 30% Glass Filled
- 40% Carbon Filled

PEK (Polyetherketone)

PES (Polyethersulfone) 30% Glass)

PP (Polypropylene)

PPE (Polyphenylene Ester)

PPO (Polyphenylene Oxide-Styrene Copolymers)

PPS (Polyphenylene Sulfide)

- Unfilled
- Long Fiber Carbon Reinforced
- 30%, 50% Glass Filled

PS (Polystyrene)

PSO (Polysulfone)

Phenolics

Polyester

- Thermoplastic
- Thermoset

RIM (Urethane)

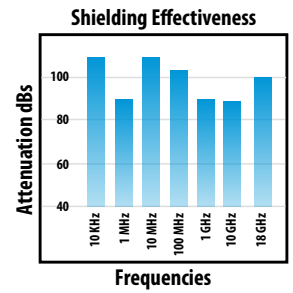
SMC (Sheet Molding Compound)

Evershield 3501

This most cost-effective system achieves high levels of EMI shielding by copper and nickel plating all surfaces.

Typical Applications

Computers and Peripherals, Video Terminals, Medical Electronics, Telecommunications, Automotive Electronics

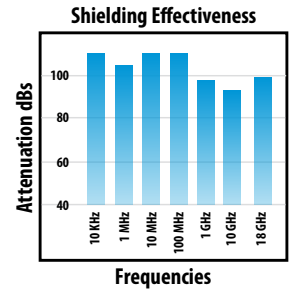


Evershield 5100-T

Increased thicknesses of copper plating achieve levels of signal attenuation in compliance with NACSIM 5100A/TEMPEST and MIL-STD 461B DESIGN requirements.

Typical Applications

TEMPEST Electronics, Military Electronics

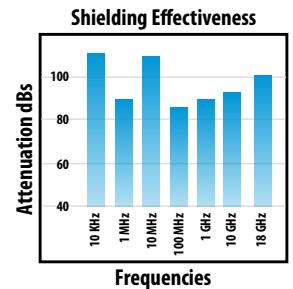


Evershield SP-4000

Eliminates harsh chemical and mechanical pretreatments, selectively plating and protecting molded-in decorative surfaces with shielding effectiveness comparable to Evershield 3501.

Typical Applications

Computers and Peripherals, Video Terminals, Medical Electronics, Telecommunications, Automotive Electronics

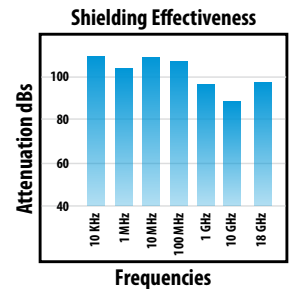


Evershield 5880

Copper/nickel plating provides high levels of electromagnetic shielding, electrical bonding, and wear and corrosion resistance. Plating thickness can be adjusted to electronic and environmental conditions. Adheres to virtually all advanced thermosets and thermoplastics.

Typical Applications

Aerospace Electronics, Military Electronics, Medical Electronics, Telecommunications, Automotive Electronics, Connectors



Evershield Mil-Plate 1000

Provides extreme levels of corrosion resistance and signal attenuation comparable to Evershield 5880. Based on copper/nickel/tinplating technology.

Typical Applications

Aerospace Electronics, Military Electronics, Connectors

