

Earth-Grounding Cable

Components:

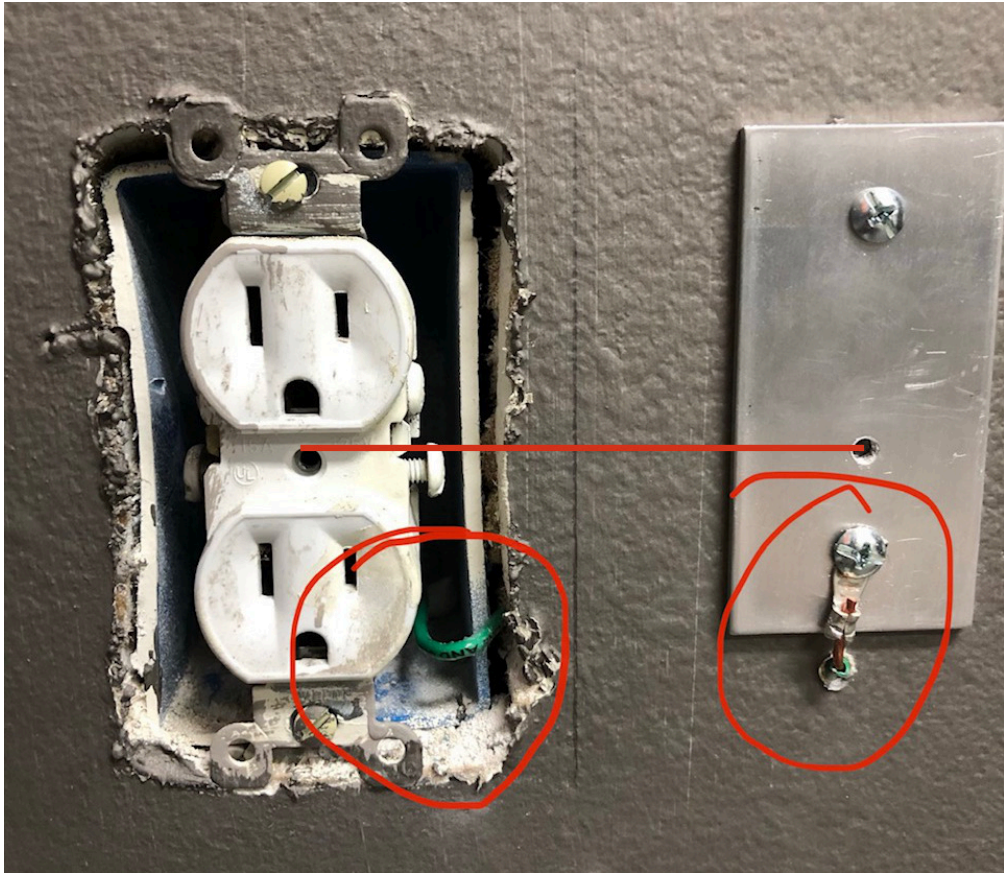
The earth-grounding cable for Imperial Paints EMR Shielding Paint comprises an aluminum plate attached to a green length of wire. One end of the wire is crimped with a spade terminal for attachment to the aluminum plate, while the other end is left to be grounded to either the ground of a nearby outlet or metal plumbing. Also included is a white wall plate to cover the aluminum ground plate. We recommend all electrical work be done by an electrical professional.

Installation Instructions:

1. Decide where the grounding plate is to be attached. We recommend grounding to a nearby outlet. **MAKE SURE THE POWER IS OFF.** The grounding plate should be mounted to the side of the wall stud that the outlet is attached too. (this allows for ease of hiding the ground wire).
2. Hold the ground plate against the wall where it will be affixed and trace the screw holes onto the wall. We recommend using the face plates to mark the wall as this gives a better visual representation to what it will look like upon completion.
3. Drill the traced holes into the wall. The holes for the toggle bolts should be drilled with 3/8" drill bit. Attach your grounding plate to the wall. Be sure to not tighten the bottom screw completely so we can attach the spade end of the grounding cable to it later.
4. Below the mounted grounding plate, drill a small hole to "snake" the ground wire through and to the outlet. (We find it easier to make a snag with a stiff wire to reach in and pull through the ground wire from the outlet) **[refer to example #1]**
5. It's time to attach the spade end of the ground wire to the ground plate and tight that bottom screw. Push all the excess wire into the wall and pull enough through the outlet to work with. **[refer to example #1]**
6. Make the proper connection to the ground of the outlet and screw the faceplate back onto the outlet. Double check that both screws on the ground plate are tight and screw the grounding plate cover with gasket on (before tightening plate cover you can turn it to make sure it is lined up correctly) **[refer to example #2]**

It is not always necessary to ground Imperial Paints EMR Shielding Paint. The paint will screen RF fields whether grounded or not. However, the paint is conductive, so it might pick up ELF electric fields from the mains electricity wiring. If protection is needed against EMR only (microwaves, mobile telephone masts etc.) then grounding is not necessary. If full shielding efficiency at lower frequencies is required (for example power lines) then it is essential that the product is grounded.

If in doubt: Conduct a "before" and "after" test for ELF electric fields. Using a calibrated electric field meter, measure the electric field, standing on the floor at least a foot away from the wall once it has been painted. Note the readings. Earth the paint using an earthing lead and measure the electric fields again in the same position. If the fields are higher once the paint has been earthed remove the earthing lead. If the readings fall, keep the earthing lead in place.



example #1



example #2