

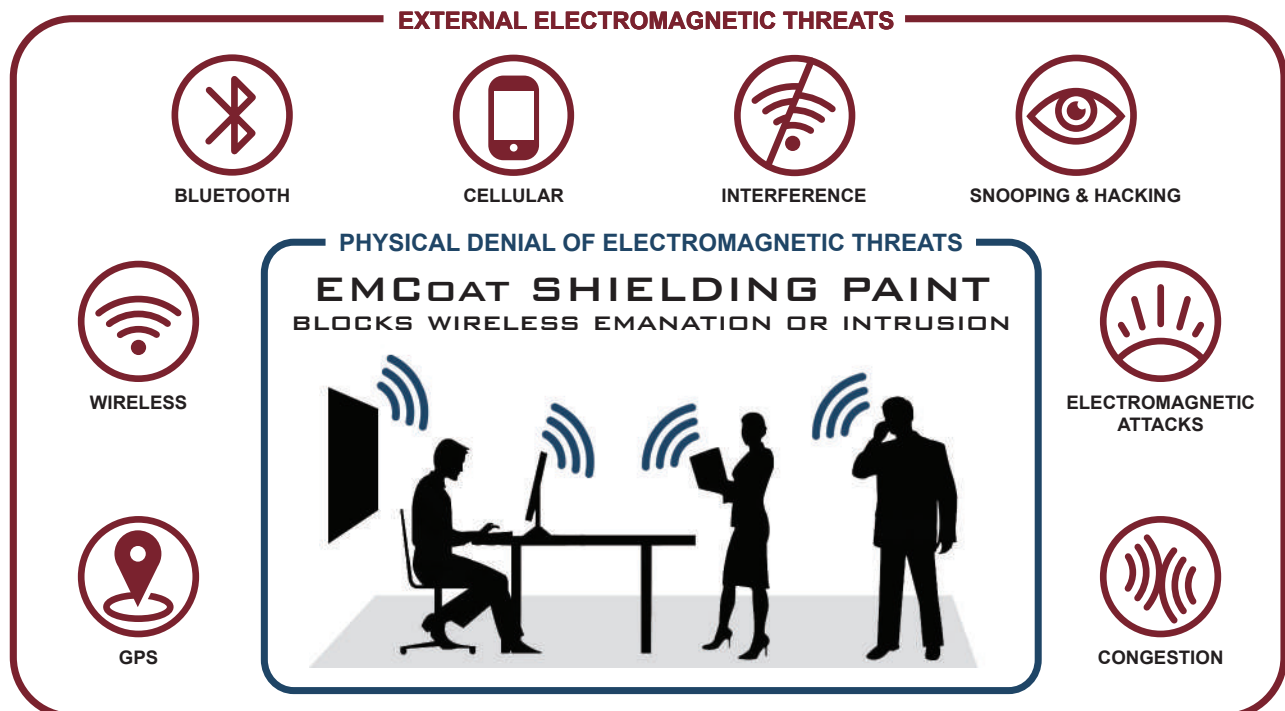


## EMCOAT SHIELDING PAINT

### CONDUCTIVE COATING FOR ELECTROMAGNETIC SHIELDING

EMCoat is a multipurpose, electrically conductive paint that shields sensitive electronics, wireless networks, and secure communications from hacking, snooping, and spectrum congestion. Fast drying, non-toxic, and water soluble, EMCoat is well suited for interior use and is applied with standard painting equipment and can be over coated with paint or other architectural finishes. Provides a wide range of broadband shielding for the aerospace, medical, electronics, entertainment, and recording industries. Ideal for electromagnetic protection in conference rooms, data centers, sensitive medical device rooms, and any area where signal control is a concern.

- Water-based, easy cleanup, non-toxic
- Saves time and money over metal or foils
- Fast and easy to install by roll, spray or brush
- Covers up to 140 ft<sup>2</sup> per gallon
- Standard flat grey finish
- Ideal for a wide range of surfaces



## EMCOAT-4PA067 TECHNICAL INFO

**WHERE:** For interior use on primed drywall, wood, metal or concrete surfaces. Can be overcoated with standard architectural finishes.

**SURFACE PREPARATION:** Surfaces should be free of dirt, oil, loose paint, construction debris and other foreign matter. Scuff sand glossy substrates and/or existing paint layers. Surfaces should be primed with compatible primers suitable for adherence to the substrate (latex primers on drywall, self etching primer on metal or concrete, etc). Proper preparation and installation is critical to overall product performance. Caulk or fill all gaps and holes and apply product liberally in corners, as even small voids or inconsistencies in the coating thickness will reduce shielding effectiveness. For large gaps, EMCaulk shielding caulk is recommended for best performance.

**COVERAGE:** 100-140 ft<sup>2</sup> per gallon when applied in two coats, depending on surface porosity. Higher shielding levels can be obtained with additional coats.

**APPLICATION TEMPERATURE:** Do not apply EMCoat in temperatures below 50°F and relative humidity above 85%. Air circulation can have a strong effect on drying times and recoat times. Any measure to reduce humidity and improve circulation in the application space will lead to shorter application times and dry times with improved performance results. Run dehumidifiers, fans, air conditioning, or other measures as possible during installation and before testing. In high humidity situations use multiple thin coats help reduce drips and runs.

**THINNING:** Do not thin or dilute.

**APPLICATION INSTRUCTIONS:** EMCoat is a high performance, high viscosity coating product with specific application instructions that must be carefully and completely followed. It is recommended that EMCoat be sprayed with commercial quality airless equipment, but it can also be brushed, or rolled. Settling of the conductive components is normal. Mix thoroughly to a uniform consistency immediately before use. Shaking is not adequate and use of a drill and impeller or other mechanical means will be necessary. Recommended mixing paddles should use straight vane construction with a square or rectangular head with rounded corners (such as mixing paddles for joint compound or grout). Helical style paddles are not recommended. Start slowly and mix carefully. If the material is mixed too aggressively it can lead to excess material losses or spilled buckets. It can take up to 15-20 minutes to initially mix a large pail. Take care to scrape all material from the bottom and corners of the container before beginning to use the product. Re-mix material at least every 10 minutes or use an agitator in the bucket to maintain dispersion of the conductive components. Product should be applied in a minimum of two coats to ensure uniform shielding coverage, with a full uniformly spread initial coat, followed by additional applications. Coats should be wet, full-bodied coats. If the product appears to be going on "dry" then a lower spray pressure or reduced fan width may be necessary. Apply product liberally in corners or over seams. Tight areas may need multiple light coats to ensure adequate coverage and avoid runs. Uniform and complete coverage is essential for product performance. It is recommended that experienced personnel are used for installation. On large jobs, it is best to work as teams with one person applying product and one person preparing and changing pails.

**Spray:** Do not thin product. To avoid clogging of equipment do not allow product to settle inside of hose or pump. Start pressure at 50% of equipment rating and work up. Remove all filters from paint equipment except the main screen on feed tube. Strainers and filters must be 30 mesh or larger. Use a new screen at the start of each job. Recommended tip sizes: HVLP: 2.2 or larger. Airless: 417 or close equivalent.

**Roll:** A high nap roller (3/4") will achieve the highest distribution of conductive particles and ease of application. Use of shorter nap or microfiber rollers is not recommended.

**Brush:** Use a high quality synthetic brush and apply product liberally.

When brushing or rolling EMCoat, apply generously and do not overwork the product. Watch for and avoid high or low concentrations of conductive solids on the painted surface.

**COATS:** Multiple coats will achieve the most consistent coverage and best shielding performance. Apply first coat with 50% overlap and cross coat a second coat and third coat for best results.

**RECOAT TIME:** Re-coat when dry to touch.

**DRY TIME:** Full curing is required to achieve maximum signal attenuation. See notes on application temperatures to help reduce dry times. Allow at least 24 hours before testing product. Additional time may be necessary in high humidity or low temperature conditions.

**CLEAN UP:** Clean immediately after use with soap and warm water. Clean all equipment according to manufacturers specifications.

**DISPOSAL:** Dry product can be disposed of with standard practices for paint products.

**STORAGE:** Store product at room temperature and do not allow to freeze. It is not recommended to store EMCoat products for longer than six months. Product must be remixed immediately prior to application.

### PRECAUTIONS:

- Refer to Product Safety Data Sheet before use
- Not for exterior use.
- Do not sand.
- Not recommended for use as a finished flooring product. EMCoat must be protected by a suitable architectural finish product for floor installations.
- Priming metal with non-conductive coatings can interrupt the electrical connection between the metal and the paint.
- Any connection to or through a shielding layer can have adverse effects upon the efficacy of the shield. Consult a shielding professional for proper installation of fasteners.

**GROUNDING:** Grounding of conductive surfaces may be required by your local electric code. Please consult with a licensed professional electrician.

**BASE:** Water-borne Urethane      **COLOR:** Dark Grey

**TOTAL VOC:** 111 g/L

**VOC:** (less exempt solvents): 290g/L

**DENSITY:** 1452 g/L

**VOLUME:** .88 gal or 4.3 gal per container

**SOLIDS (WT.):** 54% +/- 2%

**SOLIDS (VOL.):** 31% +/- 2%

For complimentary products or consultation to obtain maximum performance of a shielded enclosure, contact Faraday Structures at sales@FaradayStructures.com or see www.FaradayStructures.com

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of the Conductive Group. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your company representative to obtain the most current versions of product documentation. The Conductive Group believes this information and test values to be typical, however, the Conductive Group does not assume any liability whatsoever for accuracy or completeness of any information contained in this document. The Conductive Group does not warrant this product with respect to merchantability or suitability for use, including any intellectual property or trade restrictions, which is the sole responsibility of the purchaser and/or end user. Use of products from the Conductive Group requires compliance with the Conductive Group Standard Terms and Conditions. Always refer to materials handling instructions and safety documentation when using this or any other material. Copyright ©2020 Conductive Group, LLC

**LEAD WARNING:** Warning! Removal of pre-existing paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.